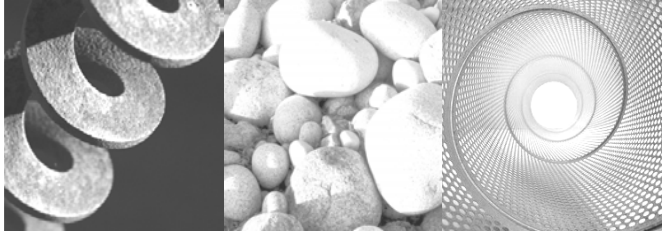

GEI Consultants

Consulting
Engineers and
Scientists

Remedial Action Report

218 and 220 40th Street
Sea Isle City Former MGP Site

Sea Isle City, Cape May County, New Jersey
SRP ID No.: G000006130
EA ID No.: RPC000001

Prepared for:
Jersey Central Power & Light Company
300 Madison Avenue
Morristown, New Jersey 07962

Submitted by:
GEI Consultants, Inc.
18000 Horizon Way, Suite 200
Mount Laurel, New Jersey 08054
(856) 608-6860

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Project 1610583

Brian C. Mannino, P.E.
Senior Project Engineer

Christopher W. Dailey, P.E.
Vice President

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Abbreviations and Acronyms

AOC	Area of Concern
BEE	Baseline Ecological Evaluation
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene and xylenes
CAFRA	Coastal Area Facility Review Act
CEA	Classification Exception Area
CID	Case Inventory Document
CSM	Conceptual Site Model
DKQP	Data of Known Quality Protocols
DPW	Department of Public Works
GEI	GEI Consultants, Inc.
gpm	Gallons Per Minute
GWQS	Groundwater Quality Standards
IAL	Integrated Analytical Laboratories
JCP&L	Jersey Central Power & Light Company
LCS	Laboratory Control Sample
LFPS	Low Flow Purge and Sample
LSRP	Licensed Site Remediation Professional
MGP	Manufactured Gas Plant
mg/kg	Milligrams per kilogram
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NAVD	North American Vertical Datum
NFA	No Further Action
N.J.A.C.	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
PAHs	Polycyclic Aromatic Hydrocarbons
PID	Photo-ionization detector
QA	Quality Assurance
QC	Quality Control
RA	Remedial Action
RAO	Response Action Outcome
RAP	Remedial Action Permit
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan
RDCSCC	Residential Direct Contact Soil Cleanup Criteria
RDCSRS	Residential Direct Contact Soil Remediation Standards
RI	Remedial Investigation
RIR	Remedial Investigation Report

RPD	Relative Percent Difference
SCC	Soil Cleanup Criteria
SRIR	Supplemental Remedial Investigation Report
SVOCs	Semi-Volatile Organic Compounds
TCL	Target Compound List
USDA-SCS	United States Department of Agriculture Soil Conservation Service
USGS	United States Geologic Survey
UST	Underground Storage Tank
Vargo	Vargo Associates
VI	Vapor Intrusion
VOCs	Volatile Organic Compounds

Executive Summary

This Remedial Action Report (RAR) was prepared by GEI Consultants, Inc. (GEI) on behalf of Jersey Central Power & Light Company (JCP&L). The RAR is written in accordance with the New Jersey Administrative Code (N.J.A.C.), Section 7:26E 5.7 of the Technical Requirements for Site Remediation. The report documents measures taken to address soil contamination identified at 218 40th Street and at 220 40th Street. These properties are identified as Block 40.04, Lots 20 and 21 by the Sea Isle City Tax Assessor. The two properties are approximately 150 feet south-southwest of the former Sea Isle City manufactured gas plant (MGP) formerly at Block 39.04, Lots 22, 23, and 24. Remedial Investigation (RI) activities performed to delineate soil and groundwater contamination associated with the former MGP site identified the presence of soil contamination at 218 and 220 40th Street. The objective of the Remedial Action (RA) is to address soil impacts associated with the adjacent former MGP operation and to demonstrate that MGP-related soil impacts are present deeper than 5 feet below the ground surface (bgs). Therefore, the soil above 5 feet bgs acts as a cover for underlying MGP-impacted soils and is consistent with its use as an appropriate engineering control for the residential properties at 218 and 220 40th Street.

Twenty-six soil borings were advanced at 218 40th Street and 28 soil borings at 220 40th Street. Four surficial soil samples were also collected from the crawl space of the 220 40th Street building. For screening purposes, a mobile laboratory was used for the analysis of soil samples collected in November and December 2002. The subsequent soil samples were submitted to New Jersey-certified laboratories for analysis. Several soil samples analyzed by the mobile laboratory reported polycyclic aromatic hydrocarbons (PAHs) exceedances in the soil at between 0 to 5 feet bgs. Confirmation soil samples collected by GEI in March and December 2014 in the same area did not report soil exceedances. Therefore, the screening values previously reported on the Site have not been used for the delineation of MGP-related contaminants.

Groundwater sampling conducted at and downgradient of 218 and 220 40th Street did not identify exceedances of groundwater quality standards. Based on the existing cover of at least five feet of non-MGP-impacted soil and the lack of groundwater contamination, no active remediation (excavation) is necessary at the properties. GEI recommends that a Remedial Action Permit (RAP) for soil be obtained and that a deed notification be established for the properties to inform potential future property owners of the soil impacts that would remain at depth on site. After the RAP is issued and a deed notice established, GEI proposes that a restricted use Area of Concern (AOC)-specific Response Action Outcome (RAO) be issued for the MGP-related soil contamination on these properties and that an unrestricted use AOC-specific RAO be issued for the groundwater.

1. Introduction

1.1 Purpose

This RAR has been prepared by GEI on behalf of JCP&L to document the RA activities for the offsite soil impacts released from the former Sea Isle City MGP site to the adjacent residential parcels at 218 and 220 40th Street in Sea Isle City, Cape May County, New Jersey, herein referenced as the "Site." The general Site location is shown in Figure 1. The Site consists of two parcels identified by the Sea Isle City Tax Assessor as Block 40.04, Lots 20 and 21. The parcels are shown in Figure 2 and are summarized below.

Block	Lot	Address	Owner
40.04	21	218 40th Street, Sea Isle City, NJ	JCP&L
40.04	20	220 40th Street, Sea Isle City, NJ	JCP&L

The purpose of the RAR is to demonstrate that MGP-related soil impacts are limited to soil at or below 5 feet bgs at the Site and to establish institutional and engineering controls for the existing subsurface soil impacts at or below 5 feet bgs.

1.2 Background

The Site is to the southwest of the former Sea Isle City MGP site. The location of the former MGP parcel relative to the Site is shown in Figure 2. Several phases of Remedial Investigation (RI) conducted at the MGP parcel and the adjacent properties, which included 218 and 220 40th Street parcels, have identified MGP-related impacts in the soil. In April 2008, a SRIR was submitted to the New Jersey Department of Environmental Protection (NJDEP). The SRIR expanded on the findings of previous investigations conducted at and around the site performed by GEI, Ebasco, Enserch, and Foster-Wheeler. The delineation of MGP-related soil impacts was completed at 218 and 220 40th Street and documented in the SRIRs dated April 2010 and August 2010.

As part of the RI activities performed in association with the MGP site, soil borings were advanced on the former MGP site, within the 39th Street, 40th Street, and Central Avenue rights-of-way, on City-owned property south of the former MGP site, and on privately-owned residential properties in the vicinity of the former MGP site. The investigation areas included the 218 and 220 40th Street properties. Monitoring wells MW-21 and MW-22 were installed at the 220 40th Street and 218 40th Street properties, respectively, to investigate for potential groundwater impacts from the former MGP site. Two additional monitoring wells, MW11 and MW20, were installed downgradient of the 218 and 220 40th Street properties in

1989 and 2007, respectively. Samples from these two wells were collected to confirm that groundwater impacts are not migrating downgradient from the Site.

The Case Inventory Document (CID) has been updated and is in Appendix A.

2. Site Description

The 218 and 220 40th Street properties are on the south side of 40th Street, approximately 170 feet south-southwest of the former Sea Isle City MGP facility. The two parcels are in a primarily residential section of Sea Isle City. To the south-southwest of the two properties is the City Hall and Ambulance Headquarters for Sea Isle City. The areas to the north of the properties across 40th Street are currently vacant but are expected to be redeveloped with residential properties.

2.1 Site Description

The Site is developed with two residential dwellings. The dwelling at 218 40th Street is a one-story building designed for occupancy by a single family. The dwelling at 220 40th Street is a three-story duplex building with garages on the ground floor level. Please see Figure 2 for a Site Plan.

The site is in the approximate center of a barrier island. The Atlantic Ocean is approximately 1,500 feet east of the site. Tidal marshes are approximately 1,500 feet west of the site.

2.2 Site History

The 218 40th Street property was developed with a single-family home in 1952. Prior to the construction of the house the parcel consisted of undeveloped land. The 220 40th Street parcel was developed between 1933 and 1954. Prior to this, the parcel consisted of undeveloped land. The building currently on the parcel was constructed in 2006.

Soil impacts at the parcels are related to past operations at the nearby MGP facility. MGP operations began in the late 1800s. Ownership of the plant changed hands several times prior to the demolition of the facility (exclusive of the gas holder and oil tank) in 1952.

2.3 Nature and Extent of Contamination

The results from the RIs indicated that contamination associated with the former MGP extended beyond the limits of the former plant parcels. Contamination consists of exceedances of the NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS) for PAH and benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds. PAH compounds and benzene are the primary contaminants of concern. PAH exceedances were found in areas on the north side of 39th Street and the south side of 40th Street, and on the block between 39th and 40th Streets, from Central Avenue to approximately 340 feet west of Central Avenue. The 218 and 220 40th Street parcels represent the southern limit of the soil impacts associated with the MGP site.

2.4 Previous Remedial Actions

No previous remedial action work has been completed at the 218 and 220 40th Street properties.

The following remedial actions were conducted to remediate contamination associated with the former MGP site.

In 1987, a RA was conducted on Block 39.04, Lot 24 to remove an underground storage tank (UST) containing sand and a black viscous substance. Impacted soil and groundwater encountered within the excavation were removed. This remediation also included the placement of a 6-inch layer of clean fill over Lot 24.

Between 1988 and 1989, JCP&L provided health and safety oversight and material disposal during a utility reconstruction project conducted by Sea Isle City. MGP-impacted soil and groundwater, which were identified through field observations, were removed from portions of the utility trenches along 39th Street, Central Avenue, and 40th Street and transported to a treatment/recycling facility.

RA was completed in 1990, which included installation of an asphalt cover and perimeter fence on Block 39.04, Lots 23 and 24. In 1991, a shallow excavation and installation of geotextile fabric and sand, stone, soil, and/or concrete cover were completed on Block 39.04, Lot 22.

In 2003, an RA was conducted on Block 40.04, Lot 22 (210 40th Street) to remove soil containing MGP-related contamination. Approximately 550 tons of soil were removed. The remediation achieved removal of MGP-related soil contamination from the property. The NJDEP issued a No Further Action (NFA) letter for this property in June 2006.

Between 2007 and 2009, with the exception of a small strip of land on Lots 22 and 23, which abutted the residential properties to the south, , an RA was conducted at the parcels comprising the former MGP site (Block 39.04, Lots 22, 23, and 24) to remove soil containing MGP-related contamination. Seven thousand eight hundred fourteen (7,814) tons of soil was removed for off-site thermal treatment. The excavation support sheeting was purposely left in place on the southern and western limits of the excavation area for use during future planned RA phases. Low permeability barriers were installed on the northern and eastern limits of the excavation area to prevent migration of MGP impacts back onto the site following remediation, as no additional excavation work was planned for the public right-of-way areas to the north and east of the site. The NJDEP approved the RAR for this phase in a letter dated March 16, 2010. The remaining strip of land at Lots 22 and 23 was remediated in 2013-2014, as part of the Phase V RA at the site.

In February 2008, JCP&L assisted the City and implemented an RA at the Sea Isle City Department of Public Works lot to the east of the former MGP site. The work was performed due to construction activities that were occurring at the lot, which uncovered the presence of hydrocarbon-impacted soils and, subsequently, a UST. Although a direct nexus with the site did not exist and an MGP-origin of hydrocarbon impacts could not be established, JCP&L assisted the City with the remediation of this occurrence. A combined total of 140.62 tons of soils were shipped off-site by Freehold Cartage, Inc. for disposal at the Environmental Recovery facility in Lancaster, Pennsylvania and CWM Chemical Services, L.L.C. facility in Model City, New York.

Approximately 2,100 gallons of groundwater was transported by Freehold Cartage, Inc. for treatment and disposal at the E.I. Dupont Denemours & Company Chamber Works facility in Deepwater, New Jersey. The excavation was backfilled with 129.61 tons of clean fill. Seven post-excavation soil samples were collected by GEI and submitted under chain of custody to a New Jersey-certified laboratory. The soil samples were analyzed for volatile organic compounds (VOCs) and PAH compounds. The analytical results of post-excavation soil samples were in compliance with the applicable NJDEP Soil Cleanup Criteria (SCC), the applicable action level at the time of the RA. The NJDEP issued an NFA letter for the RA work conducted by JCP&L on January 30, 2009.

The RA performed in 2010 and 2011 completed most of the soil excavation work at the former MGP site parcels, with the exception of small strips along the south side of the site and along the east side of the abutting 214 39th Street (Lot 22) property. The RA also included excavation of the soil at the 213 and 217 39th Street properties on the north side of 39th Street. At the 213 and 217 39th Street properties, the excavation extended to depths of 12 to 13 feet bgs. Post-excavation bottom samples in compliance with the RDCSRS were obtained from the base of the excavation. One thousand one hundred fifty-two point eight (1,152.8) tons of soil were removed from these two properties and transported to Clean Earth of New Castle, Delaware for thermal treatment. Excavation of the soil at the MGP site and at the 214 39th Street property extended to depths of 12 to 17 feet bgs. Excavation work below 12 to 13 feet was performed while the deep aquifer depressurization system was in operation. When the deep aquifer depressurization system was shut down due to naturally occurring hydrogen sulfide odors associated with the aquifer which could not be abated, the excavation depth limit was approximately 13 feet bgs. Post-excavation soil samples from the 2010-2011 RA were compared to the 2008 Residential Direct Contact Soil Cleanup Criteria (RDCSCC) as approved in the Remedial Action Work Plan (RAWP). Bottom samples from one excavation cell reported the presence of PAH compounds at concentrations above the RDCSRS, but below the RDCSCC as was approved in the RAWP. Nine thousand forty-seven point two (9,047.2) tons of soil was excavated from the 210 and 214 39th Street properties and transported to Clean Earth of New Castle for thermal treatment. The NJDEP issued an NFA letter for MGP-related soil impacts at the 213-217 39th Street properties on January 12, 2012.

The 2011-2012 RA involved the excavation at the 218 39th Street property and also included a small strip of the 214 39th Street parcel along the boundary between 214 and 218 39th Street. Soil excavation work took place 12 to 13 feet bgs, with post-excavation soil samples collected and analyzed for PAH compounds. Three thousand two hundred sixty-four (3,264) tons of impacted soil was excavated and transported to Clean Earth of New Castle for thermal desorption. Three thousand five hundred eighty-two (3,582) tons of clean fill material was transported to the site from Daley's Pit of South Seaville, New Jersey for backfill.

In 2012 and 2013, a RA was taken to address soil impacts at the following properties: 211 40th Street, 219 40th Street, 223 40th Street, and 227 40th Street. Soil excavation was completed to a depth of 12 to 14 feet bgs with post-excavation soil samples collected and analyzed for PAH compounds, plus BTEX compounds on the eastern portion of the excavation area. 13,747.86 tons of impacted soil was excavated and transported to Clean Earth of New Castle, for thermal desorption. Fourteen thousand seven hundred seventy-four point eighty-seven (14,774.87) tons of clean fill material was transported to the site from Daley's Pit of South Seaville, New Jersey for backfill.

RA work was completed in 2013 and 2014 at 205, 207, and 209 40th Street, and along a thin strip of soil along the southern edge of the former plant parcel. Soil excavation was completed to a depth of 12 to 14 feet bgs, with post-excavation soil samples collected and analyzed for BTEX and PAH compounds. Fifteen thousand seven hundred forty point sixty-one (15,740.61) tons of impacted soil was excavated and transported to Clean Earth of New Castle for thermal desorption. Seventeen thousand two hundred seventy-six point forty-five (17,276.45) tons of clean fill material was transported to the site from Daley's Pit of South Seaville, New Jersey for backfill.

3. Physical Setting

3.1 Topography and Regional Drainage

Sea Isle City is on a barrier island within the Coastal Plain geologic region of southern New Jersey. Topographic elevations range from approximately five to 10 feet above mean sea level relative to the North American Vertical Datum (NAVD).

The Site is on the United States Geologic Survey (USGS), Sea Isle City, New Jersey Quadrangle 7.5-minute series provided as Figure 1. The Site is approximately 1,500 feet to the west-northwest of the Atlantic Ocean and approximately 1,500 feet southeast of Ludlam Bay.

3.2 Regional Geology

Sea Isle City is on approximately 6,000 foot thick wedge of Mid-Atlantic Coastal Plain sediments overlying Precambrian Age bedrock. Native surface soil on the barrier island is comprised of recent marsh and alluvial deposits. The marsh and alluvial deposits are underlain by the Cape May Formation, comprised of Quaternary Period marine and deltaic sand and clay. The Cohansey Sand, a Miocene Age sand unit with thick clay lenses predominant along the coast, underlies the Cape May Formation.

The Kirkwood Formation, a Miocene Age system comprised of interbedded clay and sand approximately 250 feet thick, underlies the Cape May Formation. Tertiary and Cretaceous Age sediments underlie the Kirkwood Formation to a depth of approximately 6,000 feet.

3.3 Regional Hydrogeology

Shallow groundwater on the barrier island occurs in unconsolidated Coastal Plain sediments in a brackish water table aquifer. Recharge to shallow groundwater occurs from precipitation. Because the surficial marsh deposits are relatively impermeable, the shallow groundwater is not an extensive aquifer system.

Water in the deltaic and marine Cape May Formation is saline. The unconfined aquifer, known as the Cohansey Aquifer in the area of Atlantic City, extends downward to the upper confining unit of the underlying Kirkwood Formation. The Cohansey sand unit is underlain by an approximately 375-foot thick layer, containing a 30-foot thick sand interval ("Rio Grande" or "250-foot horizon") in the middle of the clay layer. Beneath the clay layer is the Kirkwood Formation "Atlantic City 800-foot sand" aquifer. Water in the Atlantic City 800-foot sand aquifer is used as a water supply.

3.4 Water Use

There are no surface or near-surface fresh water sources at or in the vicinity of the Site. Surrounding surface water bodies are tidal. The potable well (Well #7) at the Department of Public Works (DPW) property across Central Avenue from the former MGP site is screened in the Kirkwood Formation (Atlantic City 800-foot-sand) strata. Only the Atlantic City 800-foot-sand formation is used as a water supply source in Sea Isle City.

Well #7 was installed in 1996. The intake section of Well #7 is between 720 and 902 feet bgs. The static water level was reported as 58.83 feet bgs. The level during pumping is 71.67 feet bgs. The well yield is 800 gallons per minute (gpm), with a pump capacity of 700 gpm. The zone of withdrawal of Well #7 is vertically isolated from the former MGP site by several hundred feet of deposits, including approximately 350 feet of clay confining beds.

3.5 Site Geology

3.5.1 Site Soils

Soils observed in borings typically consisted of brown to light brown sand with silt to a depth of four to five feet bgs, and grayish sand with silt from five to eight feet bgs. A peat layer was observed at depths ranging from four to 11 feet bgs, with peat most commonly observed at approximately four to seven feet bgs. Soil above this interval is presumed to be material brought to fill the former marsh area when the area was developed.

The soils in this area have been classified by the United States Department of Agriculture Soil Conservation Service (USDA-SCS) as Urban land-Psamments, wet substratum, zero to eight percent slopes, rarely flooded. The formation consists of approximately 60 percent urban land and 30 percent Psamments. Urban land consists of surfaces covered by concrete, pavement, buildings, and other structures underlain by disturbed and natural soil material. Depth to the seasonal high water table is 12 to 24 inches bgs.

3.5.2 Site Hydrogeology

During sampling, groundwater was encountered at depths of two to four feet bgs. Based on the topography at the Site and water table elevation measurements previously collected at and in the vicinity of the former MGP site, groundwater at the subject properties flows to the east, toward Central Avenue.

4. Conceptual Site Model

GEI prepared a Conceptual Site Model (CSM) in accordance with NJDEP's Technical Guidance for the Preparation and Submission of a Conceptual Site Model, dated August 2019 (version 1.1). The CSM is defined by the NJDEP as:

"…a written and/or illustrative representation of the physical, chemical and biological processes that control the transport, migration, and actual/potential impacts of contamination (in soil, air, groundwater, surface water and/or sediments) to human and/or ecological receptors. Development and refinement of the CSM will help identify investigation data gaps in the characterization process and can ultimately support remedial decision making."

The CSM identifies sources of contamination, receptors, and pathways associated with the Site, and provides a framework to assist in the evaluation of remedial alternatives and impacts, if any, to potential receptors.

4.1 Nature of Release

Contamination identified at the Site is associated with the former MGP facility that operated at the southwest corner of 39th Street and Central Avenue from the late 1800s until 1942. At the time, the 218 and 220 40th Street parcels consisted of undeveloped marshland. Waste associated with MGP operations is presumed to have been discharged to the marshland surrounding the plant. Contaminants of concern associated with the discharges from the former MGP facility are VOC and PAH compounds. The impacts are present at or below the peat layer, as soils above the peat layer were brought to the Site as part of the development of the Site from marshland to residential properties after MGP operations ceased.

4.2 Constituents of Concern

Constituents of concern identified in association with the former MGP site consist of VOCs, primarily benzene, and PAH compounds. The contaminants have been identified in association with soil and groundwater in the vicinity of the former MGP site. At 218 and 220 40th Street, the contaminants are limited to PAH compounds in soil.

4.3 Potential Migratory and Exposure Pathways

Common potential migratory pathways associated with release sites include:

- Direct contact with impacted soil
- Ingestion of contaminated soil or groundwater

- Inhalation of vapors associated with contaminants

MGP-impacted soils at the Site are covered by 5 feet of non-MGP impacted soil cover, as well as improvements such as concrete and buildings at select locations. The impacted soils are in the saturated zone, approximately 2 feet below the water table. Risk of exposure due to direct contact or ingestion of contaminated soil is minimal.

At 218 and 220 40th Street, no exceedances of applicable Groundwater Quality Standards (GWQS) have been identified. Both properties are connected to public potable water, and therefore, ingestion of contaminated groundwater is not a concern. The contaminants of concern beneath the two parcels are PAHs with low vapor pressures. Therefore, inhalation of vapors associated with the contaminants of concern beneath the parcels is not a concern. As of the most recent groundwater sampling event in March 2020, off-site benzene concentrations in shallow groundwater were below the applicable Generic Vapor Intrusion Screening Level for Groundwater. Inhalation of vapors associated with site contaminants is, therefore, not a concern.

5. Investigation Activities and Remedial Action

Multiple rounds of soil investigation activities were conducted at 218 and 220 40th Street by GEI to complete the horizontal and vertical delineation of impacts, and to investigate for potential soil impacts in the zero to five feet bgs interval. The goal of the most recent soil investigation was to demonstrate that there is 5 feet of non-MGP impacted soil on top of MGP-impacts previously identified at the Site. In order to accomplish this, additional borings were also advanced in areas where previous sampling results had suggested that impacts above five feet bgs were present. The following is a summary of the investigation findings and actions taken as part of the RA.

5.1 Site Background

Impacts at 218 and 220 40th Street are associated with prior MGP operations, which occurred from the late 1800s to the early 1940s. The 218 and 220 40th Street properties are approximately 150 feet south-southwest of the former MGP site. No MGP-related operations were performed at the Site. Both parcels consisted of undeveloped land when the MGP was in operation. By 1954 both parcels had been developed with what are residences, and the structures at the former MGP site had been demolished. The development of the Site included filling in the marsh areas to allow for construction. The top 5 feet of soil is fill material brought to the Site after the cessation of operations at the MGP plant. The 218 40th Street dwelling was constructed in 1952. The structure observed at 220 40th Street in the 1954 aerial photograph is not the same as the building currently at the Site, which was built in 2006. Site photographs are provided in Appendix B.

5.2 Soil Investigations

Soil investigation activities at 218 and 220 40th Street began in 2002. This work identified PAH compounds in soil at concentrations exceeding the RDCSRS. The majority of the impacts were observed at depths of eight to 12 feet bgs. At 218 40th Street, PAH exceedances extend to 14.5 to 15 feet bgs and at 220 40th Street, PAH exceedances extend to 12 to 12.5 feet bgs. However, several screening samples collected from the 0- to 5-foot interval had reported PAH concentrations above applicable action levels. These samples were collected in 2002 and analyzed using a mobile laboratory as part of a Triad approach to site characterization.

The 2002 screening results reported contaminant concentrations significantly higher than those found in samples collected in later characterization events at the Site. The 2002 samples were analyzed by a mobile laboratory (Streamlined Site Characterization and Closure, Inc., of Warren, New Jersey) and did not include deliverable packages (only summary tables). Streamline Site Characterization and Closure is not currently listed as a

New Jersey-certified laboratory. It is not known whether this is due to a name change or cessation in operations.

Because the 2002 results could not be confirmed and validated, GEI conducted investigation activities at 218 and 220 40th Street in March 2014 and in May 2015, respectively, to re-evaluate contaminant concentrations at these locations and to investigate for MGP-related impacts in the 0- to 5-foot interval elsewhere on the two parcels. Borings were advanced using Geoprobe™ equipment, with the exception of borings advanced in the 218 40th Street crawl space area that were drilled using handheld equipment. Samples were collected using laboratory-supplied bottles and submitted under chain of custody to Integrated Analytical Laboratories, LLC (IAL) for PAH analysis by Environmental Protection Agency (EPA) Method 8270D.

The 218 40th Street property where soil impacts have been identified is improved with the footprint of the building, concrete sidewalks and driveway, and by a lawn. Three samples collected in 2002 at the 218 40th Street parcel reported soil impacts in the first 5 feet of soil. These samples were collected from B107C(4-4.5), B107D(4-4.5), and B107E(4-4.5). The samples were analyzed in a mobile laboratory present on the site at the time of the investigation.

In 2014, B489(4.5-5) was advanced to investigate impacts previously reported at B107C; B490(4.5-5) was advanced to investigate impacts previously reported at B107E; and B479(3.5-4) was advanced in March 2014 to investigate impacts previously reported at B107D. Review of the analytical results for samples collected from B479, B489, and B490 did not find PAH compounds at concentrations above the RDCSRS. Based on the results, the analytical results obtained in 2002 from the mobile laboratory were inaccurate and MGP-related impacts are not present in the 0- to5-foot soil interval.

Two additional soil borings, designated as B491 and B492, were advanced in the crawl space of the building using hand equipment. Soil samples were collected from 4 to 4.5 feet bgs and 5 to 5.5 feet bgs. No exceedances were reported in the samples collected from borings B491 and B492. Soil samples collected from the 218 40th Street parcel are depicted on Figure 3. Analytical results for the samples collected from the 218 40th Street parcel are provided in Table 1. Electronic data deliverable and analytical reports are in Appendices C and E.

The clean soil currently in the 0- to 5-foot bgs interval is acting as a cover (i.e., engineering control) for underlying MGP-contaminated soils.

The 220 40th Street property where soil impacts have been identified is improved by the footprint of the building, concrete sidewalks and driveways, and an area between the two driveways that is filled with decorative stones. Previous investigations performed in 2002 at the 220 40th Street property had identified soil exceedances of the RDCSRS in one sample collected from the first five feet. This sample was taken from B108A from four to 4.5 feet

bgs. The sample was collected in 2002 and was analyzed in the mobile laboratory. On March 27, 2014, B481 was advanced in the vicinity of B108A, and a soil sample was collected from 3.5 to 4 feet. The soil sample was submitted under chain of custody to IAL for PAH analysis. No exceedances of the RDCSRS were reported. On May 19, 2015 B495 was advanced to investigate exceedances previously reported at B108A at 4 to 4.5 feet bgs and B109 at 4 to 4.5 feet bgs. A soil sample was collected from B495 from 4.5 to five feet bgs and submitted under chain of custody to IAL for PAH analysis. The interval was selected based on field observation and review of the historical boring logs. Analysis of soil sample B495(4.5 to 5) did not confirm the presence of PAH contaminants at concentrations above the applicable RDCSRS.

Additional soil samples were collected from B482 at 3.5 to 4 bgs and 8 to 8.5 feet bgs; from B485 at 4 to 4.5 feet bgs, 5 to 5.5 feet bgs, and 13.5 to 14 feet bgs; from B493 at 3.5 to 4 feet bgs; and from B494 at 3.5 to 4 feet bgs. No exceedances of the applicable RDCSRS were detected in these samples. Soil samples collected from the 220 40th Street parcel are depicted on Figure 4. Analytical results for the samples collected from the 220 40th Street parcel are in Table 2. Electronic data deliverable and analytical reports are in Appendices C and E.

MGP-related impacts at 218 and 220 40th Street are deeper than 5 feet bgs, and soil above this depth is functioning as an effective cover (i.e., engineering control). See Figure 5 for the limits of the soil exceedances on the 218 and 220 40th Street properties.

5.3 Groundwater Investigation

Two monitoring wells, MW21 and MW22, were installed at the Site as a part of groundwater investigation for the former MGP site. MW21 was installed on September 14, 2012 on the western portion of the 220 40th Street parcel. MW22 was installed on May 19, 2015 on the northeastern portion of the 218 40th Street parcel. Both wells are flush-mounted, 2-inch diameter and approximately 12 feet deep. The wells are screened from two to 12 feet to allow for the screened interval to capture the soil-groundwater interface. The monitoring wells were surveyed by Vargo Associates, Inc. (Vargo), of Franklinville, NJ. Vargo prepared Forms Bs for both monitoring wells. Copies of the Form Bs are provided in Appendix F.

MW11 and MW20 are downgradient of 218 and 220 40th Street. MW11 and MW20 were also installed as a part of the MGP investigation. Earlier groundwater investigations conducted for the MGP site have determined that groundwater flows from 218 and 220 40th Street towards MW11 and MW20. The monitoring well network installed for the MGP investigations and the September 11, 2015 groundwater elevation contours are provided in Figure 6.

MW11, MW20, MW21, and MW22 were sampled in June 2015 and December 2015 for VOC+15 and PAH by GEI. An additional groundwater sample was collected from MW22 on September 15, 2015 for VOC+15 and PAH analysis. Sampling was performed using Low

Flow Purge and Sample (LFPS) techniques. No exceedances of the applicable GWQS were reported. Groundwater analytical result summaries are in Table 3. Electronic data deliverable and analytical reports are provided in Appendices D and E. Wells MW21 and MW22 were decommissioned by AmeriDrill, Inc. on May 16, 2016. Monitoring well abandonment reports are in Appendix F.

5.4 Permits

Permits for the installation of MW21 at Block 40.04 and Lot 20, MW22 at Block 40.04, were obtained by the New Jersey-licensed drillers that installed the wells on behalf of GEI. No other permits were required for the RA investigation activities.

A RAP application for the proposed soil remedy has been prepared for submittal to the NJDEP. Results of sampling of wells on and in the vicinity of 218 and 220 40th Street, specifically MW11, MW20, MW21, and MW22 has not detected the presence of VOC or PAH compounds at concentrations above applicable GWQS. An unrestricted use RAO for the groundwater at 218 and 220 40th Street will be requested for the properties. A Classification Exception Area (CEA) will be prepared to address remaining groundwater impacts associated with the former MGP at off-site properties, including the 40th Street right of way.

5.5 Remaining Soil Impacts

Exceedances of the RDCSRS for PAH compounds at 218 40th Street and at 220 40th Street are limited to soil below 5 feet bgs. Groundwater impacts were not identified at two monitoring wells at the Site. Soil impacts remaining at the Site above RDCSRS have engineering and institutional controls in place to prevent direct exposure to the contaminated media. The requirements for the institutional and engineering controls are discussed below. A restricted use RAO for soils will be issued by the project Licensed Site Remediation Professional (LSRP), Mr. Robert Blauvelt, License No. 575013.

5.5.1 Institutional Controls

- Preparation and filing of a RAP for soil.
- Preparation and filing of deed notices, that include descriptions of the engineering controls for each parcel where RDCSRS are not being met.
- Posting of financial assurance for the amount needed to monitor and maintain the Engineering Control for 30 years. A Self-Guarantee mechanism will not be used.
- Annual inspections of the Engineering Control (by the responsible party or LSRP) and biennial certifications by a LSRP, as to the integrity and effectiveness of the Engineering Control.

- Payment of an annual permit fee, currently $400, for the next 30 years.

5.5.1.1 Deed Restriction

GEI proposes that deed notices be established for portions of the 218 and 220 40th Street properties that include where MGP-related impacts were identified approximately 8 to 12 feet bgs, in accordance with N.J.A.C. 7:26C-7. The deed notices will be signed by the property owners and filed with the Cape May County Clerk's Office. Copies of the deed notices will also be provided to the NJDEP, the Sea Isle City Municipal Clerk, the Sea Isle City Mayor, Cape May County Health Department, Sea Isle City Department of Public Works, Atlantic City Electric, Verizon, and South Jersey Gas, in accordance with N.J.A.C. 7:26C-7.2(b)(3).

5.5.2 Engineering Controls

Engineering controls for the Site include:

- Cover material (e.g., soil) of sufficient thickness and extent to serve as an effective barrier so uncontrolled exposure to the underlying contamination is unlikely to occur. Any improvements (e.g., landscaping, asphalt, concrete, gravel) at the properties which make up this Site are not considered to be part of the cover.
- Performance of maintenance (as needed and in accordance with the RAPs) to maintain the integrity of the cover and monitor for potential disruptions.

6. Receptor Evaluation

As part of the RAR, GEI has updated the Receptor Evaluation previously submitted for the site. The following is a summary of the findings from the Receptor Evaluation Update. The completed Receptor Evaluation form and attachments will be submitted to the NJDEP. A copy of the Receptor Evaluation submittal is in Appendix G.

6.1 Land Usage

The site consists of residential properties and vacant lots. The surrounding properties consist of residential properties, with the exception of the Sea Isle City Department of Public Works facility adjacent to the southeast of the site across Central Avenue, and a municipal parking lot to the south across 40th Street. The usage of the site area will remain similar to prior usage (i.e., residential). No schools, childcare centers, public parks, or other sensitive populations are within 200 feet of the former MGP site.

6.2 Groundwater

Seventeen wells were identified within a 1-mile radius of the former MGP site. A potable water well is on the Sea Isle City Department of Public Works parcel, adjacent to the southeast of the MGP site across Central Avenue. The public water supply well is screened from 720 to 902 feet bgs, well below the shallow groundwater impacts associated with the former MGP Site. The screened interval is separated from the MGP-related impacts by low permeability clay layers. Sampling of groundwater in the source area, from approximately 45 to 50 feet bgs and completed in 2007, did not indicate the presence of MGP-related contaminants above applicable GWQS. This sampling was completed prior to the remediation of the source area.

No other potable water, irrigation, or industrial wells were identified within 2,000 feet of the limits of the groundwater impacts. A copy of the well search conducted as part of the Receptor Evaluation Update is included in Appendix G of this report. No impacted groundwater was found at 218 40th Street or 220 40th Street.

6.3 Vapor Intrusion

A vapor intrusion (VI) investigation was conducted in 2007. The results of the investigation confirmed that the former MGP Site had not contributed to VI issues at the nearby residences. No exceedances of the Vapor Intrusion Groundwater Screening Level were reported in samples collected during the March 2020 sampling event at 218 40th Street or 220 40th Street. Based on the groundwater results, no further investigation is proposed for VI.

6.4 Ecological Receptors

NJDEP provided comments regarding the MGP site Baseline Ecological Evaluation (BEE) in a letter dated May 24, 2004. In their letter, the NJDEP agreed that while contaminants of ecological concern were present on the former MGP Site, the soil and groundwater contamination was limited to residential lots and city streets, and there were no environmentally-sensitive natural resources at or within the surrounding areas of the former MGP Site.

The MGP site is within a coastal zone. As part of the various phases of RA completed at the MGP site, GEI has obtained several Coastal Area Facility Review Act (CAFRA) permits. Remaining soil and groundwater impacts associated with the Sea Isle City former MGP Site are limited to developed areas. No wetlands or waterbodies are located within or adjacent to the remaining soil and groundwater impacted areas. No free or residual product has been identified within 100 feet of an ecological receptor.

The completed Receptor Evaluation Form, well search data, and a figure showing receptors within a 200-foot radius of the former MGP site are provided in Appendix G.

7. Quality Assurance/Quality Control Discussion

Delineation of soil impacts at 218 and 220 40th Street associated with historical MGP site activities was completed in 2011. Lab reports for sampling conducted from 2011 and earlier were previously submitted to the NJDEP. Four laboratory analytical reports for soil samples collected from 218 and 220 40th Street after 2011 have been prepared since the submittal of the Remedial Investigation Report (RIR) for the MGP site. All soil samples were sent to IAL for analysis. IAL is a New Jersey-certified laboratory (DEP NELAC #14751).

Sample analysis was for Target Compound List (TCL) PAH compounds by EPA Method 8270D. Field blank samples were collected during the March 27, 2017 sampling event (E14-02636 lab report), the April 2, 2014 sampling event (E14-02878), and December 16, 2014 sampling event (E14-12132 lab report). Field blanks were not collected during the May 19, 2015 sampling event (E15-04181 lab report). No detections of PAH compounds were reported in the field blank samples.

Review of the laboratory reports identified that the Matrix Spike/Matrix Spike Duplicate (MS/MSD) percent recovery and laboratory control sample (LCS) did not meet NJDEP Data of Known Quality Protocols (DKQP) in the E14-141222. Other quality control criteria were achieved. Samples were analyzed and/or extracted within the applicable hold time. Dilution was required in samples from lab reports E14-02636, E14-12132 and E15-04181 due to high PAH concentrations in one sample from each report. Detection limits below applicable remediation standards were not achieved for the diluted samples. However, as exceedances were reported in these samples, the dilution and elevated reporting levels do not affect the validity of the laboratory data.

Data Set E14-02636

GEI performed a data validation of IAL data set E14-02636 for quality assurance purposes. Data Set E4-02636 contained results for 26 soil samples and one field blank sample analyzed for TCL PAHs via USEPA Method 8270D. The following paragraphs describe the data quality for the listed parameters. Calculations were spot-checked; no discrepancies were noted.

The soil samples were collected on March 27, 2014. The soil samples were extracted and analyzed within the required hold times. No contaminants were detected in the project Field Blank sample and laboratory method blanks. The surrogate and laboratory control sample recoveries and internal standard area counts, and retention times fell within control limits. The instrument performance check percent relative abundance criteria, initial calibration relative standard deviation (% RSD), and continuing calibration verification percent difference (%D) for the project analytical instruments (MSD_ A, MSD_B, MSD_C) fell within control limits.

Soil sample B476 (2.5-3) (E14-02636-001) was selected as one of the MS/MSD pair. The percent recoveries and relative percent difference (RPD) fell within control limits providing a positive indication of the accuracy and precision associated with the analysis.

Samples were placed in coolers maintained at less than 4°C for preservation. Chain-of-custody documentation was maintained until delivery to the laboratory for analysis. Samples were sent to IAL. In accordance with NJDEP's Technical Requirements for Site Remediation, IAL prepared reduced laboratory data deliverables for the final laboratory reports.

8. Conclusions

Analytical results from investigation activities performed at the 218 and 220 40th Street parcels in Sea Isle City, New Jersey (the Site) have identified PAH compounds at concentrations above RDCSRS in the soil deeper than 5 feet bgs. The soil impacts are related to the former Sea Isle City MGP site. Groundwater sampling conducted at and downgradient of the Site did not identify compounds at concentrations exceeding GWQS. Based on the existing cover of a minimum of 5 feet of unimpacted soil and the lack of groundwater contamination, no active remediation is necessary at the properties. GEI recommends that a RAP for soil be obtained and that a deed notice be established for portions of the 218 40th Street and 220 40th Street properties, to inform potential future property owners of the soil impacts that would remain on Site. After the RAP is obtained and a deed notice established, GEI proposes that a restricted use, AOC-specific, RAO be issued for the soil contamination and that an unrestricted use, AOC-specific, RAO be issued for the groundwater.

Tables

Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location:				B-107B	B-107B	B-107B(OS)	B-107B(OS)	B-107C	B-107C	B-107D
Field Sample ID:				SI-B107B-5-5.5	SI-B107B-9-9.5	SI-B107B(R)-5-5.5	SI-B107B(R)-5-5.5(R)	SI-B107C-4-4.5	SI-B107C-6-6.5	SI-B107D-4-4.5
Sample Date:				11/20/2002	11/20/2002	11/20/2002	11/20/2002	11/20/2002	11/20/2002	11/20/2002
Lab ID:				A0232520	A0232521	A0232537	A0232538	A0232524	A0232525	A0232528
Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	5-5.5	9-9.5	5-5.5	5-5.5	4-4.5	6-6.5	4-4.5
BTEX (mg/kg)										
Benzene	71-43-2	2	5	1.6 U	0.66 U	1.6 U	1.6 U	1.4 U	0.7 U	1.9 U
Toluene	108-88-3	6300	91000	0.89 J	0.66 U	0.8 J	0.62 J	1.4 U	0.7 U	0.68 J
Ethylbenzene	100-41-4	7800	110,000	5.4	0.66 U	4.6 J	3.5	1.4 U	0.7 U	3.8 J
Xylene, Total	1330-20-7	12000	170000	21.1	1.3 U	17.8 J	12.5	2.7 U	1.4 U	23.2 J
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	**1400 J**	0.12 U	**180 J**	**77 J**	0.21 U	0.13 U	**450 J**
2-Methylnaphalene	91-57-6	230	2400	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NS	300000	130 U	0.12 U	10 J	1.8 J	0.53	0.13 U	31 J
Acenaphthene	83-32-9	3400	37000	370 J	0.12 U	49 J	12 J	0.35	0.13 U	130 J
Fluorene	86-73-7	2300	24000	130 U	0.12 U	36 J	8.2 J	0.38	0.13 U	110 J
Phenanthrene	85-01-8	NS	300000	590 J	0.12 U	110 J	20 J	0.86	0.13 U	310 J
Anthracene	120-12-7	17000	30000	190 J	0.12 U	35 J	6 J	0.5	0.13 U	100 J
Fluoranthene	206-44-0	2300	24000	160 J	0.12 U	34 J	5.3 J	1.4	0.13 U	100 J
Pyrene	129-00-0	1700	18000	260 J	0.12 U	46 J	9.1 J	1.1	0.13 U	140 J
Benzo[a]anthracene	56-55-3	5	17	130 U	0.12 U	**14 J**	2.8 J	0.69	0.13 U	**42 J**
Chrysene	218-01-9	450	1700	130 U	0.12 U	14 J	2.3 J	0.87	0.13 U	40 J
Benzo[b]fluoranthene	205-99-2	5	17	250 U	0.24 U	**6.5 J**	6.7 U	0.35 J	0.25 U	**19 J**
Benzo[k]fluoranthene	207-08-9	45	170	250 U	0.24 U	5.2 J	6.7 U	0.74	0.25 U	19 J
Benzo[a]pyrene	50-32-8	0.5	2	250 U	0.24 U	**11 J**	6.7 U	**1.1**	0.25 U	**35 J**
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	250 U	0.24 U	9.7 U	6.7 U	0.76	0.25 U	27 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	250 U	0.24 U	9.7 U	6.7 U	0.42 U	0.25 U	27 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	250 U	0.24 U	9.7 U	6.7 U	0.78	0.25 U	27 U

Notes:

RDCSRS - Residential Direct Contact Soil Remediation Standard

NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

BTEX - Benzene, toluene, ethyl benzene, and xylene

PAH - Polycyclic aromatic hydrocarbons

NS - No soil remediation standard established

J - Constituent identified; value is approximated

U - Not detected above the reporting limit shown

E - Value above quantitation range

D - The compound was reported from the Diluted analysis

All results in milligrams per kilogram (mg/kg)

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Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location:				B-107D	B-107E	B-107F	B-107G	B-107H	B-107J	B-107J
Field Sample ID:				SI-B107D-7.5-8	SI-B107E-4-4.5	SI-B107F-6-6.5	SI-B107G-4.5-5	SI-B107H-5.5-6	SI-B107J-7.5-8	SI-B107J-10.5-11
Sample Date:				11/20/2002	11/20/2002	11/20/2002	11/20/2002	12/11/2002	2/11/2003	2/11/2003
Lab ID:				A0232529	A0232531	A0232533	A0232535	A0234510	A04436	A04438
Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	7.5-8	4-4.5	6-6.5	4.5-5	5.5-6	7.5-8	10.5-11
BTEX (mg/kg)										
Benzene	71-43-2	2	5	0.71 U	NA	NA	1.2 U	NA	NA	NA
Toluene	108-88-3	6300	91000	0.71 U	NA	NA	1.2 U	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	0.71 UJ	NA	NA	1.2 U	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	1.4 U	NA	NA	2.5 U	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.12 U	0.4	0.22 U	2.2	1.2	**620 E**	0.79
2-Methylnaphalene	91-57-6	230	2400	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NS	300000	0.12 U	0.2 J	0.22 U	0.19 U	0.4 U	41	0.4 U
Acenaphthene	83-32-9	3400	37000	0.12 U	0.16 J	0.22 U	0.19 U	0.4 U	210	0.4 U
Fluorene	86-73-7	2300	24000	0.12 U	0.2 U	0.22 U	0.19 U	0.4 U	120	0.4 U
Phenanthrene	85-01-8	NS	300000	0.12 U	0.89	0.22 U	0.19 U	0.4 U	330	0.31 J
Anthracene	120-12-7	17000	30000	0.12 U	0.28	0.22 U	0.19 U	0.4 U	98	0.4 U
Fluoranthene	206-44-0	2300	24000	0.12 U	1.7	0.22 U	0.19 U	0.4 U	92	0.4 U
Pyrene	129-00-0	1700	18000	0.12 U	1.3	0.22 U	0.19 U	0.4 U	130	0.4 U
Benzo[a]anthracene	56-55-3	5	17	0.12 U	0.66	0.22 U	0.19 U	0.4 U	**37**	0.4 U
Chrysene	218-01-9	450	1700	0.12 U	0.66	0.22 U	0.19 U	0.4 U	36	0.4 U
Benzo[b]fluoranthene	205-99-2	5	17	0.23 U	0.35 J	0.45 U	0.38 U	0.4 U	**12 J**	0.8 U
Benzo[k]fluoranthene	207-08-9	45	170	0.23 U	0.57	0.45 U	0.38 U	0.4 U	20 J	0.8 U
Benzo[a]pyrene	50-32-8	0.5	2	0.23 U	**0.59**	0.45 U	0.38 U	0.4 U	**27 J**	0.8 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.23 U	0.4 U	0.45 U	0.38 U	0.4 U	43 U	0.8 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.23 U	0.4 U	0.45 U	0.38 U	0.4 U	43 U	0.8 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.23 U	0.4 U	0.45 U	0.38 U	0.4 U	13 J	0.8 U

Notes:

RDCSRS - Residential Direct Contact Soil Remediation Standard

NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

BTEX - Benzene, toluene, ethyl benzene, and xylene

PAH - Polycyclic aromatic hydrocarbons

NS - No soil remediation standard established

J - Constituent identified; value is approximated

U - Not detected above the reporting limit shown

E - Value above quantitation range

D - The compound was reported from the Diluted analysis

All results in milligrams per kilogram (mg/kg)

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Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location:				B-107K	B-107K	B-107L	B-107L	B-107M	B-401	B-474	B-474
Field Sample ID:				SI-B107K-6-6.5	SI-B107K-7-7.5	SI-B107L-5-5.5	SI-B107L-7-7.5	SI-B107M-5-5.5	B-401(4-4.5)	B-474(4-4.5)	B-474(6-6.5)
Sample Date:				2/12/2003	2/12/2003	2/12/2003	2/12/2003	2/12/2003	1/18/2010	4/2/2014	4/2/2014
Lab ID:				A04424	A04425	A04423	A04428	A04426	00609-036	02878-001	02878-002
Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	6-6.5	7-7.5	5-5.5	7-7.5	5-5.5	4-4.5	4-4.5	6-6.5
BTEX (mg/kg)											
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)											
Naphthalene	91-20-3	6	17	390 E	**8.2**	**290**	0.81	4.4	0.075 U	0.040 U	0.040 U
2-Methylnaphalene	91-57-6	230	2400	NA	NA	NA	NA	NA	NA	0.040 U	0.040 U
Acenaphthylene	208-96-8	NS	300000	130	0.42 U	27	0.34 U	0.41 J	0.075 U	0.040 U	0.040 U
Acenaphthene	83-32-9	3400	37000	49	0.42 U	12 J	0.34 U	1.4	0.075 U	0.040 U	0.040 U
Fluorene	86-73-7	2300	24000	160	0.42 U	37	0.34 U	2.4	0.075 U	0.040 U	0.040 U
Phenanthrene	85-01-8	NS	300000	600 E	0.42 U	89	0.24 J	2.2	0.075 U	0.040 U	0.040 U
Anthracene	120-12-7	17000	30000	180	0.42 U	28	0.34 U	0.59	0.075 U	0.040 U	0.040 U
Fluoranthene	206-44-0	2300	24000	190	0.42 U	27	0.34 U	0.56 J	0.075 U	0.040 U	0.040 U
Pyrene	129-00-0	1700	18000	260	0.42 U	37	0.34 U	0.62	0.075 U	0.040 U	0.040 U
Benzo[a]anthracene	56-55-3	5	17	**78**	0.42 U	**13 J**	0.34 U	0.58 U	0.075 U	0.040 U	0.040 U
Chrysene	218-01-9	450	1700	77	0.42 U	11 J	0.34 U	0.29 J	0.075 U	0.040 U	0.040 U
Benzo[b]fluoranthene	205-99-2	5	17	**24 J**	0.83 U	29 U	0.67 U	1.2 U	0.075 U	0.040 U	0.040 U
Benzo[k]fluoranthene	207-08-9	45	170	35 J	0.83 U	29 U	0.67 U	1.2 U	0.075 U	0.040 U	0.040 U
Benzo[a]pyrene	50-32-8	0.5	2	**61**	0.83 U	**9.7 J**	0.67 U	1.2 U	0.075 U	0.040 U	0.040 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	**25 J**	0.83 U	29 U	0.67 U	1.2 U	0.075 U	0.040 U	0.040 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	37 U	0.83 U	29 U	0.67 U	1.2 U	0.075 U	0.040 U	0.040 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	30 J	0.83 U	29 U	0.67 U	1.2 U	0.075 U	0.040 U	0.040 U

Notes:

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NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

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NS - No soil remediation standard established

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Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Field Sample ID: Sample Date: Lab ID: Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	B-474 B-474(8.5-9) 4/2/2014 02878-003 8.5-9	B-475 B-475(3-3.5) 3/27/2014 02636-004 3-3.5	B-475 B-475(8-8.5) 3/27/2014 02636-005 8-8.5	B-475 B-475(9-9.5) 3/27/2014 02636-006 9-9.5	B-476 B-476(2.5-3) 3/27/2014 02636-001 2.5-3	B-476 B-476(11.5-12) 3/27/2014 02636-002 11.5-12	B-476 B-476(14.5-15) 3/27/2014 02636-003 14.5-15
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	**13.4**	2.26
2-Methylnaphalene	91-57-6	230	2400	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	14.2	1.91
Acenaphthylene	208-96-8	NS	300000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	5.39	0.475
Acenaphthene	83-32-9	3400	37000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	19.1	2.28
Fluorene	86-73-7	2300	24000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	18.5	2.3
Phenanthrene	85-01-8	NS	300000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	21.8	3.12
Anthracene	120-12-7	17000	30000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	14.7	2.29
Fluoranthene	206-44-0	2300	24000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	16.7	2.5
Pyrene	129-00-0	1700	18000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	24.1	3.53
Benzo[a]anthracene	56-55-3	5	17	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	**16.5**	1.78
Chrysene	218-01-9	450	1700	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	17.9	1.8
Benzo[b]fluoranthene	205-99-2	5	17	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	**8.68**	0.798
Benzo[k]fluoranthene	207-08-9	45	170	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	6.78	0.839
Benzo[a]pyrene	50-32-8	0.5	2	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	**14.8**	**1.5**
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	4.15	0.426
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	**1.79**	0.157
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.045 U	0.040 U	0.041 U	0.039 U	0.041 U	4.32	0.488

Notes:

RDCSRS - Residential Direct Contact Soil Remediation Standard

NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

BTEX - Benzene, toluene, ethyl benzene, and xylene

PAH - Polycyclic aromatic hydrocarbons

NS - No soil remediation standard established

J - Constituent identified; value is approximated

U - Not detected above the reporting limit shown

E - Value above quantitation range

D - The compound was reported from the Diluted analysis

All results in milligrams per kilogram (mg/kg)

Bold and shaded - Indicates that the detected result value exceeds RDCSRS

Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location:				B-477	B-477	B-477	B-478	B-478	B-479	B-479
Field Sample ID:				B-477(3.5-4)	B-477(8.5-9)	B-477(11.5-12)	B-478(3-3.5)	B-478(8.5-9)	B-479(3.5-4)	B-479(8-8.5)
Sample Date:				4/2/2014	4-2/2014	4/2/2014	3/27/2014	3/27/2014	3/27/2014	3/27/2014
Lab ID:				02878-005	02878-006	02878-007	02636-008	02636-009	02636-013	02636-014
Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	3.5-4	8.5-9	11.5-12	3-3.5	8.5-9	3.5-4	8-8.5
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.039 U	1.53	0.056	0.040 U	0.83	0.039 U	0.042 U
2-Methylnaphalene	91-57-6	230	2400	0.039 U	0.47	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Acenaphthylene	208-96-8	NS	300000	0.039 U	0.055	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Acenaphthene	83-32-9	3400	37000	0.039 U	0.313	0.040 U	0.040 U	0.043	0.039 U	0.042 U
Fluorene	86-73-7	2300	24000	0.039 U	0.237	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Phenanthrene	85-01-8	NS	300000	0.039 U	0.738	0.066	0.040 U	0.064	0.039 U	0.042 U
Anthracene	120-12-7	17000	30000	0.039 U	0.275	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Fluoranthene	206-44-0	2300	24000	0.039 U	0.255	0.040 U	0.040 U	0.031 J	0.039 U	0.042 U
Pyrene	129-00-0	1700	18000	0.039 U	0.387	0.034 J	0.040 U	0.048	0.039 U	0.042 U
Benzo[a]anthracene	56-55-3	5	17	0.039 U	0.146	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Chrysene	218-01-9	450	1700	0.039 U	0.159	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Benzo[b]fluoranthene	205-99-2	5	17	0.039 U	0.081	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Benzo[k]fluoranthene	207-08-9	45	170	0.039 U	0.084	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Benzo[a]pyrene	50-32-8	0.5	2	0.039 U	0.134	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.039 U	0.044	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.039 U	0.041 U	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.039 U	0.054	0.040 U	0.040 U	0.042 U	0.039 U	0.042 U

Notes:

RDCSRS - Residential Direct Contact Soil Remediation Standard

NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

BTEX - Benzene, toluene, ethyl benzene, and xylene

PAH - Polycyclic aromatic hydrocarbons

NS - No soil remediation standard established

J - Constituent identified; value is approximated

U - Not detected above the reporting limit shown

E - Value above quantitation range

D - The compound was reported from the Diluted analysis

All results in milligrams per kilogram (mg/kg)

Bold and shaded - Indicates that the detected result value exceeds RDCSRS

Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location:				B-480	B-480	B-480	B-486	B-486	B-488	B-489
Field Sample ID:				B-480(4--4.5)	B-480(6-6.5)	B-480(8.5-9)	B-486(4.5-5)	B-486(7.5-8)	B-486(4.5-5)	B-489 (4.5-5)
Sample Date:				3/27/2014	3/27/2014	3/27/2014	12/16/2014	12/16/2014	12/16/2014	12/16/2014
Lab ID:				02636-015	02636-016	02636-0017	12132-010	12132-011	12132-012	12132-013
Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	4-4.5	6-6.5	8.5-9	4.5-5	7.5-8	4.5-5	4.5-5
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.040 U	0.042	0.053	0.037 U	**14.0 D**	0.038 U	0.038 U
2-Methylnaphalene	91-57-6	230	2400	0.040 U	0.042	0.051 U	0.037 U	6.49	0.038 U	0.038 U
Acenaphthylene	208-96-8	NS	300000	0.040 U	0.042	0.366	0.037 U	0.111	0.038 U	0.038 U
Acenaphthene	83-32-9	3400	37000	0.040 U	0.042	0.138	0.037 U	2.83	0.038 U	0.038 U
Fluorene	86-73-7	2300	24000	0.040 U	0.042	0.098	0.037 U	1.90	0.038 U	0.038 U
Phenanthrene	85-01-8	NS	300000	0.040 U	0.042	0.541	0.037 U	4.38	0.038 U	0.038 U
Anthracene	120-12-7	17000	30000	0.040 U	0.042	0.4	0.037 U	1.11	0.038 U	0.038 U
Fluoranthene	206-44-0	2300	24000	0.040 U	0.042	0.818	0.037 U	0.661	0.038 U	0.038 U
Pyrene	129-00-0	1700	18000	0.040 U	0.042	1.5	0.037 U	0.764	0.038 U	0.038 U
Benzo[a]anthracene	56-55-3	5	17	0.040 U	0.042	1.79	0.037 U	0.218	0.038 U	0.038 U
Chrysene	218-01-9	450	1700	0.040 U	0.042	2.11	0.037 U	0.249	0.038 U	0.038 U
Benzo[b]fluoranthene	205-99-2	5	17	0.040 U	0.042	0.996	0.037 U	0.114	0.038 U	0.038 U
Benzo[k]fluoranthene	207-08-9	45	170	0.040 U	0.042	1.21	0.037 U	0.107	0.038 U	0.038 U
Benzo[a]pyrene	50-32-8	0.5	2	0.040 U	0.042	**2.17**	0.037 U	0.190	0.038 U	0.038 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.040 U	0.042	0.645	0.037 U	0.069	0.038 U	0.038 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.040 U	0.042	0.218	0.037 U	ND	0.038 U	0.038 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.040 U	0.042	0.727	0.037 U	0.074	0.038 U	0.038 U

Notes:

RDCSRS - Residential Direct Contact Soil Remediation Standard

NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

BTEX - Benzene, toluene, ethyl benzene, and xylene

PAH - Polycyclic aromatic hydrocarbons

NS - No soil remediation standard established

J - Constituent identified; value is approximated

U - Not detected above the reporting limit shown

E - Value above quantitation range

D - The compound was reported from the Diluted analysis

All results in milligrams per kilogram (mg/kg)

Bold and shaded - Indicates that the detected result value exceeds RDCSRS

Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location:				B-490	B-490	B-490	B-490	B-491	B-491	B-492
Field Sample ID:				B-490 (4.5-5)	B-490 (5.5-6)	B-490 (11.5-12)	B-490 (14.5-15)	B-491 (4-4.5)	B-491 (5-5.5)	B-492 (4-4.5)
Sample Date:				12/16/2014	12/16/2014	12/16/2014	12/16/2014	12/16/2014	12/16/2014	12/16/2014
Lab ID:				12132-005	12132-006	12132-007	12132-008	12132-001	12132-002	12132-003
Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	4.5-5	5.5-6	11.5-12	14.5-15	4.5-5	5-5.5	4-4.5
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.038 U	0.038 U	0.039 U	0.032	0.042 U	0.041 U	0.039 U
2-Methylnaphalene	91-57-6	230	2400	0.038 U	0.038 U	0.059	0.078	0.042 U	0.041 U	0.039 U
Acenaphthylene	208-96-8	NS	300000	0.038 U	0.038 U	0.039 U	0.038 U	0.042 U	0.041 U	0.039 U
Acenaphthene	83-32-9	3400	37000	0.038 U	0.038 U	0.057	0.077	0.042 U	0.041 U	0.039 U
Fluorene	86-73-7	2300	24000	0.038 U	0.038 U	0.038 J	0.041	0.042 U	0.041 U	0.039 U
Phenanthrene	85-01-8	NS	300000	0.038 U	0.038 U	0.146	0.142	0.042 U	0.041 U	0.039 U
Anthracene	120-12-7	17000	30000	0.038 U	0.038 U	0.044	0.041	0.042 U	0.041 U	0.039 U
Fluoranthene	206-44-0	2300	24000	0.038 U	0.038 U	0.036 J	0.056	0.042 U	0.041 U	0.039 U
Pyrene	129-00-0	1700	18000	0.038 U	0.038 U	0.035 J	0.060	0.042 U	0.041 U	0.039 U
Benzo[a]anthracene	56-55-3	5	17	0.038 U	0.038 U	0.039 U	0.038 U	0.042 U	0.041 U	0.039 U
Chrysene	218-01-9	450	1700	0.038 U	0.038 U	0.039 U	0.029	0.042 U	0.041 U	0.039 U
Benzo[b]fluoranthene	205-99-2	5	17	0.038 U	0.038 U	0.039 U	0.038 U	0.042 U	0.041 U	0.039 U
Benzo[k]fluoranthene	207-08-9	45	170	0.038 U	0.038 U	0.039 U	0.038 U	0.042 U	0.041 U	0.039 U
Benzo[a]pyrene	50-32-8	0.5	2	0.038 U	0.038 U	0.039 U	0.024	0.042 U	0.041 U	0.039 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.038 U	0.038 U	0.039 U	0.038 U	0.042 U	0.041 U	0.039 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.038 U	0.038 U	0.039 U	0.038 U	0.042 U	0.041 U	0.039 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.038 U	0.038 U	0.039 U	0.038 U	0.042 U	0.041 U	0.039 U

Notes:

RDCSRS - Residential Direct Contact Soil Remediation Standard

NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

BTEX - Benzene, toluene, ethyl benzene, and xylene

PAH - Polycyclic aromatic hydrocarbons

NS - No soil remediation standard established

J - Constituent identified; value is approximated

U - Not detected above the reporting limit shown

E - Value above quantitation range

D - The compound was reported from the Diluted analysis

All results in milligrams per kilogram (mg/kg)

Bold and shaded - Indicates that the detected result value exceeds RDCSRS

Table 1 - 218 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location:				B-492
Field Sample ID:				B-492 (5-5.5)
Sample Date:				12/16/2014
Lab ID:				12132-004
Sample Depth (fbgs):	CAS	RDCSRS	NRDCSRS	5-5.5
BTEX (mg/kg)				
Benzene	71-43-2	2	5	NA
Toluene	108-88-3	6300	91000	NA
Ethylbenzene	100-41-4	7800	110,000	NA
Xylene, Total	1330-20-7	12000	170000	NA
PAHs (mg/kg)				
Naphthalene	91-20-3	6	17	0.038 U
2-Methylnaphalene	91-57-6	230	2400	0.038 U
Acenaphthylene	208-96-8	NS	300000	0.038 U
Acenaphthene	83-32-9	3400	37000	0.038 U
Fluorene	86-73-7	2300	24000	0.038 U
Phenanthrene	85-01-8	NS	300000	0.038 U
Anthracene	120-12-7	17000	30000	0.038 U
Fluoranthene	206-44-0	2300	24000	0.038 U
Pyrene	129-00-0	1700	18000	0.038 U
Benzo[a]anthracene	56-55-3	5	17	0.038 U
Chrysene	218-01-9	450	1700	0.038 U
Benzo[b]fluoranthene	205-99-2	5	17	0.038 U
Benzo[k]fluoranthene	207-08-9	45	170	0.038 U
Benzo[a]pyrene	50-32-8	0.5	2	0.038 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.038 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.038 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.038 U

Notes:

RDCSRS - Residential Direct Contact Soil Remediation Standard

NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard

BTEX - Benzene, toluene, ethyl benzene, and xylene

PAH - Polycyclic aromatic hydrocarbons

NS - No soil remediation standard established

J - Constituent identified; value is approximated

U - Not detected above the reporting limit shown

E - Value above quantitation range

D - The compound was reported from the Diluted analysis

All results in milligrams per kilogram (mg/kg)

Bold and shaded - Indicates that the detected result value exceeds RDCSRS

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	B-108 11/19/2002 4-4.5	B-108A 12/10/2002 4-4.5	B-108A 12/10/2002 5.5-6	B-108B 12/10/2002 4-4.5	B-109 12/10/2002 4-4.5	B-109 12/10/2002 6-6.5	B-109A 12/11/2002 4-4.5
BTEX (mg/kg)										
Benzene	71-43-2	2	5	0.78 U	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	0.78 U	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	0.78 U	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	1.6 U	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.13 U	3.6 J	3.7 U	0.45 U	5.5 U	0.41 U	0.52 U
2-Methylnaphalene	91-57-6	230	2400	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NS	300000	0.13 U	2.5 J	3.7 U	0.45 U	9.3 U	0.41 U	0.52 U
Acenaphthene	83-32-9	3400	37000	0.22	5.5 J	0.052 J	0.45 U	4.7 J	0.41 U	0.52 U
Fluorene	86-73-7	2300	24000	0.13 U	7.7 J	0.37 U	0.45 U	6.8 J	0.41 U	0.52 U
Phenanthrene	85-01-8	NS	300000	0.13 U	30 J	0.31 J	0.23 J	50 J	0.41 U	0.52 U
Anthracene	120-12-7	17000	30000	0.13 U	8.8 J	0.059 J	0.15 J	23 J	0.41 U	0.52 U
Fluoranthene	206-44-0	2300	24000	0.13 U	12 J	0.35 J	0.12 J	41 J	0.41 U	0.52 U
Pyrene	129-00-0	1700	18000	0.13 U	17 J	0.22 J	0.13 J	48 J	0.41 U	0.52 U
Benzo[a]anthracene	56-55-3	5	17	0.13 U	**5.2 J**	0.37 U	0.45 U	**18 J**	0.41 U	0.52 U
Chrysene	218-01-9	450	1700	0.13 U	5.2 J	0.37 U	0.45 U	19 J	0.41 U	0.52 U
Benzo[b]fluoranthene	205-99-2	5	17	0.27 U	2.2 J	0.37 U	0.45 U	**10 J**	0.41 U	0.52 U
Benzo[k]fluoranthene	207-08-9	45	170	0.27 U	2.5 J	0.37 U	0.45 U	8 J	0.41 U	0.52 U
Benzo[a]pyrene	50-32-8	0.5	2	0.27 U	**4.3 J**	0.37 U	0.45 U	**16 J**	0.41 U	0.52 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.27 U	4.9 U	0.37 U	0.45 U	**6.9 J**	0.41 U	0.52 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.27 U	4.9 U	0.37 U	0.45 U	**5.5 J**	0.41 U	0.52 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.27 U	4.9 U	0.37 U	0.45 U	6.9 J	0.41 U	0.52 U

Notes:
RDCSRS - Resdiential Direct Contact Soil Remediation Standard
NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard
BOLD - Indicates that the detected result value exceeds RDCSRS
BTEX - Benzene, toluene, ethyl benzene, and xylene
PAH - Polycyclic aromatic hydrocarbons
NA - Not Analyzed
NS - No soil remediation standard established
J - Constituent identified; value is approximated
U - Not detected above the reporting limit shown
E - Value above quantitation range
D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	B-110 2/11/2003 6-6.5	B-298 1/18/2010 5-5.5	B-298 1/18/2010 6.5-7	B-299 1/18/2010 6.5-7	B-400 1/18/2010 4-4.5	B-404 3/10/2010 7-7.5	B-404 3/10/2010 9.5-10
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	4.9	0.077 U	**9.79**	0.080 U	0.075 U	0.078 U	0.080 U
2-Methylnaphalene	91-57-6	230	2400	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NS	300000	0.55 J	0.077 U	0.148 U	0.080 U	0.075 U	0.078 U	0.080 U
Acenaphthene	83-32-9	3400	37000	2.4	0.077 U	2.47	0.080 U	0.075 U	0.078 U	0.080 U
Fluorene	86-73-7	2300	24000	2.5	0.077 U	0.580	0.080 U	0.075 U	0.078 U	0.080 U
Phenanthrene	85-01-8	NS	300000	4.4	0.077 U	0.421	0.080 U	0.075 U	0.078 U	0.080 U
Anthracene	120-12-7	17000	30000	1.3	0.077 U	0.121 J	0.080 U	0.075 U	0.078 U	0.080 U
Fluoranthene	206-44-0	2300	24000	1.7	0.077 U	0.197	0.080 U	0.075 U	0.078 U	0.080 U
Pyrene	129-00-0	1700	18000	1.7	0.077 U	0.206	0.080 U	0.075 U	0.078 U	0.080 U
Benzo[a]anthracene	56-55-3	5	17	0.52	0.077 U	0.100 J	0.080 U	0.075 U	0.078 U	0.080 U
Chrysene	218-01-9	450	1700	0.97	0.077 U	0.076 J	0.080 U	0.075 U	0.078 U	0.080 U
Benzo[b]fluoranthene	205-99-2	5	17	0.44 J	0.077 U	0.148 U	0.080 U	0.075 U	0.078 U	0.080 U
Benzo[k]fluoranthene	207-08-9	45	170	0.55 J	0.077 U	0.148 U	0.080 U	0.075 U	0.078 U	0.080 U
Benzo[a]pyrene	50-32-8	0.5	2	0.49 J	0.077 U	0.148 U	0.080 U	0.075 U	0.078 U	0.080 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	1.2 U	0.077 U	0.148 U	0.080 U	0.075 U	0.078 U	0.080 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	1.2 U	0.077 U	0.148 U	0.080 U	0.075 U	0.078 U	0.080 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.45 J	0.077 U	0.148 U	0.080 U	0.075 U	0.078 U	0.080 U

Notes:
RDCSRS - Resdiential Direct Contact Soil Remediation Standard
NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard
BOLD - Indicates that the detected result value exceeds RDCSRS
BTEX - Benzene, toluene, ethyl benzene, and xylene
PAH - Polycyclic aromatic hydrocarbons
NA - Not Analyzed
NS - No soil remediation standard established
J - Constituent identified; value is approximated
U - Not detected above the reporting limit shown
E - Value above quantitation range
D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	B-405 3/10/2010 7-7.5	B-405 3/10/2010 9.5-10	B-406 3/10/2010 7-7.5	B-406 3/10/2010 9.5-10	B-407 3/10/2010 7-7.5	B-407 3/10/2010 9.5-10	B-408 3/11/2010 9.5-10
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.092 J	0.098 U	0.079 U	**23.3**	0.081 U	0.079 U	**38.4**
2-Methylnaphalene	91-57-6	230	2400	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NS	300000	0.128 U	0.098 U	0.079 U	0.142 J	0.081 U	0.079 U	9.83
Acenaphthene	83-32-9	3400	37000	0.113 J	0.098 U	0.079 U	7.34	0.081 U	0.079 U	59.8
Fluorene	86-73-7	2300	24000	0.128 U	0.098 U	0.079 U	3.17	0.081 U	0.079 U	47.2
Phenanthrene	85-01-8	NS	300000	0.156	0.098 U	0.079 U	3.44	0.081 U	0.079 U	155
Anthracene	120-12-7	17000	30000	0.060 J	0.098 U	0.079 U	0.853	0.081 U	0.079 U	48.7
Fluoranthene	206-44-0	2300	24000	0.316	0.098 U	0.079 U	0.352 J	0.081 U	0.079 U	67.7
Pyrene	129-00-0	1700	18000	0.371	0.098 U	0.079 U	0.361	0.081 U	0.079 U	76.7
Benzo[a]anthracene	56-55-3	5	17	0.121 J	0.098 U	0.079 U	0.170 J	0.081 U	0.079 U	**25.4**
Chrysene	218-01-9	450	1700	0.219	0.098 U	0.079 U	0.124 J	0.081 U	0.079 U	27.6
Benzo[b]fluoranthene	205-99-2	5	17	0.128 U	0.098 U	0.079 U	0.353 U	0.081 U	0.079 U	**10.7**
Benzo[k]fluoranthene	207-08-9	45	170	0.128 U	0.098 U	0.079 U	0.353 U	0.081 U	0.079 U	16.1
Benzo[a]pyrene	50-32-8	0.5	2	0.128 U	0.098 U	0.079 U	0.353 U	0.081 U	0.079 U	**20.5**
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.128 U	0.098 U	0.079 U	0.353 U	0.081 U	0.079 U	**18.8**
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.128 U	0.098 U	0.079 U	0.353 U	0.081 U	0.079 U	**6.56**
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.128 U	0.098 U	0.079 U	0.353 U	0.081 U	0.079 U	24.9

Notes:
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PAH - Polycyclic aromatic hydrocarbons
NA - Not Analyzed
NS - No soil remediation standard established
J - Constituent identified; value is approximated
U - Not detected above the reporting limit shown
E - Value above quantitation range
D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	B-408A 5/11/2010 12-12.5	B-408A 5/11/2010 14.5-15	B-409 5/11/2010 6-6.5	B-409 5/11/2010 11-11.5	B-410 5/11/2010 6-6.5	B-410 5/11/2010 9-9.5	B-411 5/11/2010 8.5-9
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.943	0.033 U	0.029 U	0.776	0.034 U	0.024 U	0.024 U
2-Methylnaphalene	91-57-6	230	2400	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NS	300000	0.060 J	0.042 U	0.037 U	0.034 U	0.043 U	0.030 U	0.031 U
Acenaphthene	83-32-9	3400	37000	0.603	0.038 U	0.033 U	0.176	0.039 U	0.027 U	0.028 U
Fluorene	86-73-7	2300	24000	0.444	0.035 U	0.031 U	0.048 J	0.037 U	0.025 U	0.026 U
Phenanthrene	85-01-8	NS	300000	1.89	0.203	0.029 U	0.161	0.034 U	0.024 U	0.024 U
Anthracene	120-12-7	17000	30000	0.581	0.077 J	0.050 U	0.130	0.060 U	0.041 U	0.042 U
Fluoranthene	206-44-0	2300	24000	1.06	0.091 J	0.029 U	0.177	0.034 U	0.024 U	0.024 U
Pyrene	129-00-0	1700	18000	1.52	0.188	0.031 U	0.272	0.037 U	0.025 U	0.026 U
Benzo[a]anthracene	56-55-3	5	17	0.434	0.044 U	0.039 U	0.079 J	0.046 U	0.032 U	0.033 U
Chrysene	218-01-9	450	1700	0.495	0.062 U	0.054 U	0.082 J	0.064 U	0.045 U	0.046 U
Benzo[b]fluoranthene	205-99-2	5	17	0.194	0.038 U	0.033 U	0.031 U	0.039 U	0.027 U	0.028 U
Benzo[k]fluoranthene	207-08-9	45	170	0.238	0.044 U	0.039 U	0.036 U	0.046 U	0.032 U	0.033 U
Benzo[a]pyrene	50-32-8	0.5	2	0.374	0.047 U	0.041 U	0.038 U	0.048 U	0.033 U	0.034 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.116	0.033 U	0.029 U	0.027 U	0.034 U	0.024 U	0.024 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.033 U	0.035 U	0.031 U	0.029 U	0.037 U	0.025 U	0.026 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.137	0.040 U	0.035 U	0.032 U	0.041 U	0.029 U	0.029 U

Notes:
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BOLD - Indicates that the detected result value exceeds RDCSRS
BTEX - Benzene, toluene, ethyl benzene, and xylene
PAH - Polycyclic aromatic hydrocarbons
NA - Not Analyzed
NS - No soil remediation standard established
J - Constituent identified; value is approximated
U - Not detected above the reporting limit shown
E - Value above quantitation range
D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	B-412 5/11/2010 4.5-5	B-412 5/11/2010 8.5-9	B-481 3/27/2014 3.5-4	B-481 3/27/2014 8-8.5	B-482 3/27/2014 3.5-4	B-482 3/27/2014 8-8.5	B-483 3/27/2014 6-6.5
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.024 U	0.103	0.028 U	0.028 U	0.024 U	0.026 U	0.030 U
2-Methylnaphalene	91-57-6	230	2400	NA	NA	0.035 U	0.034 U	0.030 U	0.032 U	0.037 U
Acenaphthylene	208-96-8	NS	300000	0.030 U	0.033 U	0.028 U	0.028 U	0.024 U	0.026 U	0.030 U
Acenaphthene	83-32-9	3400	37000	0.027 U	0.059 J	0.044 U	0.042 U	0.037 U	0.040 U	0.046 U
Fluorene	86-73-7	2300	24000	0.025 U	0.028 U	0.028 U	0.028 U	0.024 U	0.026 U	0.030 U
Phenanthrene	85-01-8	NS	300000	0.024 U	0.026 U	0.073	0.028 U	0.024 U	0.026 U	0.030 U
Anthracene	120-12-7	17000	30000	0.041 U	0.045 U	0.028 U	0.028 U	0.024 U	0.026 U	0.030 U
Fluoranthene	206-44-0	2300	24000	0.024 U	0.026 U	0.058	0.028 U	0.024 U	0.026 U	0.030 U
Pyrene	129-00-0	1700	18000	0.025 U	0.028 U	0.066	0.028 U	0.024 U	0.026 U	0.030 U
Benzo[a]anthracene	56-55-3	5	17	0.032 U	0.035 U	0.070	0.028 U	0.024 U	0.026 U	0.030 U
Chrysene	218-01-9	450	1700	0.045 U	0.049 U	0.124	0.028 U	0.024 U	0.026 U	0.030 U
Benzo[b]fluoranthene	205-99-2	5	17	0.027 U	0.030 U	0.035	0.028 U	0.024 U	0.026 U	0.030 U
Benzo[k]fluoranthene	207-08-9	45	170	0.032 U	0.035 U	0.036	0.028 U	0.024 U	0.026 U	0.030 U
Benzo[a]pyrene	50-32-8	0.5	2	0.034 U	0.037 U	0.037	0.028 U	0.024 U	0.026 U	0.030 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.024 U	0.026 U	0.028 U	0.028 U	0.024 U	0.026 U	0.030 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.026 U	0.028 U	0.029 U	0.028 U	0.024 U	0.026 U	0.030 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.029 U	0.031 U	0.028 U	0.028 U	0.024 U	0.026 U	0.030 U

Notes:
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NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard
BOLD - Indicates that the detected result value exceeds RDCSRS
BTEX - Benzene, toluene, ethyl benzene, and xylene
PAH - Polycyclic aromatic hydrocarbons
NA - Not Analyzed
NS - No soil remediation standard established
J - Constituent identified; value is approximated
U - Not detected above the reporting limit shown
E - Value above quantitation range
D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	B-483 3/27/2014 8.5-9	B-483 3/27/2014 12-12.5	B-484 3/27/2014 6.5-7	B-484 3/27/2014 9-9.5	B-484 3/27/2014 12.5-13	B-485 3/27/2014 4-4.5	B-485 3/27/2014 5-5.5
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.036 U	0.025 U	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
2-Methylnaphalene	91-57-6	230	2400	0.044 U	0.031 U	0.028 U	0.028 U	0.030 U	0.030 U	0.028 U
Acenaphthylene	208-96-8	NS	300000	0.036 U	0.042	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Acenaphthene	83-32-9	3400	37000	0.055 U	0.038 U	0.035 U	0.035 U	0.037 U	0.038 U	0.035 U
Fluorene	86-73-7	2300	24000	0.036 U	0.025 U	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Phenanthrene	85-01-8	NS	300000	0.036 U	0.118	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Anthracene	120-12-7	17000	30000	0.036 U	0.073	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Fluoranthene	206-44-0	2300	24000	0.036 U	0.288	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Pyrene	129-00-0	1700	18000	0.036 U	0.435	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Benzo[a]anthracene	56-55-3	5	17	0.036 U	0.199	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Chrysene	218-01-9	450	1700	0.036 U	0.259	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Benzo[b]fluoranthene	205-99-2	5	17	0.036 U	0.144	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Benzo[k]fluoranthene	207-08-9	45	170	0.036 U	0.169	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Benzo[a]pyrene	50-32-8	0.5	2	0.036 U	0.242	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.036 U	0.096	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.036 U	0.025 U	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.036 U	0.092	0.023 U	0.023 U	0.024 U	0.025 U	0.023 U

Notes:
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NA - Not Analyzed
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J - Constituent identified; value is approximated
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E - Value above quantitation range
D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	B-485 3/27/2014 13.5-14	B-493 5/19/2015 3.5-4	B-494 5/19/2015 3.5-4	B-495 5/19/2015 4.5-5	220SS-01 1/19/2010 0	220SS-02 1/19/2010 0	220SS-03 1/19/2010 0
BTEX (mg/kg)										
Benzene	71-43-2	2	5	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	6300	91000	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA	NA	NA	NA	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA	NA	NA	NA	NA	NA
PAHs (mg/kg)										
Naphthalene	91-20-3	6	17	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
2-Methylnaphalene	91-57-6	230	2400	0.037 U	0.024 U	0.023 U	0.022 U	NA	NA	NA
Acenaphthylene	208-96-8	NS	300000	0.030 U	0.028 U	0.027 U	0.026 U	0.075 U	0.07 U	0.073 U
Acenaphthene	83-32-9	3400	37000	0.047 U	0.030 U	0.029 U	0.028 U	0.075 U	0.07 U	0.073 U
Fluorene	86-73-7	2300	24000	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Phenanthrene	85-01-8	NS	300000	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Anthracene	120-12-7	17000	30000	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Fluoranthene	206-44-0	2300	24000	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Pyrene	129-00-0	1700	18000	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Benzo[a]anthracene	56-55-3	5	17	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Chrysene	218-01-9	450	1700	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Benzo[b]fluoranthene	205-99-2	5	17	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Benzo[k]fluoranthene	207-08-9	45	170	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Benzo[a]pyrene	50-32-8	0.5	2	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.030 U	0.035 U	0.034 U	0.032 U	0.075 U	0.07 U	0.073 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.031 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.030 U	0.024 U	0.023 U	0.022 U	0.075 U	0.07 U	0.073 U

Notes:
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BTEX - Benzene, toluene, ethyl benzene, and xylene
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D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 2 - 220 40th Street Soil Sample Analytical Results
Remedial Action Report
218 40th Street
Sea Isle City, New Jersey

Location: Sample Date: Sample Depth (ft):	CAS	RDCSRS	NRDCSRS	220SS-04 1/19/2010 0	MW-21 9/28/2012
BTEX (mg/kg)					
Benzene	71-43-2	2	5	NA	NA
Toluene	108-88-3	6300	91000	NA	NA
Ethylbenzene	100-41-4	7800	110,000	NA	NA
Xylene, Total	1330-20-7	12000	170000	NA	NA
PAHs (mg/kg)					
Naphthalene	91-20-3	6	17	0.072 U	1.00 U
2-Methylnaphalene	91-57-6	230	2400	NA	NA
Acenaphthylene	208-96-8	NS	300000	0.072 U	1.00 U
Acenaphthene	83-32-9	3400	37000	0.072 U	1.00 U
Fluorene	86-73-7	2300	24000	0.072 U	1.00 U
Phenanthrene	85-01-8	NS	300000	0.072 U	1.00 U
Anthracene	120-12-7	17000	30000	0.072 U	1.00 U
Fluoranthene	206-44-0	2300	24000	0.072 U	1.00 U
Pyrene	129-00-0	1700	18000	0.072 U	1.00 U
Benzo[a]anthracene	56-55-3	5	17	0.072 U	0.100 U
Chrysene	218-01-9	450	1700	0.072 U	1.00 U
Benzo[b]fluoranthene	205-99-2	5	17	0.072 U	0.100 U
Benzo[k]fluoranthene	207-08-9	45	170	0.072 U	0.100 U
Benzo[a]pyrene	50-32-8	0.5	2	0.072 U	0.100 U
Indeno[1,2,3-cd]pyrene	193-39-5	5	17	0.072 U	0.100 U
Dibenz[a,h]anthracene	53-70-3	0.5	2	0.072 U	0.100 U
Benzo[g,h,i]perylene	191-24-2	380000	30000	0.072 U	1.00 U

Notes:
RDCSRS - Resdiential Direct Contact Soil Remediation Standard
NRDCSRS - Non-Resdiential Direct Contact Soil Remediation Standard
BOLD - Indicates that the detected result value exceeds RDCSRS
BTEX - Benzene, toluene, ethyl benzene, and xylene
PAH - Polycyclic aromatic hydrocarbons
NA - Not Analyzed
NS - No soil remediation standard established
J - Constituent identified; value is approximated
U - Not detected above the reporting limit shown
E - Value above quantitation range
D - The compound was reported from the Diluted analysis
mg/kg - milligrams per kilogram

Table 3 - Groundwater Sample Analytical Results
Remedial Action Report
218-220 40th Street
Sea Isle City, New Jersey

Sample #:		HIGHER OF	Table 1 - Mar 13	MW-11				MW-11				MW-20			
Field ID:		PQLs	Vapor Intrusion												
Lab ID:		and	GW	04681-001				10258-006				04681-002			
Date Sampled:		GWQC	Screening	06/03/2015				11/05/2015				06/03/2015			
Depth(ft):		(ug/L)	Levels												
	CAS		(ug/L)												
Volatiles (ug/L)				Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Dichlorodifluoromethane	75-71-8	1000	1000	ND		1.00	0.685	ND		1.00	0.685	ND		1.00	0.685
Chloromethane	74-87-3	NS	240	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493
Vinyl chloride	75-01-4	1	1	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463
Bromomethane	74-83-9	10	20	ND		1.00	0.684	ND		1.00	0.684	ND		1.00	0.684
Chloroethane	75-00-3	5	26000	ND		1.00	0.829	ND		1.00	0.829	ND		1.00	0.829
Trichlorofluoromethane	75-69-4	2000	2000	ND		1.00	0.813	ND		1.00	0.813	ND		1.00	0.813
1,1-Dichloroethene	75-35-4	1	260	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
Acetone	67-64-1	6000	21000000	ND		5.00	1.43	ND		5.00	1.43	ND		5.00	1.43
Carbon disulfide	75-15-0	700	1500	ND		1.00	0.505	ND		1.00	0.505	ND		1.00	0.505
Methylene chloride	75-09-2	3	920	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99
trans-1,2-Dichloroethene	156-60-5	100	520	ND		1.00	0.544	ND		1.00	0.544	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	1634-04-4	70	580	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
1,1-Dichloroethane	75-34-3	50	50	ND		1.00	0.358	ND		1.00	0.358	ND		1.00	0.358
cis-1,2-Dichloroethene	156-59-2	70	NS	ND		1.00	0.479	ND		1.00	0.479	ND		1.00	0.479
2-Butanone (MEK)	78-93-3	300	2500000	ND		1.00	0.872	ND		1.00	0.872	ND		1.00	0.872
Bromochloromethane	74-97-5	NS	NS	ND		1.00	0.636	ND		1.00	0.636	ND		1.00	0.636
Chloroform	67-66-3	70	70	ND		1.00	0.511	ND		1.00	0.511	ND		1.00	0.511
1,1,1-Trichloroethane	71-55-6	30	13000	ND		1.00	0.485	ND		1.00	0.485	ND		1.00	0.485
Carbon tetrachloride	56-23-5	1	1	ND		1.00	0.668	ND		1.00	0.668	ND		1.00	0.668
1,2-Dichloroethane (EDC)	107-06-2	2	3	ND		1.00	0.573	ND		1.00	0.573	ND		1.00	0.573
Benzene	71-43-2	1	20	ND		1.00	0.388	ND		1.00	0.388	ND		1.00	0.388
Trichloroethene	79-01-6	1	2	ND		1.00	0.357	ND		1.00	0.357	ND		1.00	0.357
1,2-Dichloropropane	78-87-5	1	4	ND		1.00	0.556	ND		1.00	0.556	ND		1.00	0.556
1,4-Dioxane	123-91-1	10	NS	ND		**200**	**82.7**	ND		**200**	**82.7**	ND		**200**	**82.7**
Bromodichloromethane	75-27-4	1	2	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526
cis-1,3-Dichloropropene	10061-01-5	NS	7	ND		1.00	0.441	ND		1.00	0.441	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	108-10-1	NS	900000	ND		1.00	0.867	ND		1.00	0.867	ND		1.00	0.867
Toluene	108-88-3	600	330000	ND		1.00	0.370	ND		1.00	0.370	ND		1.00	0.370
trans-1,3-Dichloropropene	10061-02-6	NS	7	ND		1.00	0.416	ND		1.00	0.416	ND		1.00	0.416
1,1,2-Trichloroethane	79-00-5	3	8	ND		1.00	0.633	ND		1.00	0.633	ND		1.00	0.633
Tetrachloroethene	127-18-4	1	31	ND		1.00	0.495	ND		1.00	0.495	ND		1.00	0.495
2-Hexanone	591-78-6	300	NS	ND		1.00	0.693	ND		1.00	0.693	ND		1.00	0.693
Dibromochloromethane	124-48-1	1	6	ND		1.00	0.516	ND		1.00	0.516	ND		1.00	0.516
1,2-Dibromoethane (EDB)	106-93-4	0.03	0.4	ND		**1.00**	**0.677**	ND		**1.00**	**0.677**	ND		**1.00**	**0.677**
Chlorobenzene	108-90-7	50	770	ND		1.00	0.395	ND		1.00	0.395	ND		1.00	0.395
Ethylbenzene	100-41-4	700	700	ND		1.00	0.420	ND		1.00	0.420	ND		1.00	0.420
Total Xylenes	1330-20-7	1000	8600	ND		2.00	1.04	ND		2.00	1.04	ND		2.00	1.04
Styrene	100-42-5	100	180000	ND		1.00	0.370	ND		1.00	0.370	ND		1.00	0.370
Bromoform	75-25-2	4	300	ND		1.00	0.663	ND		1.00	0.663	ND		1.00	0.663
Isopropylbenzene	98-82-8	700	NS	ND		1.00	0.581	ND		1.00	0.581	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	79-34-5	1	6	ND		1.00	0.691	ND		1.00	0.691	ND		1.00	0.691
1,3-Dichlorobenzene	541-73-1	600	NS	ND		1.00	0.416	ND		1.00	0.416	ND		1.00	0.416
1,4-Dichlorobenzene	106-46-7	75	75	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409
1,2-Dichlorobenzene	95-50-1	600	6800	ND		1.00	0.401	ND		1.00	0.401	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	96-12-8	0.02	NS	ND		**1.00**	**0.930**	ND		**1.00**	**0.930**	ND		**1.00**	**0.930**
1,2,4-Trichlorobenzene	120-82-1	9	130	ND		1.00	0.483	ND		1.00	0.483	ND		1.00	0.483
1,2,3-Trichlorobenzene	87-61-6	NS	NS	ND		1.00	0.449	ND		1.00	0.449	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NS	3700	ND		1.00	0.972	ND		1.00	0.972	ND		1.00	0.972
Methyl acetate	79-20-9	7000	NS	ND		1.00	0.897	ND		1.00	0.897	ND		1.00	0.897
Cyclohexane	110-82-7	NS	16000	ND		2.00	0.818	ND		2.00	0.818	ND		2.00	0.818
Methylcyclohexane	108-87-2	NS	NS	ND		1.00	0.773	ND		1.00	0.773	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	542-75-6	1	7	ND		1.00	0.441	ND		1.00	0.441	ND		1.00	0.441
TOTAL VO's:		NS	NS	ND			NA	ND			NA	ND			NA
TOTAL TIC's:		NS	NS	ND			NA	ND			NA	ND			NA
TOTAL VO's & TIC's:		NS	NS	ND			NA	ND			NA	ND			NA
Semivolatiles - PAH (ug/L)				Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Naphthalene	91-20-3	300	300	ND		1.00	0.341	ND		1.00	0.341	ND		1.00	0.341
2-Methylnaphthalene	91-57-6	30	NS	ND		1.00	0.224	ND		1.00	0.224	ND		1.00	0.224
Acenaphthylene	208-96-8	100	NS	ND		1.00	0.246	ND		1.00	0.246	ND		1.00	0.246
Acenaphthene	83-32-9	400	NS	ND		1.00	0.251	ND		1.00	0.251	ND		1.00	0.251
Fluorene	86-73-7	300	NS	ND		1.00	0.203	ND		1.00	0.203	ND		1.00	0.203
Phenanthrene	85-01-8	100	NS	ND		1.00	0.225	ND		1.00	0.225	ND		1.00	0.225
Anthracene	120-12-7	2000	NS	ND		1.00	0.258	ND		1.00	0.258	ND		1.00	0.258
Fluoranthene	206-44-0	300	NS	ND		1.00	0.206	ND		1.00	0.206	ND		1.00	0.206
Pyrene	129-00-0	200	NS	ND		1.00	0.256	ND		1.00	0.256	ND		1.00	0.256
Benzo[a]anthracene	56-55-3	0.1	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Chrysene	218-01-9	5	NS	ND		1.00	0.320	ND		1.00	0.320	ND		1.00	0.320
Benzo[b]fluoranthene	205-99-2	0.2	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[k]fluoranthene	207-08-9	0.5	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[a]pyrene	50-32-8	0.1	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Dibenz[a,h]anthracene	53-70-3	0.3	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[g,h,i]perylene	191-24-2	100	NS	ND		1.00	0.325	ND		1.00	0.325	ND		1.00	0.325

NJDEP Class II-A Specific Ground Water Quality Criteria : Ground Water Quality Standards N.J.A.C. 7:9C, Nov 2005

BOLD Conc Indicates a concentration that exceeds the applicable criteria.

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

~ = Sample not analyzed for

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

N = Presumptive evidence of a compound from the use of GC/MS library search.

Table 3 - Groundwater Sample Analytical Results
Remedial Action Report
218-220 40th Street
Sea Isle City, New Jersey

Sample #:		HIGHER OF	Table 1 - Mar 13	MW-20				MW-21				MW-21			
Field ID:		PQLs	Vapor Intrusion												
Lab ID:		and	GW	10258-004				04681-003				10258-001			
Date Sampled:		GWQC	Screening	11/04/2015				06/03/2015				11/04/2015			
Depth(ft):		(ug/L)	Levels												
	CAS		(ug/L)												
Volatiles (ug/L)				Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Dichlorodifluoromethane	75-71-8	1000	1000	ND		1.00	0.685	ND		1.00	0.685	ND		1.00	0.685
Chloromethane	74-87-3	NS	240	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493
Vinyl chloride	75-01-4	1	1	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463
Bromomethane	74-83-9	10	20	ND		1.00	0.684	ND		1.00	0.684	ND		1.00	0.684
Chloroethane	75-00-3	5	26000	ND		1.00	0.829	ND		1.00	0.829	ND		1.00	0.829
Trichlorofluoromethane	75-69-4	2000	2000	ND		1.00	0.813	ND		1.00	0.813	ND		1.00	0.813
1,1-Dichloroethene	75-35-4	1	260	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
Acetone	67-64-1	6000	21000000	ND		5.00	1.43	ND		5.00	1.43	ND		5.00	1.43
Carbon disulfide	75-15-0	700	1500	ND		1.00	0.505	ND		1.00	0.505	ND		1.00	0.505
Methylene chloride	75-09-2	3	920	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99
trans-1,2-Dichloroethene	156-60-5	100	520	ND		1.00	0.544	ND		1.00	0.544	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	1634-04-4	70	580	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
1,1-Dichloroethane	75-34-3	50	50	ND		1.00	0.358	ND		1.00	0.358	ND		1.00	0.358
cis-1,2-Dichloroethene	156-59-2	70	NS	ND		1.00	0.479	ND		1.00	0.479	ND		1.00	0.479
2-Butanone (MEK)	78-93-3	300	2500000	ND		1.00	0.872	ND		1.00	0.872	ND		1.00	0.872
Bromochloromethane	74-97-5	NS	NS	ND		1.00	0.636	ND		1.00	0.636	ND		1.00	0.636
Chloroform	67-66-3	70	70	ND		1.00	0.511	ND		1.00	0.511	ND		1.00	0.511
1,1,1-Trichloroethane	71-55-6	30	13000	ND		1.00	0.485	ND		1.00	0.485	ND		1.00	0.485
Carbon tetrachloride	56-23-5	1	1	ND		1.00	0.668	ND		1.00	0.668	ND		1.00	0.668
1,2-Dichloroethane (EDC)	107-06-2	2	3	ND		1.00	0.573	ND		1.00	0.573	ND		1.00	0.573
Benzene	71-43-2	1	20	ND		1.00	0.388	ND		1.00	0.388	ND		1.00	0.388
Trichloroethene	79-01-6	1	2	ND		1.00	0.357	ND		1.00	0.357	ND		1.00	0.357
1,2-Dichloropropane	78-87-5	1	4	ND		1.00	0.556	ND		1.00	0.556	ND		1.00	0.556
1,4-Dioxane	123-91-1	10	NS	ND		**200**	**82.7**	ND		**200**	**82.7**	ND		**200**	**82.7**
Bromodichloromethane	75-27-4	1	2	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526
cis-1,3-Dichloropropene	10061-01-5	NS	7	ND		1.00	0.441	ND		1.00	0.441	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	108-10-1	NS	900000	ND		1.00	0.867	ND		1.00	0.867	ND		1.00	0.867
Toluene	108-88-3	600	330000	ND		1.00	0.370	ND		1.00	0.370	ND		1.00	0.370
trans-1,3-Dichloropropene	10061-02-6	NS	7	ND		1.00	0.416	ND		1.00	0.416	ND		1.00	0.416
1,1,2-Trichloroethane	79-00-5	3	8	ND		1.00	0.633	ND		1.00	0.633	ND		1.00	0.633
Tetrachloroethene	127-18-4	1	31	ND		1.00	0.495	ND		1.00	0.495	ND		1.00	0.495
2-Hexanone	591-78-6	300	NS	ND		1.00	0.693	ND		1.00	0.693	ND		1.00	0.693
Dibromochloromethane	124-48-1	1	6	ND		1.00	0.516	ND		1.00	0.516	ND		1.00	0.516
1,2-Dibromoethane (EDB)	106-93-4	0.03	0.4	ND		**1.00**	**0.677**	ND		**1.00**	**0.677**	ND		**1.00**	**0.677**
Chlorobenzene	108-90-7	50	770	ND		1.00	0.395	ND		1.00	0.395	ND		1.00	0.395
Ethylbenzene	100-41-4	700	700	ND		1.00	0.420	ND		1.00	0.420	ND		1.00	0.420
Total Xylenes	1330-20-7	1000	8600	ND		2.00	1.04	ND		2.00	1.04	ND		2.00	1.04
Styrene	100-42-5	100	180000	ND		1.00	0.370	ND		1.00	0.370	ND		1.00	0.370
Bromoform	75-25-2	4	300	ND		1.00	0.663	ND		1.00	0.663	ND		1.00	0.663
Isopropylbenzene	98-82-8	700	NS	ND		1.00	0.581	ND		1.00	0.581	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	79-34-5	1	6	ND		1.00	0.691	ND		1.00	0.691	ND		1.00	0.691
1,3-Dichlorobenzene	541-73-1	600	NS	ND		1.00	0.416	ND		1.00	0.416	ND		1.00	0.416
1,4-Dichlorobenzene	106-46-7	75	75	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409
1,2-Dichlorobenzene	95-50-1	600	6800	ND		1.00	0.401	ND		1.00	0.401	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	96-12-8	0.02	NS	ND		**1.00**	**0.930**	ND		**1.00**	**0.930**	ND		**1.00**	**0.930**
1,2,4-Trichlorobenzene	120-82-1	9	130	ND		1.00	0.483	ND		1.00	0.483	ND		1.00	0.483
1,2,3-Trichlorobenzene	87-61-6	NS	NS	ND		1.00	0.449	ND		1.00	0.449	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NS	3700	ND		1.00	0.972	ND		1.00	0.972	ND		1.00	0.972
Methyl acetate	79-20-9	7000	NS	ND		1.00	0.897	ND		1.00	0.897	ND		1.00	0.897
Cyclohexane	110-82-7	NS	16000	ND		2.00	0.818	ND		2.00	0.818	ND		2.00	0.818
Methylcyclohexane	108-87-2	NS	NS	ND		1.00	0.773	ND		1.00	0.773	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	542-75-6	1	7	ND		1.00	0.441	ND		1.00	0.441	ND		1.00	0.441
TOTAL VO's:		NS	NS	ND			NA	ND			NA	ND			NA
TOTAL TIC's:		NS	NS	ND			NA	ND			NA	ND			NA
TOTAL VO's & TIC's:		NS	NS	ND			NA	ND			NA	ND			NA
Semivolatiles - PAH (ug/L)				Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Naphthalene	91-20-3	300	300	ND		1.00	0.341	ND		1.00	0.341	ND		1.00	0.341
2-Methylnaphthalene	91-57-6	30	NS	ND		1.00	0.224	ND		1.00	0.224	ND		1.00	0.224
Acenaphthylene	208-96-8	100	NS	ND		1.00	0.246	ND		1.00	0.246	ND		1.00	0.246
Acenaphthene	83-32-9	400	NS	ND		1.00	0.251	ND		1.00	0.251	ND		1.00	0.251
Fluorene	86-73-7	300	NS	ND		1.00	0.203	ND		1.00	0.203	ND		1.00	0.203
Phenanthrene	85-01-8	100	NS	ND		1.00	0.225	ND		1.00	0.225	ND		1.00	0.225
Anthracene	120-12-7	2000	NS	ND		1.00	0.258	ND		1.00	0.258	ND		1.00	0.258
Fluoranthene	206-44-0	300	NS	ND		1.00	0.206	ND		1.00	0.206	ND		1.00	0.206
Pyrene	129-00-0	200	NS	ND		1.00	0.256	ND		1.00	0.256	ND		1.00	0.256
Benzo[a]anthracene	56-55-3	0.1	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Chrysene	218-01-9	5	NS	ND		1.00	0.320	ND		1.00	0.320	ND		1.00	0.320
Benzo[b]fluoranthene	205-99-2	0.2	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[k]fluoranthene	207-08-9	0.5	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[a]pyrene	50-32-8	0.1	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Dibenz[a,h]anthracene	53-70-3	0.3	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[g,h,i]perylene	191-24-2	100	NS	ND		1.00	0.325	ND		1.00	0.325	ND		1.00	0.325

NJDEP Class II-A Specific Ground Water Quality Criteria : Ground Water Quality Standards N.J.A.C. 7:9C,

BOLD Conc Indicates a concentration that exceeds the applicable criteria.

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

~ = Sample not analyzed for

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-ta

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

N = Presumptive evidence of a compound from the use of GC/MS library search.

Table 3 - Groundwater Sample Analytical Results
Remedial Action Report
218-220 40th Street
Sea Isle City, New Jersey

Sample #:		HIGHER OF	Table 1 - Mar 13	MW-22				MW-22				MW-22			
Field ID:		PQLs	Vapor Intrusion												
Lab ID:		and	GW	04681-004				08356-001				10258-003			
Date Sampled:		GWQC	Screening	06/03/2015				09/15/2015				11/04/2015			
Depth(ft):		(ug/L)	Levels												
	CAS		(ug/L)												
Volatiles (ug/L)				Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Dichlorodifluoromethane	75-71-8	1000	1000	ND		1.00	0.685	ND		1.00	0.685	ND		1.00	0.685
Chloromethane	74-87-3	NS	240	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493
Vinyl chloride	75-01-4	1	1	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463
Bromomethane	74-83-9	10	20	ND		1.00	0.684	ND		1.00	0.684	ND		1.00	0.684
Chloroethane	75-00-3	5	26000	ND		1.00	0.829	ND		1.00	0.829	ND		1.00	0.829
Trichlorofluoromethane	75-69-4	2000	2000	ND		1.00	0.813	ND		1.00	0.813	ND		1.00	0.813
1,1-Dichloroethene	75-35-4	1	260	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
Acetone	67-64-1	6000	21000000	ND		5.00	1.43	ND		5.00	1.43	ND		5.00	1.43
Carbon disulfide	75-15-0	700	1500	ND		1.00	0.505	ND		1.00	0.505	ND		1.00	0.505
Methylene chloride	75-09-2	3	920	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99
trans-1,2-Dichloroethene	156-60-5	100	520	ND		1.00	0.544	ND		1.00	0.544	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	1634-04-4	70	580	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
1,1-Dichloroethane	75-34-3	50	50	ND		1.00	0.358	ND		1.00	0.358	ND		1.00	0.358
cis-1,2-Dichloroethene	156-59-2	70	NS	ND		1.00	0.479	ND		1.00	0.479	ND		1.00	0.479
2-Butanone (MEK)	78-93-3	300	2500000	ND		1.00	0.872	ND		1.00	0.872	ND		1.00	0.872
Bromochloromethane	74-97-5	NS	NS	ND		1.00	0.636	ND		1.00	0.636	ND		1.00	0.636
Chloroform	67-66-3	70	70	ND		1.00	0.511	ND		1.00	0.511	ND		1.00	0.511
1,1,1-Trichloroethane	71-55-6	30	13000	ND		1.00	0.485	ND		1.00	0.485	ND		1.00	0.485
Carbon tetrachloride	56-23-5	1	1	ND		1.00	0.668	ND		1.00	0.668	ND		1.00	0.668
1,2-Dichloroethane (EDC)	107-06-2	2	3	ND		1.00	0.573	ND		1.00	0.573	ND		1.00	0.573
Benzene	71-43-2	1	20	ND		1.00	0.388	ND		1.00	0.388	ND		1.00	0.388
Trichloroethene	79-01-6	1	2	ND		1.00	0.357	ND		1.00	0.357	ND		1.00	0.357
1,2-Dichloropropane	78-87-5	1	4	ND		1.00	0.556	ND		1.00	0.556	ND		1.00	0.556
1,4-Dioxane	123-91-1	10	NS	ND		**200**	**82.7**	ND		**200**	**82.7**	ND		**200**	**82.7**
Bromodichloromethane	75-27-4	1	2	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526
cis-1,3-Dichloropropene	10061-01-5	NS	7	ND		1.00	0.441	ND		1.00	0.441	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	108-10-1	NS	900000	ND		1.00	0.867	ND		1.00	0.867	ND		1.00	0.867
Toluene	108-88-3	600	330000	ND		1.00	0.370	ND		1.00	0.370	ND		1.00	0.370
trans-1,3-Dichloropropene	10061-02-6	NS	7	ND		1.00	0.416	ND		1.00	0.416	ND		1.00	0.416
1,1,2-Trichloroethane	79-00-5	3	8	ND		1.00	0.633	ND		1.00	0.633	ND		1.00	0.633
Tetrachloroethene	127-18-4	1	31	ND		1.00	0.495	ND		1.00	0.495	0.573	J	1.00	0.495
2-Hexanone	591-78-6	300	NS	ND		1.00	0.693	ND		1.00	0.693	ND		1.00	0.693
Dibromochloromethane	124-48-1	1	6	ND		1.00	0.516	ND		1.00	0.516	ND		1.00	0.516
1,2-Dibromoethane (EDB)	106-93-4	0.03	0.4	ND		**1.00**	**0.677**	ND		**1.00**	**0.677**	ND		**1.00**	**0.677**
Chlorobenzene	108-90-7	50	770	ND		1.00	0.395	ND		1.00	0.395	ND		1.00	0.395
Ethylbenzene	100-41-4	700	700	ND		1.00	0.420	ND		1.00	0.420	ND		1.00	0.420
Total Xylenes	1330-20-7	1000	8600	ND		2.00	1.04	ND		2.00	1.04	ND		2.00	1.04
Styrene	100-42-5	100	180000	ND		1.00	0.370	ND		1.00	0.370	ND		1.00	0.370
Bromoform	75-25-2	4	300	ND		1.00	0.663	ND		1.00	0.663	ND		1.00	0.663
Isopropylbenzene	98-82-8	700	NS	ND		1.00	0.581	ND		1.00	0.581	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	79-34-5	1	6	ND		1.00	0.691	ND		1.00	0.691	ND		1.00	0.691
1,3-Dichlorobenzene	541-73-1	600	NS	ND		1.00	0.416	ND		1.00	0.416	ND		1.00	0.416
1,4-Dichlorobenzene	106-46-7	75	75	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409
1,2-Dichlorobenzene	95-50-1	600	6800	ND		1.00	0.401	ND		1.00	0.401	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	96-12-8	0.02	NS	ND		**1.00**	**0.930**	ND		**1.00**	**0.930**	ND		**1.00**	**0.930**
1,2,4-Trichlorobenzene	120-82-1	9	130	ND		1.00	0.483	ND		1.00	0.483	ND		1.00	0.483
1,2,3-Trichlorobenzene	87-61-6	NS	NS	ND		1.00	0.449	ND		1.00	0.449	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NS	3700	ND		1.00	0.972	ND		1.00	0.972	ND		1.00	0.972
Methyl acetate	79-20-9	7000	NS	ND		1.00	0.897	ND		1.00	0.897	ND		1.00	0.897
Cyclohexane	110-82-7	NS	16000	ND		2.00	0.818	ND		2.00	0.818	ND		2.00	0.818
Methylcyclohexane	108-87-2	NS	NS	ND		1.00	0.773	ND		1.00	0.773	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	542-75-6	1	7	ND		1.00	0.441	ND		1.00	0.441	ND		1.00	0.441
TOTAL VO's:		NS	NS	ND			NA	ND			NA	0.573	J		NA
TOTAL TIC's:		NS	NS	ND			NA	ND			NA	ND			NA
TOTAL VO's & TIC's:		NS	NS	ND			NA	ND			NA	0.573	J		NA
Semivolatiles - PAH (ug/L)				Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Naphthalene	91-20-3	300	300	ND		1.00	0.341	ND		1.00	0.341	ND		1.00	0.341
2-Methylnaphthalene	91-57-6	30	NS	ND		1.00	0.224	ND		1.00	0.224	ND		1.00	0.224
Acenaphthylene	208-96-8	100	NS	ND		1.00	0.246	ND		1.00	0.246	ND		1.00	0.246
Acenaphthene	83-32-9	400	NS	ND		1.00	0.251	ND		1.00	0.251	ND		1.00	0.251
Fluorene	86-73-7	300	NS	ND		1.00	0.203	ND		1.00	0.203	ND		1.00	0.203
Phenanthrene	85-01-8	100	NS	ND		1.00	0.225	ND		1.00	0.225	ND		1.00	0.225
Anthracene	120-12-7	2000	NS	ND		1.00	0.258	ND		1.00	0.258	ND		1.00	0.258
Fluoranthene	206-44-0	300	NS	ND		1.00	0.206	ND		1.00	0.206	ND		1.00	0.206
Pyrene	129-00-0	200	NS	ND		1.00	0.256	ND		1.00	0.256	ND		1.00	0.256
Benzo[a]anthracene	56-55-3	0.1	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Chrysene	218-01-9	5	NS	ND		1.00	0.320	ND		1.00	0.320	ND		1.00	0.320
Benzo[b]fluoranthene	205-99-2	0.2	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[k]fluoranthene	207-08-9	0.5	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[a]pyrene	50-32-8	0.1	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene	193-39-5	0.2	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Dibenz[a,h]anthracene	53-70-3	0.3	NS	ND		0.100	0.100	ND		0.100	0.100	ND		0.100	0.100
Benzo[g,h,i]perylene	191-24-2	100	NS	ND		1.00	0.325	ND		1.00	0.325	ND		1.00	0.325

NJDEP Class II-A Specific Ground Water Quality Criteria : Ground Water Quality Standards N.J.A.C. 7:9C,

BOLD Conc Indicates a concentration that exceeds the applicable criteria.

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

~ = Sample not analyzed for

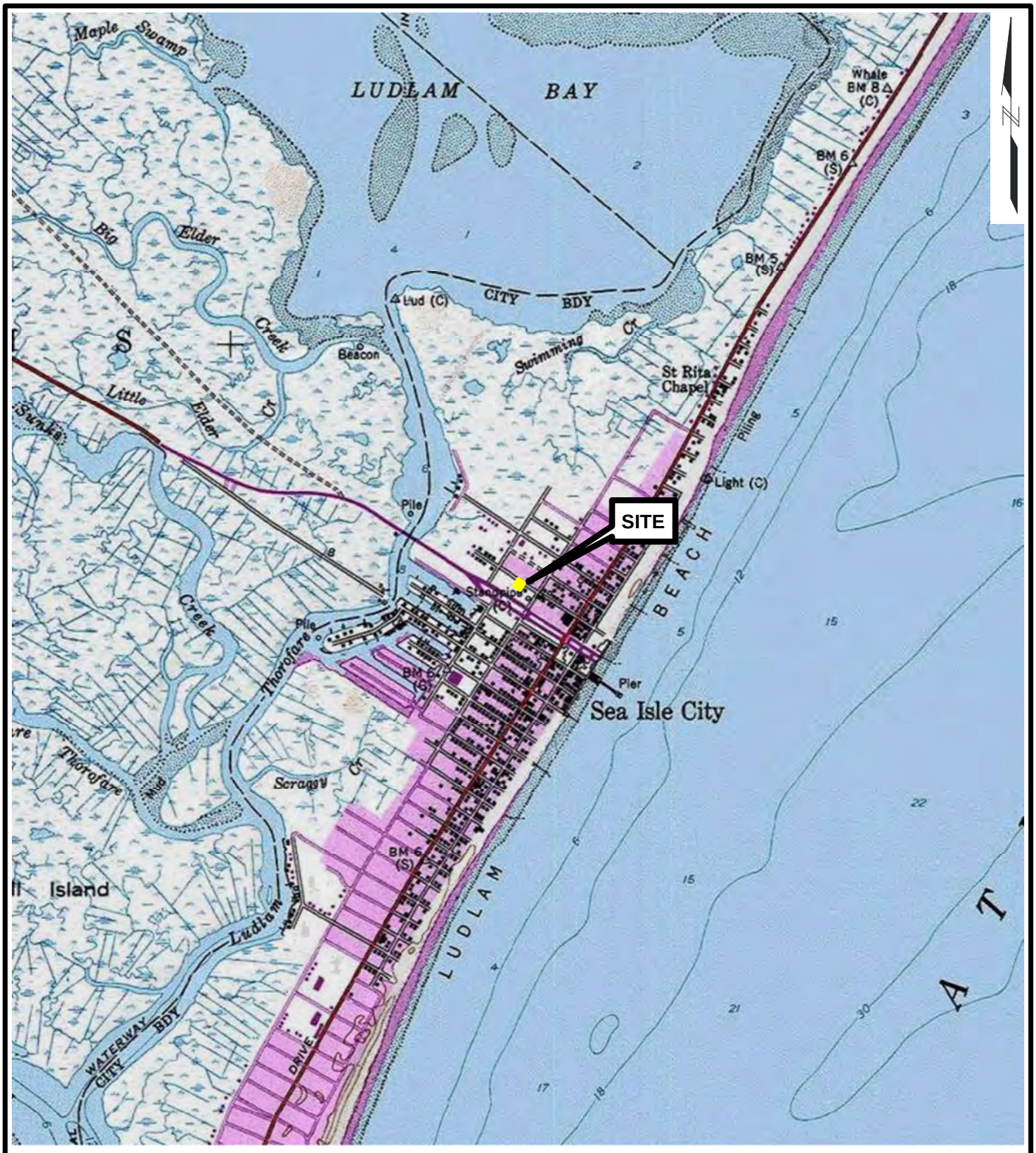
ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-ta

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

N = Presumptive evidence of a compound from the use of GC/MS library search.

Figures



SOURCE:
1. USGS TOPOGRAPHIC MAP ACCESSED VIA ARCGIS ONLINE SERVICES.

0 2,000 4,000
SCALE: 1" = 2000'

Remedial Action Report Sea Isle City Former MGP Site Sea Isle City, New Jersey	GEI Consultants	SITE LOCATION MAP
Jersey Central Power & Light Company Morristown, New Jersey	Project 1610583	December 2020 Fig. 1

J:\Projects\JCP&L\Sea Isle City\Site Location.mxd

SOURCE:

1. Parcel lines and data are provided by NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), and are shown for graphical purposes only. This map is not to be considered a legal tax map
2. 2014 Google Earth Pro Image accessed 8/20/2015.

0 100 200

SCALE: 1" = 100'

LEGEND

- Former Manufactured Gas Plant Site
- Site Boundary
- Current Parcel Boundaries

Remedial Action Report
Sea Isle City Former MGP Site
Sea Isle City, New Jersey

Jersey Central Power & Light Company
Morristown, New Jersey

GEI Consultants

SITE PLAN

Project 1610583 | December 2020 | Fig. 2

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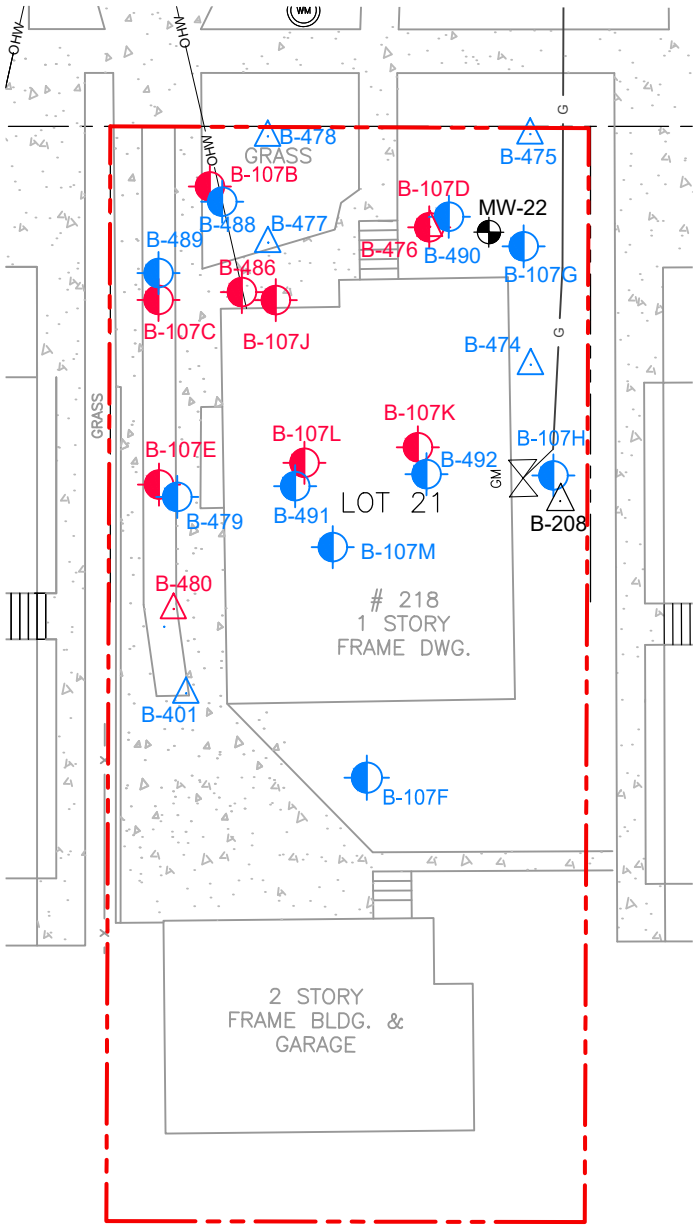

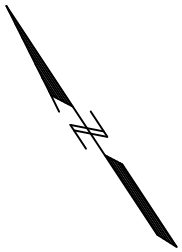

LEGEND

- 218 40TH STREET PROPERTY BOUNDARY
- SUBSURFACE SOIL SAMPLE WITH PAH VALUES ABOVE NJDEP SOIL REMEDIATION STANDARD
- SUBSURFACE SOIL SAMPLES WITH PAH VALUES BELOW NJDEP SOIL REMEDIATION STANDARD
- SOIL BORING ADVANCED BY GEI TO SCREEN FOR RESIDUAL PRODUCT ONLY (NO SOIL SAMPLE COLLECTED)
- CONCRETE CURB
- G — GAS LINE
- SAN — SANITARY SEWER LINE
- OHW — OVERHEAD LINE
- W — WM — WATER METER LINE

NOTES:

1. Soil sample compared to NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS) for polycyclic aromatic hydrocarbons (PAHs): Remediation Standard N.J.A.C. 7:26D, May 2013; Amended September 2017.

0 20 40

SCALE, FEET

Remedial Action Report Sea Isle City Former MGP Site Sea Isle City, New Jersey	GEI Consultants	Soil Boring Location Map - 218 40th Street
Jersey Central Power & Light Company Morristown, New Jersey	Project 1610583	December 2020 Fig. 3

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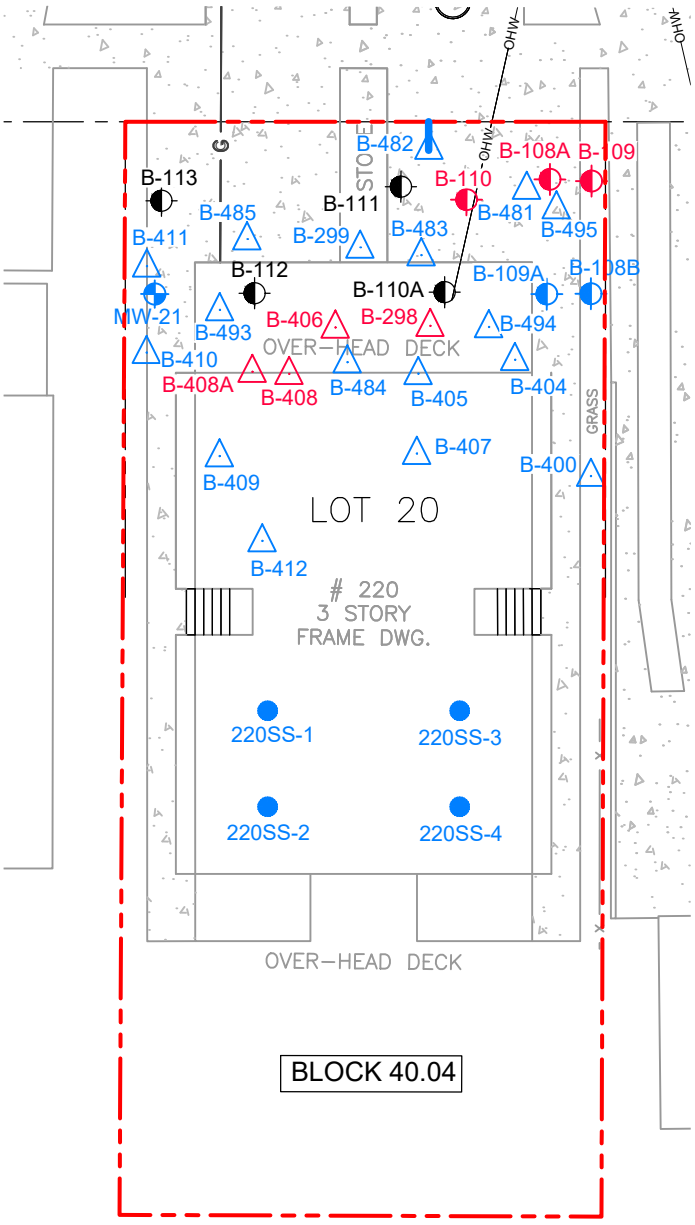

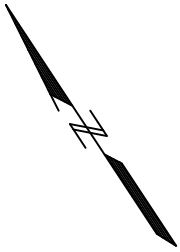

LEGEND

- 220 40TH STREET PROPERTY BOUNDARY
- SAMPLES AT THESE LOCATIONS WERE FIELD-SCREENED AND WERE NOT ANALYZED
- SUBSURFACE SOIL SAMPLES WITH PAH VALUES ABOVE NJDEP SOIL REMEDIATION STANDARD
- SUBSURFACE SOIL SAMPLES WITH PAH VALUES BELOW NJDEP SOIL REMEDIATION STANDARD
- SURFICIAL SOIL SAMPLE COLLECTED BY GEI 2010
- CONCRETE CURB
- G — GAS LINE
- SAN — SANITARY SEWER LINE
- OHW — OVERHEAD LINE
- W — WM — W — WATER METER LINE

NOTES:

1. Soil sample compared to NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS) for polycyclic aromatic hydrocarbons (PAHs): Remediation Standard N.J.A.C. 7:26D, May 2013; Amended September 2017.

0 20 40

SCALE, FEET

Remedial Action Report Sea Isle City Former MGP Site Sea Isle City, New Jersey	GEI Consultants	Soil Boring Location Map - 220 40th Street
Jersey Central Power & Light Company Morristown, New Jersey	Project 1610583	December 2020 Fig. 4

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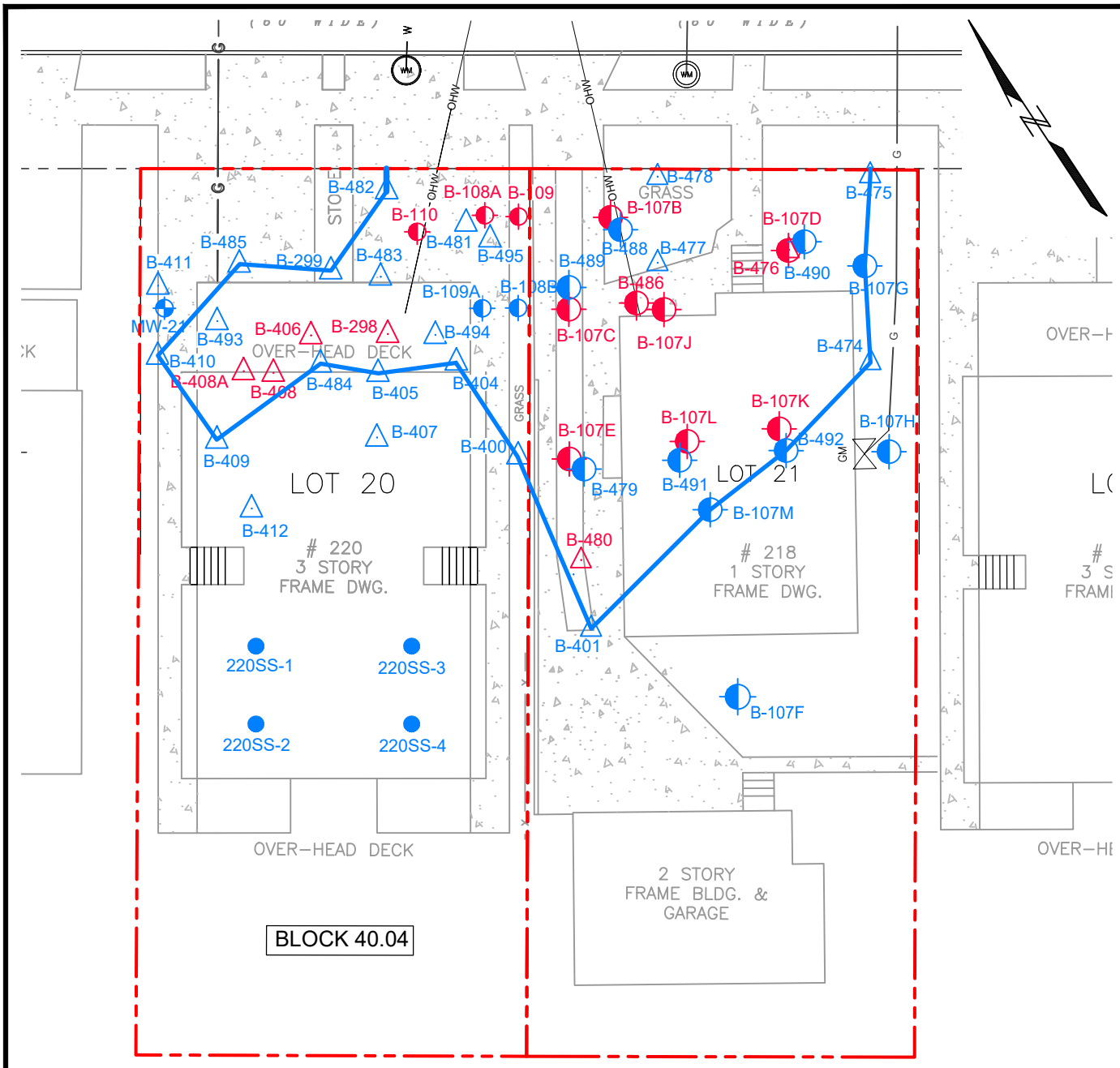

0 20 40

SCALE, FEET

LEGEND

- 218 - 220 40TH STREET PROPERTY BOUNDARY
- SOIL IMPACT DELINEATION LINE
- SUBSURFACE SOIL SAMPLES WITH PAH VALUES ABOVE NJDEP SOIL REMEDIATION STANDARD
- SUBSURFACE SOIL SAMPLES WITH PAH VALUES BELOW NJDEP SOIL REMEDIATION STANDARD
- SURFICIAL SOIL SAMPLE COLLECTED BY GEI 2010

NOTES:

1. Soil sample compared to NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS) for polycyclic aromatic hydrocarbons (PAHs): Remediation Standard N.J.A.C. 7:26D, May 2013; Amended September 2017.

Remedial Action Report
Sea Isle City Former MGP Site
Sea Isle City, New Jersey

Jersey Central Power & Light Company
Morristown, New Jersey

GEI Consultants

218 - 220 40th STREET SOIL IMPACT DELINEATION MAP

Project 1610583 | December 2020 | Fig. 5

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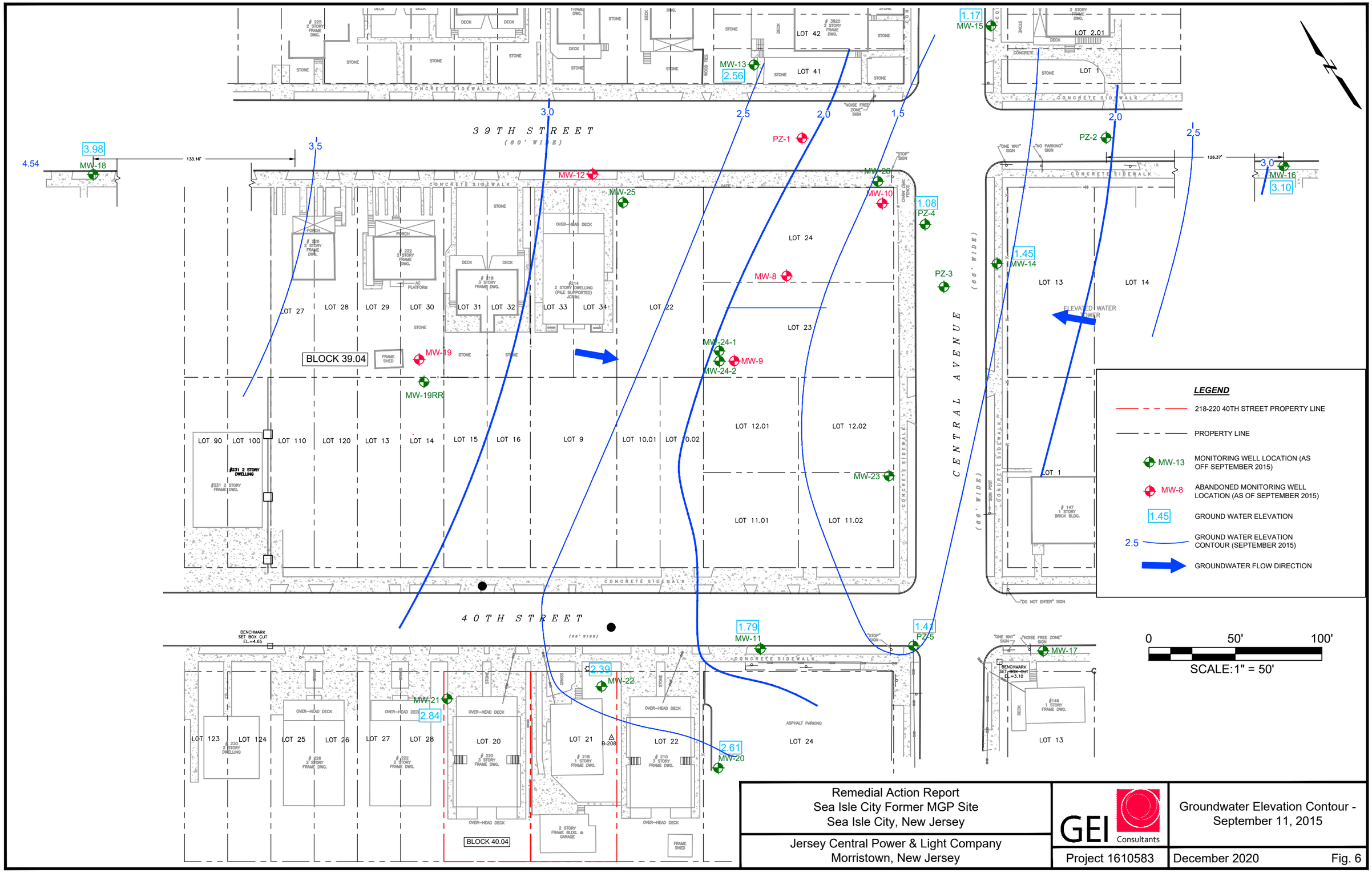

Remedial Action Report
Sea Isle City Former MGP Site
Sea Isle City, New Jersey

Jersey Central Power & Light Company
Morristown, New Jersey

GEI Consultants

Groundwater Elevation Contour - September 11, 2015

Project 1610583 | December 2020 | Fig. 6

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Appendix A

Case Inventory Document

Case Name: Sea Isle City Coal Gas

PI #: G000006130

IMPORTANT: *1) Do not delete or copy and paste across multiple columns because it can disrupt hidden equations.*
2) If pasting from a Word document, use the Paste option: ***Match Destination Formatting***
3) If the text turns ***red*** *you have exceeded the character limit for that column*

Case Inventory Document Version 1.4 02/23/17

AOC ID	AOC Type	AOC Description	Confirmed Contamination	AOC Status	Status Date	Incident #	DEP AOC Number	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
AOC-1A	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	210 39th Street, Block 39.04, Lot 22. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	9/6/2016			Soil	PAHs	VO		Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ingestion/Dermal	Inhalation	Excavation	No Remedial Action		Yes	Soil excavation activities were conducted at the site from 2008 to 2011 to address MGP-related impacts. Approximately 7,814 tons of impacted soil was excavated as part of the remediation. Impacts from 0-12 feet were excavated and transported off-site for thermal desorption. Deeper soil impacts at approximately 16 feet were left in place. The concentrations left in place were below the Soil Cleanup Criteria but above the RDCSRS. The RAWP for the site was approved in 2007, so the SCC would be applicable. No further investigation or remedial action is proposed and therefore an RAO was issued for the parcel on 9/6/2016.
AOC-1B	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	3900 Central Avenue, Block 39.4, Lot 23. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	9/6/2016			Soil	PAHs	VO		Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ingestion/Dermal		Excavation			Yes	Soil excavation activities were conducted at the site from 2008 to 2011 to address MGP-related impacts. Impacts from 0-12 feet were excavated and transported off-site for thermal desorption. Deeper soil impacts at approximately 16 feet were left in place. The concentrations left in place were below the Soil Cleanup Criteria but above the RDCSRS. The RAWP for the site was approved in 2007, so the SCC would be applicable. No further investigation or remedial action is proposed and therefore an RAO was issued for the parcel on 9/6/2016.
AOC-1C	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	3904 Central Avenue, Block 39.04, Lot 24. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	9/6/2016			Soil	PAHs	VO		Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ingestion/Dermal		Excavation			Yes	Soil excavation activities were conducted at the site from 2008 to 2011 to address MGP-related impacts. Impacts from 0-12 feet were excavated and transported off-site for thermal desorption. Deeper soil impacts at approximately 16 feet were left in place. The concentrations left in place were below the Soil Cleanup Criteria but above the RDCSRS. The RAWP for the site was approved in 2007, so the SCC would be applicable. No further investigation or remedial action is proposed and therefore an RAO was issued for the parcel on 9/6/2016.
AOC-1D	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	214 39th Street, Block 39.04, Lots 33 and 34. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	9/6/2016			Soil	PAHs	VO		Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ingestion/Dermal		Excavation			Yes	Soil excavation activities were conducted at the site from 2008 to 2011 to address MGP-related impacts. Impacts from 0-12 feet were excavated and transported off-site for thermal desorption. Deeper soil impacts at approximately 16 feet were left in place. The concentrations left in place were below the Soil Cleanup Criteria but above the RDCSRS. The RAWP for the site was approved in 2007, so the SCC would be applicable. No further investigation or remedial action is proposed and therefore an RAO was issued for the parcel on 9/6/2016.
AOC-1E	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	205 40th Street, Block 39.04, Lots 11.02 and 12.02. Contamination assoicated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	10/28/2015			Soil	PAHs			Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of the 205 40th Street parcel was conducted in 2012-2014, as part of the remediation off-site impacts located along the north side of 40th Street. Approximately 30,500 tons of soil was excavated during the remedial action and transported off-site for thermal desorption and disposal. An RAO for the parcel was issued on 10/28/2015.
AOC-1F	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	207 40th Street, Block 39.04, Lots 11.01 and 12.01. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	10/28/2015			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of the 207 40th Street parcel was conducted in 2012-2014, as part of the remediation off-site impacts located along the north side of 40th Street. Approximately 30,500 tons of soil was excavated during the remedial action and transported off-site for thermal desorption and disposal. An RAO for the parcel was issued on 10/28/2015.
AOC-1G	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	211 40th Street, Block 39.04, Lots 9 and 10.01. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	10/28/2015			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of the 211 40th Street parcel was conducted in 2012-2014, as part of the remediation off-site impacts located along the north side of 40th Street. Approximately 30,500 tons of soil was excavated during the remedial action and transported off-site for thermal desorption and disposal. An RAO for the parcel was issued on 10/28/2015.
AOC-1H	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	219 40th Street, Block 39.04, Lots 15 and 16. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	10/28/2015			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of the 219 40th Street parcel was conducted in 2012-2014, as part of the remediation off-site impacts located along the north side of 40th Street. Approximately 30,500 tons of soil was excavated during the remedial action and transported off-site for thermal desorption and disposal. An RAO for soils at the parcel was issued on 10/28/2015.
AOC-1I	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	223 40th Street, Block 39.04, Lots 13 and 14. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	10/28/2015			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of the 223 40th Street parcel was conducted in 2012-2014, as part of the remediation off-site impacts located along the north side of 40th Street. An area of less than 1,200 square feet on the northern portion of the 223 40th Street parcel remained in place after the completion of the remedial action. Approximately 30,500 tons of soil was excavated during the remedial action and transported off-site for thermal desorption and disposal. An RAO for the parcel was issued on 10/28/2015.

Case Name: Sea Isle City Coal Gas

PI #: G000006130

IMPORTANT: *1) Do not delete or copy and paste across multiple columns because it can disrupt hidden equations.*

2) If pasting from a Word document, use the Paste option: ***Match Destination Formatting***

3) If the text turns ***red*** *you have exceeded the character limit for that column*

Case Inventory Document Version 1.4 02/23/17

AOC ID	AOC Type	AOC Description	Confirmed Contamination	AOC Status	Status Date	Incident #	DEP AOC Number	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
AOC-1J	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	227 40th Street, Block 39.04, Lots 110 and 120. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	10/28/2015			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of the 227 40th Street parcel was conducted in 2012-2014, as part of the remediation off-site impacts located along the north side of 40th Street. Approximately 30,500 tons of soil was excavated during the remedial action and transported off-site for thermal desorption and disposal. An RAO for soils at the parcel was issued on 10/28/2015.
AOC-1K	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	218 39th Street, Block 39.04, Lots 31 and 32. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	10/28/2015			Soil	PAHs			Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of soil impacts at the 218 39th Street parcel was completed in 2012. Approximately 3,264 tons of soil were excavated and transported off-site for thermal desorption treatment and disposal. The excavation work included small portions of Block 39.04, Lots 9, 16, and 33. An RAO for soils at the parcel was issued on 10/28/2015.
AOC-1L	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	213 39th Street, Block 38.04, Lots 17 and 18. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	NFA-A DEP Issued (Unrestricted Use)	1/10/2012			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Soil excavation to remediate soil impacts at 213 39th Street was conducted in December 2010. A total of 1,153 tons of soil were excavated and transported off-site for thermal desorption treatment and disposal. The excavation was backfilled with clean fill material A Remedial Action Report documenting remediation activities was prepared in August 2011 and the NJDEP issued an NFA on the parcel on 1/10/2012.
AOC-1M	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	217 39th Street, Block 38.04, Lots 15 and 16. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	NFA-A DEP Issued (Unrestricted Use)	1/10/2012			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Soil excavation to remediate soil impacts at 217 39th Street was conducted in December 2010. A total of 1,153 tons of soil were excavated and transported off-site for thermal desorption treatment and disposal. The excavation was backfilled with clean fill material A Remedial Action Report documenting remediation activities was prepared in August 2011,and the NJDEP issued an NFA on the parcel on 1/10/2012
AOC-1N	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	3820 Central Avenue, Block 38.04, Lots 41, 42, and 43. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAR	11/18/2020			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Capping			Yes	Delineation of soil impacts at the site was completed by March 2014. JCP&L is currently in negotiations with the property owner to establish a deed restriction for the site, to allow for the impacted soil to remain in place. An RAO will be prepared and filed for this AOC after the Deed Notice is estabilished and a RAP-Soil is issued by NJDEP.
AOC-1O	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	210 40th Street, Block 40.04, Lot 22. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	NFA-A DEP Issued (Unrestricted Use)	5/19/2006			Soil	PAHs	VO		Soil Cleanup Criteria (MUST have RAW approved for AOC prior to 12/2/2008)	Ingestion/Dermal		Excavation			Yes	Soil excavation work completed in December 2003 and February 2004, with a total of 536 tons of impacted soil excavated and transported off-site for thermla desoption treatment and disposal. The Remedial Action Report documenting remediation activities was submitted to the NJDEP in April 2004. An unconditional NFA for soil was issued by the NJDEP on May 19, 2006.
AOC-1P	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	218 40th Street, Block 40.04, Lot 21. Contamination assoicated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAR	12/16/2020			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal					Yes	Delineation of soil impacts at the site was completed by March 2014. Additional sampling performed between March 2014 and May 2015 did not reveal the presence of MGP-related impacts from ground surface to a depth of five feet. A deed restriction for the site is being filed as a part of RAR. An RAO will be prepared and filed for this AOC after the Deed Notice is estabilished and a RAP-Soil is issued by NJDEP.
AOC-1Q	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	220 40th Street, Block 40.04, Lot 20. Contamination assoicated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAR	12/16/2020			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal					Yes	Delineation of soil impacts at the site was completed by March 2014. Additional sampling performed between March 2014 and May 2015 did not reveal the presence of MGP-related impacts from ground surface to a depth of five feet. A deed restriction for the site is being filed as a part of RAR. An RAO will be prepared and filed for this AOC after the Deed Notice is estabilished and a RAP-Soil is issued by NJDEP.
AOC-1R	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	39th Street Right of Way. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RI	3/13/2014			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal					Yes	Delineation of soil impacts at the site was completed by March 2014. The impacted areas are currently capped with either concrete, asphalt, or top soil. Limited excavation and removal of impacted soil was completed in 2017 as part of a sanitary sewer line replacement project. Monitored natural attenuation proposed for remaining groundwater impacts. Agreement from Sea Isle City to leave the remaining impacts in place for the right-of-way was made as part of the 39th Street Sewer Reconstruction project in 2016.
AOC-1S	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	Central Avenue Right of Way. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RI	3/13/2014			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal					Yes	Delineation of soil impacts at the site was completed by March 2014. The impacted areas are currently capped with either concrete, asphalt, or top soil. Limited soil excavation was completed near the intersection of Central Avenue and 39th Street in 2017 as part of a sanitary sewer replacement project. Agreement from Sea Isle City to leave the remaining impacts in place for the right-of-way was made as part of th 39th Street Sewer Reconstruction project in 2016. An RAO will be prepared and filed for this AOC after the Notice in Lieu of Deed Notice is established and a RAP-Soil is issued by NJDEP.

Case Name: Sea Isle City Coal Gas

PI #: G000006130

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Case Inventory Document Version 1.4 02/23/17

AOC ID	AOC Type	AOC Description	Confirmed Contamination	AOC Status	Status Date	Incident #	DEP AOC Number	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
AOC-1T	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	40th Street Right of Way. Contamination associated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RI	3/13/2014			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal					Yes	Delineation of soil impacts at the site was completed by March 2014. Sampling completed in 2017 did not reveal the presence of soil exceedances from 0 to 4 feet. The impacted areas are currently capped with either concrete, asphalt, or top soil. Agreement from Sea Isle City to leave the remaining impacts in place for the right-of-way was made as part of the 39th Street Sewer Reconstruction project in 2016. An RAO will be prepared and filed for this AOC after the Notice in Lieu of Deed Notice is established and a RAP-Soil is issued by NJDEP.
AOC-1U	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	209 40th Street, Block 39.04, Lot 10.02. Contamination assoicated with historical Manufactured Gas Plant (MGP) that operated at the 210 39th Street parcel between the late 1800s and early 1900s.	Yes	RAO-A (Unrestricted Use)	11/4/2020			Soil	PAHs	VO		Remediation Standards	Ingestion/Dermal		Excavation			Yes	Remediation of the 209 40th Street parcel was conducted in 2012-2014, as part of the remediation off-site impacts located along the north side of 40th Street. Approximately 30,500 tons of soil was excavated during the remedial action and transported off-site for thermal desorption and disposal. An RAO for the parcel was issued on 10/28/2015.
AOC-2	Discharge and disposal area - Area of discharge pursuant to N.J.A.C. 7:1E	Groundwater impacts associated with historical Manufactured Gas Plant that operated at 210 39th Street parcel between the late 1800s and the early 1900s. An RAO will be prepared and filed for this AOC after a RAP-Ground Water is issued by NJDEP.	Yes	RAR	11/4/2020			Ground Water	PAHs	VO		Remediation Standards	Ingestion/Dermal		Monitored Natural Attenuation				Groundwater delineation had been completed and documented in Supplemental Remedial Investigation Report submitted to NJDEP in April 2008. Results from eight rounds of quarterly groundwater sampling show that contamination is limited to benzene. Additional sampling completed in 2019 and 2020 confirmed benzene exceedance and refined the limits of the CEA.

Appendix B

Site Photographs

Project Photos - JCP&L – Sea Isle City Former MGP
PI No. G000006130
218-220 40th Street, Sea Isle City, NJ
Date: August 25, 2020

Project Photos - JCP&L – Sea Isle City Former MGP
PI No. G000006130
218-220 40th Street, Sea Isle City, NJ
Date: August 25, 2020

Photo No. 1 – Front Exterior of 220 40th Street

Photo No. 2 – East Front Exterior of 220 40th Street

Photo No. 3 – West Front Exterior of 220 40th Street

Photo No. 4 – Front Exterior of 218 40th Street

Photo No. 5 – West Front Exterior of 218 40th Street

Photo No. 6 – East Front Exterior of 218 40th Street

Appendix C

Soil Laboratory Analytical Results

2014 and 2015 Sampling Events (Electronic Copies Only)

IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054

Project Name: **SIC**
IAL Case Number: **E14-12132**

These data have been reviewed and accepted by:

Michael H. Leftin, Ph.D.
Laboratory Director

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

This report was finalized on January 12, 2015

* Methodology is included in the IAL Project Information Page

Sample Summary

IAL Case No.

E14-12132

Client GEI Consultants, Inc.

Project SIC

Received On 12/18/2014@18:20

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
12132-001	B-491 (4-4.5)	4/4.5	12/16/2014@09:45	Soil	1
12132-002	B-491 (5-5.5)	5/5.5	12/16/2014@10:00	Soil	1
12132-003	B-492 (4-4.5)	4/4.5	12/16/2014@10:30	Soil	1
12132-004	B-492 (5-5.5)	5/5.5	12/16/2014@10:35	Soil	1
12132-005	B-490 (4.5-5)	4.5/5	12/16/2014@10:50	Soil	1
12132-006	B-490 (5.5-6)	5.5/6	12/16/2014@10:55	Soil	1
12132-007	B-490 (11.5-12)	11.5/12	12/16/2014@11:00	Soil	1
12132-008	B-490 (14.5-15)	14.5/15	12/16/2014@11:05	Soil	1
12132-009	B-487 (4.5-5)	4.5/5	12/16/2014@11:20	Soil	1
12132-010	B-486 (4.5-5)	4.5/5	12/16/2014@11:30	Soil	1
12132-011	B-486 (7.5-8)	7.5/8	12/16/2014@11:35	Soil	1
12132-012	B-488 (4.5-5)	4.5/5	12/16/2014@12:00	Soil	1
12132-013	B-489 (4.5-5)	4.5/5	12/16/2014@12:35	Soil	1
12132-014	FB-12162014	n/a	12/16/2014@14:20	Aqueous	2

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

INTEGRATED ANALYTICAL LABORATORIES, LLC.

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-12132

Integrated Analytical Laboratories, LLC. received fourteen (14) samples** from GEI Consultants, Inc. (IAL SDG# **E14-12132**, Project: SIC) on December 18, 2014 for the analysis of :

(14) TCL/PAH

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2°C

Semivolatiles By 8270D	**Batch: 141222-02**	**Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standard recovery me QC criteria.
- Surrogate recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

E14-12132
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- All samples were analyzed as a straight run and no further dilutions were required.

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

Semivolatiles By 8270D	**Batch: 141222-03**	**Matrix: Soil**

QC
- Calibration curve met QC criteria.
- Internal standard recovery me QC criteria.
- Surrogate recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

E14-12132
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- 12132-011 performed 2x dilution because of high target compounds;.
- The following samples were analyzed as a straight run and no further dilutions were required: 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 012, 013.

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-12132

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by	1/8/2015 Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
Client: GEI Consultants, Inc.
Project Location: SIC
IAL Project #: E14-12132
IAL Sample ID(s): E14-12132-001 ~ -014
Sampling Date(s): 12/16/2014

List of DKQP Method Used:
TCL/PAH by 8270D

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP	X		
1A	Were the method specified handling, preservation, and holding time requirements met?	X		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)			X
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	X		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?		X	
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?		X	
5B	Were these reporting limits met?			X
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	X		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?		X	

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E14-12132

Lab ID:	**12132-014**		
Client ID:	**FB-12162014**		
Matrix:	**Aqueous**		
Sampled Date	**12/16/14**		
PARAMETER(Units)	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/L)*		
Naphthalene	ND		0.000273
2-Methylnaphthalene	ND		0.000433
Acenaphthylene	ND		0.000316
Acenaphthene	ND		0.000261
Fluorene	ND		0.000447
Phenanthrene	ND		0.000372
Anthracene	ND		0.000322
Fluoranthene	ND		0.000362
Pyrene	ND		0.000308
Benzo[a]anthracene	ND		0.000243
Chrysene	ND		0.000243
Benzo[b]fluoranthene	ND		0.000716
Benzo[k]fluoranthene	ND		0.000683
Benzo[a]pyrene	ND		0.000381
Indeno[1,2,3-cd]pyrene	ND		0.000509
Dibenz[a,h]anthracene	ND		0.000514
Benzo[g,h,i]perylene	ND		0.000468

Lab ID:	**12132-001**			**12132-002**			**12132-003**			**12132-004**		
Client ID:	**B-491 (4-4.5)**			**B-491 (5-5.5)**			**B-492 (4-4.5)**			**B-492 (5-5.5)**		
Depth:	**4/4.5**			**5/5.5**			**4/4.5**			**5/5.5**		
Matrix:	**Soil**			**Soil**			**Soil**			**Soil**		
Sampled Date	**12/16/14**			**12/16/14**			**12/16/14**			**12/16/14**		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
2-Methylnaphthalene	ND		0.031	ND		0.031	ND		0.029	ND		0.028
Acenaphthylene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Acenaphthene	ND		0.039	ND		0.038	ND		0.036	ND		0.035
Fluorene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Phenanthrene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Anthracene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Fluoranthene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Pyrene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Benzo[a]anthracene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Chrysene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Benzo[b]fluoranthene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Benzo[k]fluoranthene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Benzo[a]pyrene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Indeno[1,2,3-cd]pyrene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Dibenz[a,h]anthracene	ND		0.025	ND		0.025	ND		0.024	ND		0.023
Benzo[g,h,i]perylene	ND		0.025	ND		0.025	ND		0.024	ND		0.023

ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E14-12132

Lab ID:	12132-005			12132-006			12132-007			12132-008		
Client ID:	B-490 (4.5-5)			B-490 (5.5-6)			B-490 (11.5-12)			B-490 (14.5-15)		
Depth:	4.5/5			5.5/6			11.5/12			14.5/15		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	12/16/14			12/16/14			12/16/14			12/16/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.023	ND		0.023	ND		0.024	0.032	J	0.023
2-Methylnaphthalene	ND		0.028	ND		0.028	0.059		0.029	0.078		0.028
Acenaphthylene	ND		0.023	ND		0.023	ND		0.024	ND		0.023
Acenaphthene	ND		0.035	ND		0.035	0.057		0.036	0.077		0.035
Fluorene	ND		0.023	ND		0.023	0.038	J	0.024	0.041		0.023
Phenanthrene	ND		0.023	ND		0.023	0.146		0.024	0.142		0.023
Anthracene	ND		0.023	ND		0.023	0.044		0.024	0.041		0.023
Fluoranthene	ND		0.023	ND		0.023	0.036	J	0.024	0.056		0.023
Pyrene	ND		0.023	ND		0.023	0.035	J	0.024	0.060		0.023
Benzo[a]anthracene	ND		0.023	ND		0.023	ND		0.024	ND		0.023
Chrysene	ND		0.023	ND		0.023	ND		0.024	0.029	J	0.023
Benzo[b]fluoranthene	ND		0.023	ND		0.023	ND		0.024	ND		0.023
Benzo[k]fluoranthene	ND		0.023	ND		0.023	ND		0.024	ND		0.023
Benzo[a]pyrene	ND		0.023	ND		0.023	ND		0.024	0.024	J	0.023
Indeno[1,2,3-cd]pyrene	ND		0.023	ND		0.023	ND		0.024	ND		0.023
Dibenz[a,h]anthracene	ND		0.023	ND		0.023	ND		0.024	ND		0.023
Benzo[g,h,i]perylene	ND		0.023	ND		0.023	ND		0.024	ND		0.023

Lab ID:	12132-009			12132-010			12132-011			12132-012		
Client ID:	B-487 (4.5-5)			B-486 (4.5-5)			B-486 (7.5-8)			B-488 (4.5-5)		
Depth:	4.5/5			4.5/5			7.5/8			4.5/5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	12/16/14			12/16/14			12/16/14			12/16/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.024	ND		0.022	14.0	D	0.060	ND		0.023
2-Methylnaphthalene	ND		0.029	ND		0.027	6.49		0.037	ND		0.028
Acenaphthylene	ND		0.024	ND		0.022	0.111		0.030	ND		0.023
Acenaphthene	ND		0.036	ND		0.034	2.83		0.046	ND		0.035
Fluorene	ND		0.024	ND		0.022	1.90		0.030	ND		0.023
Phenanthrene	ND		0.024	ND		0.022	4.38		0.030	ND		0.023
Anthracene	ND		0.024	ND		0.022	1.11		0.030	ND		0.023
Fluoranthene	ND		0.024	ND		0.022	0.661		0.030	ND		0.023
Pyrene	ND		0.024	ND		0.022	0.764		0.030	ND		0.023
Benzo[a]anthracene	ND		0.024	ND		0.022	0.218		0.030	ND		0.023
Chrysene	ND		0.024	ND		0.022	0.249		0.030	ND		0.023
Benzo[b]fluoranthene	ND		0.024	ND		0.022	0.114		0.030	ND		0.023
Benzo[k]fluoranthene	ND		0.024	ND		0.022	0.107		0.030	ND		0.023
Benzo[a]pyrene	ND		0.024	ND		0.022	0.190		0.030	ND		0.023
Indeno[1,2,3-cd]pyrene	ND		0.024	ND		0.022	0.069		0.030	ND		0.023
Dibenz[a,h]anthracene	ND		0.024	ND		0.022	ND		0.030	ND		0.023
Benzo[g,h,i]perylene	ND		0.024	ND		0.022	0.074		0.030	ND		0.023

ND = Analyzed for but Not Detected at the MDL

D = The compound was reported from the Diluted analysis

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E14-12132

Lab ID:	**12132-013**		
Client ID:	**B-489 (4.5-5)**		
Depth:	**4.5/5**		
Matrix:	**Soil**		
Sampled Date	**12/16/14**		
PARAMETER(Units)	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*		
Naphthalene	ND		0.023
2-Methylnaphthalene	ND		0.028
Acenaphthylene	ND		0.023
Acenaphthene	ND		0.035
Fluorene	ND		0.023
Phenanthrene	ND		0.023
Anthracene	ND		0.023
Fluoranthene	ND		0.023
Pyrene	ND		0.023
Benzo[a]anthracene	ND		0.023
Chrysene	ND		0.023
Benzo[b]fluoranthene	ND		0.023
Benzo[k]fluoranthene	ND		0.023
Benzo[a]pyrene	ND		0.023
Indeno[1,2,3-cd]pyrene	ND		0.023
Dibenz[a,h]anthracene	ND		0.023
Benzo[g,h,i]perylene	ND		0.023

ND = Analyzed for but Not Detected at the MDL

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-001
Client ID: B-491_(4
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2802.D

GC/MS Column: DB-5
Sample wt/vol: 15.38g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 22.9

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.042	0.025
2-Methylnaphthalene	ND		0.042	0.031
Acenaphthylene	ND		0.042	0.025
Acenaphthene	ND		0.042	0.039
Fluorene	ND		0.042	0.025
Phenanthrene	ND		0.042	0.025
Anthracene	ND		0.042	0.025
Fluoranthene	ND		0.042	0.025
Pyrene	ND		0.042	0.025
Benzo[a]anthracene	ND		0.042	0.025
Chrysene	ND		0.042	0.025
Benzo[b]fluoranthene	ND		0.042	0.025
Benzo[k]fluoranthene	ND		0.042	0.025
Benzo[a]pyrene	ND		0.042	0.025
Indeno[1,2,3-cd]pyrene	ND		0.042	0.025
Dibenz[a,h]anthracene	ND		0.042	0.025
Benzo[g,h,i]perylene	ND		0.042	0.025

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-12132 0012

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-002
Client ID: B-491_(5
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2803.D

GC/MS Column: DB-5
Sample wt/vol: 15.49g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 21.9

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.041	0.025
2-Methylnaphthalene	ND		0.041	0.031
Acenaphthylene	ND		0.041	0.025
Acenaphthene	ND		0.041	0.038
Fluorene	ND		0.041	0.025
Phenanthrene	ND		0.041	0.025
Anthracene	ND		0.041	0.025
Fluoranthene	ND		0.041	0.025
Pyrene	ND		0.041	0.025
Benzo[a]anthracene	ND		0.041	0.025
Chrysene	ND		0.041	0.025
Benzo[b]fluoranthene	ND		0.041	0.025
Benzo[k]fluoranthene	ND		0.041	0.025
Benzo[a]pyrene	ND		0.041	0.025
Indeno[1,2,3-cd]pyrene	ND		0.041	0.025
Dibenz[a,h]anthracene	ND		0.041	0.025
Benzo[g,h,i]perylene	ND		0.041	0.025

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-12132 0013

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-003
Client ID: B-492_(4
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2804.D

GC/MS Column: DB-5
Sample wt/vol: 15.65g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.6

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.024
2-Methylnaphthalene	ND		0.039	0.029
Acenaphthylene	ND		0.039	0.024
Acenaphthene	ND		0.039	0.036
Fluorene	ND		0.039	0.024
Phenanthrene	ND		0.039	0.024
Anthracene	ND		0.039	0.024
Fluoranthene	ND		0.039	0.024
Pyrene	ND		0.039	0.024
Benzo[a]anthracene	ND		0.039	0.024
Chrysene	ND		0.039	0.024
Benzo[b]fluoranthene	ND		0.039	0.024
Benzo[k]fluoranthene	ND		0.039	0.024
Benzo[a]pyrene	ND		0.039	0.024
Indeno[1,2,3-cd]pyrene	ND		0.039	0.024
Dibenz[a,h]anthracene	ND		0.039	0.024
Benzo[g,h,i]perylene	ND		0.039	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-004
Client ID: B-492_(5
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2805.D

GC/MS Column: DB-5
Sample wt/vol: 15.76g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 16.4

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-005
Client ID: B-490_(4
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2806.D

GC/MS Column: DB-5
Sample wt/vol: 15.57g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.4

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-006
Client ID: B-490_(5
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2807.D

GC/MS Column: DB-5
Sample wt/vol: 15.13g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.8

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-007
Client ID: B-490_(1
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2808.D

GC/MS Column: DB-5
Sample wt/vol: 15.32g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 16.7

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.024
2-Methylnaphthalene	0.059		0.039	0.029
Acenaphthylene	ND		0.039	0.024
Acenaphthene	0.057		0.039	0.036
Fluorene	0.038	J	0.039	0.024
Phenanthrene	0.146		0.039	0.024
Anthracene	0.044		0.039	0.024
Fluoranthene	0.036	J	0.039	0.024
Pyrene	0.035	J	0.039	0.024
Benzo[a]anthracene	ND		0.039	0.024
Chrysene	ND		0.039	0.024
Benzo[b]fluoranthene	ND		0.039	0.024
Benzo[k]fluoranthene	ND		0.039	0.024
Benzo[a]pyrene	ND		0.039	0.024
Indeno[1,2,3-cd]pyrene	ND		0.039	0.024
Dibenz[a,h]anthracene	ND		0.039	0.024
Benzo[g,h,i]perylene	ND		0.039	0.024
Total Target Compounds (17):	0.415	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-008
Client ID: B-490_(1
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2809.D

GC/MS Column: DB-5
Sample wt/vol: 15.72g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.8

Compound	Concentration	Q	RL	MDL
Naphthalene	0.032	J	0.038	0.023
2-Methylnaphthalene	0.078		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	0.077		0.038	0.035
Fluorene	0.041		0.038	0.023
Phenanthrene	0.142		0.038	0.023
Anthracene	0.041		0.038	0.023
Fluoranthene	0.056		0.038	0.023
Pyrene	0.060		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	0.029	J	0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	0.024	J	0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023
Total Target Compounds (17):	0.580	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-009
Client ID: B-487_(4
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2810.D

GC/MS Column: DB-5
Sample wt/vol: 15.29g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 17.2

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.024
2-Methylnaphthalene	ND		0.039	0.029
Acenaphthylene	ND		0.039	0.024
Acenaphthene	ND		0.039	0.036
Fluorene	ND		0.039	0.024
Phenanthrene	ND		0.039	0.024
Anthracene	ND		0.039	0.024
Fluoranthene	ND		0.039	0.024
Pyrene	ND		0.039	0.024
Benzo[a]anthracene	ND		0.039	0.024
Chrysene	ND		0.039	0.024
Benzo[b]fluoranthene	ND		0.039	0.024
Benzo[k]fluoranthene	ND		0.039	0.024
Benzo[a]pyrene	ND		0.039	0.024
Indeno[1,2,3-cd]pyrene	ND		0.039	0.024
Dibenz[a,h]anthracene	ND		0.039	0.024
Benzo[g,h,i]perylene	ND		0.039	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-010
Client ID: B-486_(4
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2811.D

GC/MS Column: DB-5
Sample wt/vol: 15.49g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.7

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.037	0.022
2-Methylnaphthalene	ND		0.037	0.027
Acenaphthylene	ND		0.037	0.022
Acenaphthene	ND		0.037	0.034
Fluorene	ND		0.037	0.022
Phenanthrene	ND		0.037	0.022
Anthracene	ND		0.037	0.022
Fluoranthene	ND		0.037	0.022
Pyrene	ND		0.037	0.022
Benzo[a]anthracene	ND		0.037	0.022
Chrysene	ND		0.037	0.022
Benzo[b]fluoranthene	ND		0.037	0.022
Benzo[k]fluoranthene	ND		0.037	0.022
Benzo[a]pyrene	ND		0.037	0.022
Indeno[1,2,3-cd]pyrene	ND		0.037	0.022
Dibenz[a,h]anthracene	ND		0.037	0.022
Benzo[g,h,i]perylene	ND		0.037	0.022

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-12132 0021

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-011
Client ID: B-486_(7
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2812.D

GC/MS Column: DB-5
Sample wt/vol: 15.79g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 37.1

Compound	Concentration	Q	RL	MDL
Naphthalene	12.9	E	0.050	0.030
2-Methylnaphthalene	6.49		0.050	0.037
Acenaphthylene	0.111		0.050	0.030
Acenaphthene	2.83		0.050	0.046
Fluorene	1.90		0.050	0.030
Phenanthrene	4.38		0.050	0.030
Anthracene	1.11		0.050	0.030
Fluoranthene	0.661		0.050	0.030
Pyrene	0.764		0.050	0.030
Benzo[a]anthracene	0.218		0.050	0.030
Chrysene	0.249		0.050	0.030
Benzo[b]fluoranthene	0.114		0.050	0.030
Benzo[k]fluoranthene	0.107		0.050	0.030
Benzo[a]pyrene	0.190		0.050	0.030
Indeno[1,2,3-cd]pyrene	0.069		0.050	0.030
Dibenz[a,h]anthracene	ND		0.050	0.030
Benzo[g,h,i]perylene	0.074		0.050	0.030
Total Target Compounds (17):	32.2	E		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-011DL
Client ID: B-486_(7
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2822.D

GC/MS Column: DB-5
Sample wt/vol: 15.79g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 2
% Moisture: 37.1

Compound	Concentration	Q	RL	MDL
Naphthalene	14.0	D	0.101	0.060
2-Methylnaphthalene	5.46	D	0.101	0.074
Acenaphthylene	0.106	D	0.101	0.060
Acenaphthene	2.51	D	0.101	0.092
Fluorene	1.60	D	0.101	0.060
Phenanthrene	3.65	D	0.101	0.060
Anthracene	0.956	D	0.101	0.060
Fluoranthene	0.584	D	0.101	0.060
Pyrene	0.640	D	0.101	0.060
Benzo[a]anthracene	0.204	D	0.101	0.060
Chrysene	0.215	D	0.101	0.060
Benzo[b]fluoranthene	0.084	DJ	0.101	0.060
Benzo[k]fluoranthene	0.118	D	0.101	0.060
Benzo[a]pyrene	0.162	D	0.101	0.060
Indeno[1,2,3-cd]pyrene	0.065	DJ	0.101	0.060
Dibenz[a,h]anthracene	ND		0.101	0.061
Benzo[g,h,i]perylene	0.076	DJ	0.101	0.060
Total Target Compounds (17):	30.4	DJ		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-012
Client ID: B-488_(4
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2813.D

GC/MS Column: DB-5
Sample wt/vol: 15.56g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 16.3

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-013
Client ID: B-489_(4
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2814.D

GC/MS Column: DB-5
Sample wt/vol: 15.34g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.2

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-12132-014
Client ID: FB-12162
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/23/2014
Data file: A3015.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-mg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.001	0.000273
2-Methylnaphthalene	ND		0.001	0.000433
Acenaphthylene	ND		0.001	0.000316
Acenaphthene	ND		0.001	0.000261
Fluorene	ND		0.001	0.000447
Phenanthrene	ND		0.001	0.000372
Anthracene	ND		0.001	0.000322
Fluoranthene	ND		0.001	0.000362
Pyrene	ND		0.001	0.000308
Benzo[a]anthracene	ND		0.001	0.000243
Chrysene	ND		0.001	0.000243
Benzo[b]fluoranthene	ND		0.001	0.000716
Benzo[k]fluoranthene	ND		0.001	0.000683
Benzo[a]pyrene	ND		0.001	0.000381
Indeno[1,2,3-cd]pyrene	ND		0.001	0.000509
Dibenz[a,h]anthracene	ND		0.001	0.000514
Benzo[g,h,i]perylene	ND		0.001	0.000468

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS QC SUMMARY

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 12/23/2014

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2	AQUEOUS	A2987.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKA141222-02	AQUEOUS	A3000.D	26		16		57		66		68		79	
LCSA141222-02	AQUEOUS	A3001.D	30		19		66		78		79		87	
E14-12156-020MS	AQUEOUS	A3002.D	31		23		60		72		75		88	
E14-12156-020MSD	AQUEOUS	A3003.D	31		23		56		66		70		89	
E14-12156-019	AQUEOUS	A3004.D	N/A		N/A		47		55		N/A		66	
E14-12156-020	AQUEOUS	A3005.D	N/A		N/A		50		64		N/A		86	
E14-12156-021	AQUEOUS	A3006.D	N/A		N/A		48		55		N/A		70	
E14-12156-022	AQUEOUS	A3007.D	N/A		N/A		42		47		N/A		69	
E14-12197-001	AQUEOUS	A3008.D	N/A		N/A		40		54		N/A		66	
E14-12180-002	AQUEOUS	A3009.D	N/A		N/A		46		60		N/A		74	
E14-12180-003	AQUEOUS	A3010.D	N/A		N/A		39		24	$	N/A		33	
E14-12180-004	AQUEOUS	A3011.D	N/A		N/A		26	$	26	$	N/A		33	
E14-12184-001	AQUEOUS	A3012.D	N/A		N/A		49		62		N/A		74	
E14-12184-002	AQUEOUS	A3013.D	N/A		N/A		29	$	31		N/A		36	
E14-12099-008	AQUEOUS	A3014.D	N/A		N/A		49		63		N/A		73	
E14-12132-014	AQUEOUS	A3015.D	N/A		N/A		49		62		N/A		77	
BLKA141223-01	AQUEOUS	A3021.D	52		51		51		58		53		56	
SPLP141216	LEACHATE	A3022.D	57		56		52		62		56		59	
SPLP141218	LEACHATE	A3023.D	53		50		50		61		51		56	
LCSA141223-01	AQUEOUS	A3024.D	52		51		56		59		53		57	
E14-11765-005MS	AQUEOUS	A3025.D	22		16		73		82		79		88	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10.-83	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	10.-91	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	25-94	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	23-102	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	27-110	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	33-113	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 12/23/2014

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
E14-11765-005MSD	AQUEOUS	A3026.D	21		18		65		75		71		80	
E14-11786-018	LEACHATE	A3027.D	N/A		N/A		52		69		N/A		83	
E14-11786-019	LEACHATE	A3028.D	N/A		N/A		48		61		N/A		85	
E14-11786-020	LEACHATE	A3029.D	N/A		N/A		62		77		N/A		87	
E14-11765-005	LEACHATE	A3030.D	N/A		N/A		51		68		N/A		79	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10.-83	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	10.-91	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	25-94	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	23-102	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	27-110	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	33-113	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 12/29/2014

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2		C2792.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKS141223-05	SOIL	C2793.D	71		76		81		77		98		100	
LCSS141223-05	SOIL	C2794.D	58		67		77		88		98		100	
E14-12116-002MS	SOIL	C2795.D	44		50		61		70		86		92	
E14-12116-003MSD	SOIL	C2796.D	50		53		66		73		94		92	
E14-12116-001	SOIL	C2797.D	N/A		N/A		58		69		N/A		83	
BLKS141222-03	SOIL	C2798.D	56		56		61		75		93		92	
LCSS141222-03	SOIL	C2799.D	67		73		86		91		105		112	
E14-12168-005MS	SOIL	C2800.D	47		51		60		67		83		74	
E14-12168-006MSD	SOIL	C2801.D	51		56		63		70		85		75	
E14-12132-001	SOIL	C2802.D	N/A		N/A		64		70		N/A		88	
E14-12132-002	SOIL	C2803.D	N/A		N/A		59		70		N/A		87	
E14-12132-003	SOIL	C2804.D	N/A		N/A		70		77		N/A		86	
E14-12132-004	SOIL	C2805.D	N/A		N/A		62		68		N/A		87	
E14-12132-005	SOIL	C2806.D	N/A		N/A		62		67		N/A		84	
E14-12132-006	SOIL	C2807.D	N/A		N/A		62		69		N/A		85	
E14-12132-007	SOIL	C2808.D	N/A		N/A		48		62		N/A		80	
E14-12132-008	SOIL	C2809.D	N/A		N/A		52		56		N/A		74	
E14-12132-009	SOIL	C2810.D	N/A		N/A		59		63		N/A		82	
E14-12132-010	SOIL	C2811.D	N/A		N/A		69		74		N/A		89	
E14-12132-011	SOIL	C2812.D	N/A		N/A		63		70		N/A		84	
E14-12132-012	SOIL	C2813.D	N/A		N/A		65		74		N/A		94	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	45-104	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	52-106	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	57-107	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	57-126	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	30-147	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	68-133	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 12/29/2014

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
E14-12132-013	SOIL	C2814.D	N/A		N/A		61		68		N/A		86	
E14-12073-002	SOIL	C2815.D	N/A		N/A		80		75		N/A		82	
E14-12168-001	SOIL	C2816.D	40		48		54		63		81		75	
E14-12168-002	SOIL	C2817.D	39		45		51		59		76		70	
E14-12168-003	SOIL	C2818.D	47		50		58		65		79		71	
E14-12168-004	SOIL	C2819.D	46		51		56		63		75		67	
E14-12168-007	SOIL	C2820.D	41		47		57		66		82		79	
E14-12168-008	SOIL	C2821.D	49		54		63		74		89		85	
E14-12132-011DL	SOIL	C2822.D	N/A		N/A		52		64		N/A		68	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	45-104	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	52-106	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	57-107	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	57-126	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	30-147	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	68-133	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA141222-02
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/23/2014
Data file: A3001.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	DKQP
N-Nitrosodimethylamine	30.0	29.1	97		40-140	70-130
Pyridine	30.0	10.0	33		20-120	20-160
Benzaldehyde	30.0	3.6	12	$	10-110	20-160
Phenol	30.0	13.6	45		30-140	20-160
Aniline	30.0	17.3	58	$	40-140	70-130
Bis(2-chloroethyl) ether	30.0	21.5	72		40-140	70-130
2-Chlorophenol	30.0	18.7	62		30-140	20-160
1,3-Dichlorobenzene	30.0	18.3	61	$	40-140	70-130
1,4-Dichlorobenzene	30.0	17.3	58	$	40-140	70-130
Benzyl alcohol	30.0	15.4	51	$	40-140	70-130
1,2-Dichlorobenzene	30.0	18.6	62	$	40-140	70-130
2-Methylphenol	30.0	16.9	56		30-140	20-160
Bis(2-chloroisopropyl) ether	30.0	19.7	66	$	40-140	70-130
4-Methylphenol	30.0	16.1	54	$	30-140	70-130
N-Nitrosodi-n-propylamine	30.0	20.2	67	$	40-140	70-130
Acetophenone	30.0	22.3	74		40-140	70-130
3-Methylphenol	30.0	16.1	54		30-140	20-160
Hexachloroethane	30.0	17.0	57	$	40-140	70-130
Nitrobenzene	30.0	20.3	68	$	40-140	70-130
Isophorone	30.0	21.5	72		40-140	70-130
2-Nitrophenol	30.0	21.9	73		30-140	20-160
2,4-Dimethylphenol	30.0	21.7	72		30-140	20-160
Bis(2-chloroethoxy) methane	30.0	21.5	72		40-140	70-130
Benzoic acid	30.0	12.3	41		30-140	20-160
2,4-Dimethylaniline	30.0	18.5	62	$	40-140	70-130
2,4-Dichlorophenol	30.0	22.1	74		30-140	20-160
1,2,4-Trichlorobenzene	30.0	20.4	68	$	40-140	70-130
Naphthalene	30.0	18.8	63	$	40-140	70-130
4-Chloroaniline	30.0	21.9	73		40-140	70-130
Hexachlorobutadiene	30.0	19.6	65	$	40-140	70-130
Caprolactam	30.0	21.7	72		40-140	70-130
4-Chloro-3-methylphenol	30.0	23.2	77		30-140	20-160
2-Methylnaphthalene	30.0	22.9	76		40-140	70-130
Hexachlorocyclopentadiene	30.0	22.9	76		5-105	20-160
2,4,6-Trichlorophenol	30.0	24.0	80		30-140	20-160
2,4,5-Trichlorophenol	30.0	26.7	89		30-140	20-160
1,1'-Biphenyl	30.0	25.3	84		40-140	70-130
2-Chloronaphthalene	30.0	23.4	78		40-140	70-130
2-Nitroaniline	30.0	27.2	91		40-140	70-130
Dimethyl phthalate	30.0	23.9	80		40-140	70-130
2,6-Dinitrotoluene	30.0	26.0	87		40-140	70-130
Acenaphthylene	30.0	22.9	76		40-140	70-130
3-Nitroaniline	30.0	28.3	94		40-140	70-130
Acenaphthene	30.0	23.1	77		40-140	20-160
2,4-Dinitrophenol	30.0	14.5	48		5-105	20-160

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA141222-02
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/23/2014
Data file: A3001.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	30.0	14.7	49		30-140	20-160
2,4-Dinitrotoluene	30.0	26.5	88		40-140	70-130
Dibenzofuran	30.0	25.0	83		40-140	70-130
Diethyl phthalate	30.0	25.2	84		40-140	70-130
Fluorene	30.0	23.7	79		40-140	70-130
4-Chlorophenyl phenyl ether	30.0	25.7	86		40-140	70-130
4-Nitroaniline	30.0	25.7	86		40-140	70-130
1,2,4,5-Tetrachlorobenzene	30.0	21.6	72		40-140	70-130
2,3,4,6-Tetrachlorophenol	30.0	23.3	78		40-140	70-130
4,6-Dinitro-2-methylphenol	30.0	21.5	72		10-110	20-160
N-Nitrosodiphenylamine	30.0	26.8	89		40-140	70-130
1,2-Diphenylhydrazine	30.0	20.7	69	$	40-140	70-130
4-Bromophenyl phenyl ether	30.0	25.3	84		40-140	70-130
Hexachlorobenzene	30.0	26.3	88		40-140	70-130
Atrazine	30.0	26.7	89		20-120	20-160
Pentachlorophenol	30.0	21.9	73		30-140	20-160
Phenanthrene	30.0	24.1	80		40-140	70-130
Anthracene	30.0	25.1	84		40-140	70-130
Carbazole	30.0	25.5	85		40-140	70-130
Di-n-butyl phthalate	30.0	25.9	86		40-140	70-130
Fluoranthene	30.0	22.8	76		40-140	70-130
Benzidine	30.0	7.9	26		5-105	20-160
Pyrene	30.0	24.4	81		40-140	70-130
3,3'-Dimethylbenzidine	30.0	11.7	39		5-105	20-160
Butyl benzyl phthalate	30.0	25.9	86		40-140	70-130
3,3'-Dichlorobenzidine	30.0	24.2	81		40-140	70-130
Benzo[a]anthracene	30.0	23.6	79		40-140	70-130
Chrysene	30.0	24.9	83		40-140	70-130
Bis(2-ethylhexyl) phthalate	30.0	24.5	82		40-140	70-130
Di-n-octyl phthalate	30.0	19.1	64	$	40-140	70-130
Benzo[b]fluoranthene	30.0	18.6	62	$	40-140	70-130
Benzo[k]fluoranthene	30.0	18.8	63	$	40-140	70-130
Benzo[a]pyrene	30.0	19.6	65	$	40-140	70-130
Indeno[1,2,3-cd]pyrene	30.0	18.2	61	$	40-140	70-130
Dibenz[a,h]anthracene	30.0	17.4	58	$	40-140	70-130
Benzo[g,h,i]perylene	30.0	18.2	61	$	40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS141222-03
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2799.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
N-Nitrosodimethylamine	50.0	34.4	69	$	40-140	70-130
Pyridine	50.0	21.8	44		20-120	20-160
Benzaldehyde	50.0	5.9	12	$	10-110	20-160
Phenol	50.0	34.3	69		30-140	20-160
Aniline	50.0	38.5	77		40-140	70-130
Bis(2-chloroethyl) ether	50.0	35.7	71		40-140	70-130
2-Chlorophenol	50.0	36.1	72		30-140	20-160
1,3-Dichlorobenzene	50.0	35.8	72		40-140	70-130
1,4-Dichlorobenzene	50.0	34.5	69	$	40-140	70-130
Benzyl alcohol	50.0	40.8	82		40-140	70-130
1,2-Dichlorobenzene	50.0	35.5	71		40-140	70-130
2-Methylphenol	50.0	37.6	75		30-140	20-160
Bis(2-chloroisopropyl) ether	50.0	35.4	71		40-140	70-130
4-Methylphenol	50.0	38.8	78		30-140	70-130
N-Nitrosodi-n-propylamine	50.0	37.8	76		40-140	70-130
Acetophenone	50.0	41.9	84		40-140	70-130
3-Methylphenol	50.0	38.8	78		30-140	20-160
Hexachloroethane	50.0	31.9	64	$	40-140	70-130
Nitrobenzene	50.0	40.3	81		40-140	70-130
Isophorone	50.0	39.7	79		40-140	70-130
2-Nitrophenol	50.0	41.0	82		30-140	20-160
2,4-Dimethylphenol	50.0	43.5	87		30-140	20-160
Bis(2-chloroethoxy) methane	50.0	41.4	83		40-140	70-130
Benzoic acid	50.0	45.5	91		30-140	20-160
2,4-Dimethylaniline	50.0	38.7	77		40-140	70-130
2,4-Dichlorophenol	50.0	41.4	83		30-140	20-160
1,2,4-Trichlorobenzene	50.0	41.3	83		40-140	70-130
Naphthalene	50.0	40.2	80		40-140	70-130
4-Chloroaniline	50.0	43.1	86		40-140	70-130
Hexachlorobutadiene	50.0	41.4	83		40-140	70-130
Caprolactam	50.0	46.4	93		40-140	70-130
4-Chloro-3-methylphenol	50.0	47.5	95		30-140	20-160
2-Methylnaphthalene	50.0	47.3	95		40-140	70-130
Hexachlorocyclopentadiene	50.0	27.3	55		5-105	20-160
2,4,6-Trichlorophenol	50.0	50.6	101		30-140	20-160
2,4,5-Trichlorophenol	50.0	49.4	99		30-140	20-160
1,1'-Biphenyl	50.0	45.6	91		40-140	70-130
2-Chloronaphthalene	50.0	42.2	84		40-140	70-130
2-Nitroaniline	50.0	45.1	90		40-140	70-130
Dimethyl phthalate	50.0	47.2	94		40-140	70-130
2,6-Dinitrotoluene	50.0	47.5	95		40-140	70-130
Acenaphthylene	50.0	43.2	86		40-140	70-130
3-Nitroaniline	50.0	49.9	100		40-140	70-130
Acenaphthene	50.0	43.7	87		40-140	20-160
2,4-Dinitrophenol	50.0	46.5	93		5-105	20-160

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS141222-03
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2799.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	50.0	45.2	90		30-140	20-160
2,4-Dinitrotoluene	50.0	53.7	107		40-140	70-130
Dibenzofuran	50.0	46.9	94		40-140	70-130
Diethyl phthalate	50.0	46.7	93		40-140	70-130
Fluorene	50.0	45.0	90		40-140	70-130
4-Chlorophenyl phenyl ether	50.0	47.9	96		40-140	70-130
4-Nitroaniline	50.0	53.9	108		40-140	70-130
1,2,4,5-Tetrachlorobenzene	50.0	40.6	81		40-140	70-130
2,3,4,6-Tetrachlorophenol	50.0	52.0	104		40-140	70-130
4,6-Dinitro-2-methylphenol	50.0	49.7	99		10-110	20-160
N-Nitrosodiphenylamine	50.0	48.5	97		40-140	70-130
1,2-Diphenylhydrazine	50.0	34.8	70		40-140	70-130
4-Bromophenyl phenyl ether	50.0	48.4	97		40-140	70-130
Hexachlorobenzene	50.0	50.5	101		40-140	70-130
Atrazine	50.0	55.5	111		20-120	20-160
Pentachlorophenol	50.0	56.5	113		30-140	20-160
Phenanthrene	50.0	47.6	95		40-140	70-130
Anthracene	50.0	49.5	99		40-140	70-130
Carbazole	50.0	48.6	97		40-140	70-130
Di-n-butyl phthalate	50.0	51.4	103		40-140	70-130
Fluoranthene	50.0	52.2	104		40-140	70-130
Benzidine	50.0	37.6	75		5-105	20-160
Pyrene	50.0	49.2	98		40-140	70-130
3,3'-Dimethylbenzidine	50.0	21.0	42		5-105	20-160
Butyl benzyl phthalate	50.0	49.8	100		40-140	70-130
3,3'-Dichlorobenzidine	50.0	58.6	117		40-140	70-130
Benzo[a]anthracene	50.0	52.9	106		40-140	70-130
Chrysene	50.0	53.0	106		40-140	70-130
Bis(2-ethylhexyl) phthalate	50.0	51.0	102		40-140	70-130
Di-n-octyl phthalate	50.0	51.9	104		40-140	70-130
Benzo[b]fluoranthene	50.0	53.6	107		40-140	70-130
Benzo[k]fluoranthene	50.0	53.2	106		40-140	70-130
Benzo[a]pyrene	50.0	55.5	111		40-140	70-130
Indeno[1,2,3-cd]pyrene	50.0	51.6	103		40-140	70-130
Dibenz[a,h]anthracene	50.0	52.9	106		40-140	70-130
Benzo[g,h,i]perylene	50.0	51.6	103		40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-12156-020
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/23/2014
MS Data file: A3002.D
MSD Data file: A3003.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD limits IAL	DKQP
N-Nitrosodimethylamine	40.0	0.0	26.3	66	$	26.8	67	$	2		40-140/20	70-130/20
Pyridine	40.0	0.0	14.5	36		13.8	35		5		20-120/20	20-160/20
Benzaldehyde	40.0	0.0	4.7	12	$	4.1	10	$	14		10-110/20	20-160/20
Phenol	40.0	0.0	20.2	51		18.4	46		9		30-140/20	20-160/20
Aniline	40.0	0.0	22.8	57	$	22.1	55	$	3		40-140/20	70-130/20
Bis(2-chloroethyl) ether	40.0	0.0	22.2	56	$	22.0	55	$	1		40-140/20	70-130/20
2-Chlorophenol	40.0	0.0	19.6	49		19.2	48		2		30-140/20	20-160/20
1,3-Dichlorobenzene	40.0	0.0	21.0	53	$	20.7	52	$	1		40-140/20	70-130/20
1,4-Dichlorobenzene	40.0	0.0	20.4	51	$	19.7	49	$	3		40-140/20	70-130/20
Benzyl alcohol	40.0	0.0	23.0	58	$	20.9	52	$	10		40-140/20	70-130/20
1,2-Dichlorobenzene	40.0	0.0	21.3	53	$	21.4	54	$	0		40-140/20	70-130/20
2-Methylphenol	40.0	0.0	20.3	51		19.8	50		2		30-140/20	20-160/20
Bis(2-chloroisopropyl) ether	40.0	0.0	21.7	54	$	21.4	54	$	1		40-140/20	70-130/20
4-Methylphenol	40.0	0.0	19.4	49	$	19.2	48	$	1		30-140/20	70-130/20
N-Nitrosodi-n-propylamine	40.0	0.0	24.3	61	$	23.2	58	$	5		40-140/20	70-130/20
Acetophenone	40.0	0.0	25.8	65	$	24.7	62	$	4		40-140/20	70-130/20
3-Methylphenol	40.0	0.0	19.4	49		19.2	48		1		30-140/20	20-160/20
Hexachloroethane	40.0	0.0	19.1	48	$	19.4	49	$	2		40-140/20	70-130/20
Nitrobenzene	40.0	0.0	24.4	61	$	23.0	58	$	6		40-140/20	70-130/20
Isophorone	40.0	0.0	26.6	67	$	24.9	62	$	7		40-140/20	70-130/20
2-Nitrophenol	40.0	0.0	26.8	67		24.9	62		7		30-140/20	20-160/20
2,4-Dimethylphenol	40.0	0.0	15.6	39		15.3	38		2		30-140/20	20-160/20
Bis(2-chloroethoxy) methane	40.0	0.0	26.3	66	$	24.5	61	$	7		40-140/20	70-130/20
Benzoic acid	40.0	0.0	36.8	92		36.2	91		2		30-140/20	20-160/20
2,4-Dimethylaniline	40.0	0.0	23.9	60	$	22.1	55	$	8		40-140/20	70-130/20
2,4-Dichlorophenol	40.0	0.0	26.3	66		24.2	61		8		30-140/20	20-160/20
1,2,4-Trichlorobenzene	40.0	0.0	24.2	61	$	22.8	57	$	6		40-140/20	70-130/20
Naphthalene	40.0	0.0	23.2	58	$	21.8	55	$	6		40-140/20	70-130/20
4-Chloroaniline	40.0	0.0	28.2	71		26.5	66	$	6		40-140/20	70-130/20
Hexachlorobutadiene	40.0	0.0	23.1	58	$	22.1	55	$	4		40-140/20	70-130/20
Caprolactam	40.0	0.0	24.4	61	$	26.6	67	$	9		40-140/20	70-130/20
4-Chloro-3-methylphenol	40.0	0.0	28.6	72		26.5	66		8		30-140/20	20-160/20
2-Methylnaphthalene	40.0	0.0	28.9	72		26.4	66	$	9		40-140/20	70-130/20
Hexachlorocyclopentadiene	40.0	0.0	30.9	77		28.2	71		9		5-105/20	20-160/20
2,4,6-Trichlorophenol	40.0	0.0	28.9	72		26.1	65		10		30-140/20	20-160/20
2,4,5-Trichlorophenol	40.0	0.0	34.5	86		30.5	76		12		30-140/20	20-160/20
1,1'-Biphenyl	40.0	0.0	31.5	79		29.0	73		8		40-140/20	70-130/20
2-Chloronaphthalene	40.0	0.0	30.2	76		27.0	68	$	11		40-140/20	70-130/20
2-Nitroaniline	40.0	0.0	37.8	95		34.8	87		8		40-140/20	70-130/20
Dimethyl phthalate	40.0	0.0	32.9	82		28.6	72		14		40-140/20	70-130/20
2,6-Dinitrotoluene	40.0	0.0	35.3	88		33.3	83		6		40-140/20	70-130/20
Acenaphthylene	40.0	0.0	29.9	75		27.0	68	$	10		40-140/20	70-130/20
3-Nitroaniline	40.0	0.0	39.3	98		37.2	93		5		40-140/20	70-130/20
Acenaphthene	40.0	0.0	30.7	77		27.7	69		10		40-140/20	20-160/20
2,4-Dinitrophenol	40.0	0.0	21.7	54		19.5	49		11		5-105/20	20-160/20

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-12156-020
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/23/2014
MS Data file: A3002.D
MSD Data file: A3003.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD IAL Limits	Rec/RPD DKQP Limits
4-Nitrophenol	40.0	0.0	13.9	35		12.3	31		12		30-140/20	20-160/20
2,4-Dinitrotoluene	40.0	0.0	38.1	95		34.3	86		10		40-140/20	70-130/20
Dibenzofuran	40.0	0.0	33.5	84		30.3	76		10		40-140/20	70-130/20
Diethyl phthalate	40.0	0.0	34.6	87		31.7	79		9		40-140/20	70-130/20
Fluorene	40.0	0.0	31.7	79		28.8	72		10		40-140/20	70-130/20
4-Chlorophenyl phenyl ether	40.0	0.0	34.2	86		31.6	79		8		40-140/20	70-130/20
4-Nitroaniline	40.0	0.0	39.0	98		35.5	89		9		40-140/20	70-130/20
1,2,4,5-Tetrachlorobenzene	40.0	0.0	27.4	69	$	24.6	62	$	11		40-140/20	70-130/20
2,3,4,6-Tetrachlorophenol	40.0	0.0	28.3	71		26.9	67	$	5		40-140/20	70-130/20
4,6-Dinitro-2-methylphenol	40.0	0.0	32.9	82		30.5	76		8		10-110/20	20-160/20
N-Nitrosodiphenylamine	40.0	0.0	36.8	92		33.5	84		9		40-140/20	70-130/20
1,2-Diphenylhydrazine	40.0	0.0	27.6	69	$	25.6	64	$	8		40-140/20	70-130/20
4-Bromophenyl phenyl ether	40.0	0.0	32.9	82		29.9	75		10		40-140/20	70-130/20
Hexachlorobenzene	40.0	0.0	34.8	87		32.0	80		8		40-140/20	70-130/20
Atrazine	40.0	0.0	37.5	94		35.8	90		5		20-120/20	20-160/20
Pentachlorophenol	40.0	0.0	25.2	63		24.1	60		4		30-140/20	20-160/20
Phenanthrene	40.0	0.0	33.6	84		29.9	75		12		40-140/20	70-130/20
Anthracene	40.0	0.0	33.8	85		30.9	77		9		40-140/20	70-130/20
Carbazole	40.0	0.0	35.2	88		32.6	82		8		40-140/20	70-130/20
Di-n-butyl phthalate	40.0	0.0	36.5	91		33.3	83		9		40-140/20	70-130/20
Fluoranthene	40.0	0.0	32.4	81		29.3	73		10		40-140/20	70-130/20
Benzidine	40.0	0.0	11.9	30		10.4	26		13		5-105/20	20-160/20
Pyrene	40.0	0.0	34.0	85		33.8	85		1		40-140/20	70-130/20
3,3'-Dimethylbenzidine	40.0	0.0	14.1	35		13.8	35		2		5-105/20	20-160/20
Butyl benzyl phthalate	40.0	0.0	36.9	92		36.6	92		1		40-140/20	70-130/20
3,3'-Dichlorobenzidine	40.0	0.0	33.2	83		33.1	83		0		40-140/20	70-130/20
Benzo[a]anthracene	40.0	0.0	32.5	81		31.6	79		3		40-140/20	70-130/20
Chrysene	40.0	0.0	35.4	89		35.2	88		1		40-140/20	70-130/20
Bis(2-ethylhexyl) phthalate	40.0	0.0	34.4	86		34.2	86		1		40-140/20	70-130/20
Di-n-octyl phthalate	40.0	0.0	27.3	68	$	27.3	68	$	0		40-140/20	70-130/20
Benzo[b]fluoranthene	40.0	0.0	24.6	62	$	26.4	66	$	7		40-140/20	70-130/20
Benzo[k]fluoranthene	40.0	0.0	28.7	72		25.8	65	$	11		40-140/20	70-130/20
Benzo[a]pyrene	40.0	0.0	27.8	70		27.7	69	$	0		40-140/20	70-130/20
Indeno[1,2,3-cd]pyrene	40.0	0.0	26.4	66	$	25.7	64	$	3		40-140/20	70-130/20
Dibenz[a,h]anthracene	40.0	0.0	26.4	66	$	25.2	63	$	5		40-140/20	70-130/20
Benzo[g,h,i]perylene	40.0	0.0	26.3	66	$	25.6	64	$	3		40-140/20	70-130/20

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-12168-004
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
MS Data file: C2800.D
MSD Data file: C2801.D

GC/MS Column: DB-5
Sample wt/vol: 15.81g
Matrix-Units: Soil-mg/Kg
% Moisture: 31.0
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD limits IAL	DKQP
N-Nitrosodimethylamine	50.0	0.0	26.7	53	$	28.9	58	$	8		40-140/30	70-130/30
Pyridine	50.0	0.0	17.0	34		19.9	40		16		20-120/30	20-160/30
Benzaldehyde	50.0	0.0	18.0	36		20.1	40		11		10-110/30	20-160/30
Phenol	50.0	0.0	25.0	50		26.5	53		6		30-140/30	20-160/30
Aniline	50.0	0.0	22.3	45	$	22.5	45	$	1		40-140/30	70-130/30
Bis(2-chloroethyl) ether	50.0	0.0	23.8	48	$	27.7	55	$	15		40-140/30	70-130/30
2-Chlorophenol	50.0	0.0	25.8	52		28.0	56		8		30-140/30	20-160/30
1,3-Dichlorobenzene	50.0	0.0	25.9	52	$	27.1	54	$	5		40-140/30	70-130/30
1,4-Dichlorobenzene	50.0	0.0	25.3	51	$	27.5	55	$	8		40-140/30	70-130/30
Benzyl alcohol	50.0	0.0	28.5	57	$	30.3	61	$	6		40-140/30	70-130/30
1,2-Dichlorobenzene	50.0	0.0	25.5	51	$	27.3	55	$	7		40-140/30	70-130/30
2-Methylphenol	50.0	0.0	27.4	55		28.9	58		5		30-140/30	20-160/30
Bis(2-chloroisopropyl) ether	50.0	0.0	25.1	50	$	27.9	56	$	11		40-140/30	70-130/30
4-Methylphenol	50.0	0.0	29.1	58	$	33.8	68	$	15		30-140/30	70-130/30
N-Nitrosodi-n-propylamine	50.0	0.0	27.0	54	$	29.5	59	$	9		40-140/30	70-130/30
Acetophenone	50.0	0.0	29.7	59	$	32.7	65	$	10		40-140/30	70-130/30
3-Methylphenol	50.0	0.0	29.1	58		33.8	68		15		30-140/30	20-160/30
Hexachloroethane	50.0	0.0	22.1	44	$	21.4	43	$	3		40-140/30	70-130/30
Nitrobenzene	50.0	0.0	27.8	56	$	30.7	61	$	10		40-140/30	70-130/30
Isophorone	50.0	0.0	28.7	57	$	29.3	59	$	2		40-140/30	70-130/30
2-Nitrophenol	50.0	0.0	28.8	58		32.5	65		12		30-140/30	20-160/30
2,4-Dimethylphenol	50.0	0.0	32.4	65		34.5	69		6		30-140/30	20-160/30
Bis(2-chloroethoxy) methane	50.0	0.0	30.1	60	$	31.5	63	$	5		40-140/30	70-130/30
Benzoic acid	50.0	0.0	22.2	44		26.9	54		19		30-140/30	20-160/30
2,4-Dimethylaniline	50.0	0.0	22.1	44	$	21.9	44	$	1		40-140/30	70-130/30
2,4-Dichlorophenol	50.0	0.0	30.8	62		32.6	65		6		30-140/30	20-160/30
1,2,4-Trichlorobenzene	50.0	0.0	31.7	63	$	31.8	64	$	0		40-140/30	70-130/30
Naphthalene	50.0	0.0	28.6	57	$	30.7	61	$	7		40-140/30	70-130/30
4-Chloroaniline	50.0	0.0	27.6	55	$	28.4	57	$	3		40-140/30	70-130/30
Hexachlorobutadiene	50.0	0.0	31.0	62	$	33.2	66	$	7		40-140/30	70-130/30
Caprolactam	50.0	0.0	36.6	73		37.1	74		1		40-140/30	70-130/30
4-Chloro-3-methylphenol	50.0	0.0	33.8	68		34.5	69		2		30-140/30	20-160/30
2-Methylnaphthalene	50.0	0.0	33.5	67	$	34.8	70		4		40-140/30	70-130/30
Hexachlorocyclopentadiene	50.0	0.0	3.0	6	$	3.9	8	$	26		5-105/30	20-160/30
2,4,6-Trichlorophenol	50.0	0.0	38.0	76		40.5	81		6		30-140/30	20-160/30
2,4,5-Trichlorophenol	50.0	0.0	37.1	74		39.5	79		6		30-140/30	20-160/30
1,1'-Biphenyl	50.0	0.0	33.8	68	$	36.1	72		7		40-140/30	70-130/30
2-Chloronaphthalene	50.0	0.0	31.9	64	$	34.1	68	$	7		40-140/30	70-130/30
2-Nitroaniline	50.0	0.0	35.0	70		37.2	74		6		40-140/30	70-130/30
Dimethyl phthalate	50.0	0.0	39.0	78		37.3	75		4		40-140/30	70-130/30
2,6-Dinitrotoluene	50.0	0.0	36.1	72		38.7	77		7		40-140/30	70-130/30
Acenaphthylene	50.0	0.0	32.1	64	$	34.3	69	$	7		40-140/30	70-130/30
3-Nitroaniline	50.0	0.0	34.8	70		37.0	74		6		40-140/30	70-130/30
Acenaphthene	50.0	0.0	33.9	68		35.1	70		3		40-140/30	20-160/30
2,4-Dinitrophenol	50.0	0.0	9.3	19	$	11.0	22		17		5-105/30	20-160/30

E14-12132 0039

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-12168-004
Date Received: 12/18/2014
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
MS Data file: C2800.D
MSD Data file: C2801.D

GC/MS Column: DB-5
Sample wt/vol: 15.81g
Matrix-Units: Soil-mg/Kg
% Moisture: 31.0
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD IAL Limits	Rec/RPD DKQP Limits
4-Nitrophenol	50.0	0.0	31.9	64		37.9	76		17		30-140/30	20-160/30
2,4-Dinitrotoluene	50.0	0.0	39.6	79		45.4	91		14		40-140/30	70-130/30
Dibenzofuran	50.0	0.0	34.5	69	$	36.8	74		6		40-140/30	70-130/30
Diethyl phthalate	50.0	0.0	35.6	71		38.5	77		8		40-140/30	70-130/30
Fluorene	50.0	0.0	34.9	70		37.0	74		6		40-140/30	70-130/30
4-Chlorophenyl phenyl ether	50.0	0.0	36.4	73		39.1	78		7		40-140/30	70-130/30
4-Nitroaniline	50.0	0.0	31.9	64	$	35.9	72		12		40-140/30	70-130/30
1,2,4,5-Tetrachlorobenzene	50.0	0.0	31.4	63	$	32.6	65	$	4		40-140/30	70-130/30
2,3,4,6-Tetrachlorophenol	50.0	0.0	36.0	72		41.0	82		13		40-140/30	70-130/30
4,6-Dinitro-2-methylphenol	50.0	0.0	18.9	38		24.7	49		27		10-110/30	20-160/30
N-Nitrosodiphenylamine	50.0	0.0	41.6	83		40.1	80		4		40-140/30	70-130/30
1,2-Diphenylhydrazine	50.0	0.0	29.8	60	$	29.5	59	$	1		40-140/30	70-130/30
4-Bromophenyl phenyl ether	50.0	0.0	38.6	77		39.3	79		2		40-140/30	70-130/30
Hexachlorobenzene	50.0	0.0	40.2	80		40.4	81		0		40-140/30	70-130/30
Atrazine	50.0	0.0	41.4	83		40.9	82		1		20-120/30	20-160/30
Pentachlorophenol	50.0	0.0	32.0	64		40.6	81		24		30-140/30	20-160/30
Phenanthrene	50.0	6.3	65.5	118		54.3	96		19		40-140/30	70-130/30
Anthracene	50.0	1.9	44.0	84		44.8	86		2		40-140/30	70-130/30
Carbazole	50.0	1.0	40.1	78		42.7	83		6		40-140/30	70-130/30
Di-n-butyl phthalate	50.0	0.0	56.5	113		43.5	87		26		40-140/30	70-130/30
Fluoranthene	50.0	17.4	87.4	140	$	86.3	138	$	1		40-140/30	70-130/30
Benzidine	50.0	0.0	6.5	13	$	8.5	17	$	27		5-105/30	20-160/30
Pyrene	50.0	12.5	71.5	118		63.7	102		12		40-140/30	70-130/30
3,3'-Dimethylbenzidine	50.0	0.0	6.5	13	$	8.3	17	$	24		5-105/30	20-160/30
Butyl benzyl phthalate	50.0	0.0	37.9	76		44.7	89		16		40-140/30	70-130/30
3,3'-Dichlorobenzidine	50.0	0.0	34.3	69	$	32.9	66	$	4		40-140/30	70-130/30
Benzo[a]anthracene	50.0	7.9	61.1	106		59.5	103		3		40-140/30	70-130/30
Chrysene	50.0	9.4	64.2	110		61.1	103		5		40-140/30	70-130/30
Bis(2-ethylhexyl) phthalate	50.0	37.8	76.1	77		83.2	91		9		40-140/30	70-130/30
Di-n-octyl phthalate	50.0	0.0	40.3	81		44.3	89		9		40-140/30	70-130/30
Benzo[b]fluoranthene	50.0	10.3	63.1	106		60.9	101		4		40-140/30	70-130/30
Benzo[k]fluoranthene	50.0	7.9	58.9	102		57.3	99		3		40-140/30	70-130/30
Benzo[a]pyrene	50.0	8.4	62.1	107		61.6	106		1		40-140/30	70-130/30
Indeno[1,2,3-cd]pyrene	50.0	4.9	52.1	94		50.6	91		3		40-140/30	70-130/30
Dibenz[a,h]anthracene	50.0	2.0	44.5	85		44.5	85		0		40-140/30	70-130/30
Benzo[g,h,i]perylene	50.0	5.5	57.3	104		56.5	102		1		40-140/30	70-130/30

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E14-12132 0040

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: A3000.D

Instrument ID: MSDA

Date Extracted: 12/22/14

Matrix: AQUEOUS

Date Analyzed: 12/23/2014

Time Analyzed: 11:32

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSA141222-02	12/23/2014	11:48
.	E14-12156-020MS	12/23/2014	12:04
.	E14-12156-020MSD	12/23/2014	12:20
TW-4/5.9	E14-12156-019	12/23/2014	12:36
TW-3/9.4	E14-12156-020	12/23/2014	12:52
TW-5/11.	E14-12156-021	12/23/2014	13:08
TW-2/15.	E14-12156-022	12/23/2014	13:24
TW-1/13.	E14-12197-001	12/23/2014	13:40
FB-12-18	E14-12180-002	12/23/2014	13:56
L1-PZ/1.	E14-12180-003	12/23/2014	14:12
L2-PZ/1.	E14-12180-004	12/23/2014	14:28
SR-MW1	E14-12184-001	12/23/2014	14:44
SR-RW2	E14-12184-002	12/23/2014	15:00
FIELD_BL.	E14-12099-008	12/23/2014	15:16
FB-12162	E14-12132-014	12/23/2014	15:32

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C2798.D

Instrument ID: MSDC

Date Extracted: 12/22/14

Matrix: SOIL

Date Analyzed: 12/29/2014

Time Analyzed: 11:50

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
ABN067-14	CCV040BNA2	12/29/2014	10:17
.	LCSS141222-03	12/29/2014	12:07
.	E14-12168-005MS	12/29/2014	12:22
.	E14-12168-006MSD	12/29/2014	12:38
B-491_(4	E14-12132-001	12/29/2014	12:54
B-491_(5	E14-12132-002	12/29/2014	13:09
B-492_(4	E14-12132-003	12/29/2014	13:25
B-492_(5	E14-12132-004	12/29/2014	13:41
B-490_(4	E14-12132-005	12/29/2014	13:56
B-490_(5	E14-12132-006	12/29/2014	14:12
B-490_(1	E14-12132-007	12/29/2014	14:27
B-490_(1	E14-12132-008	12/29/2014	14:43
B-487_(4	E14-12132-009	12/29/2014	14:59
B-486_(4	E14-12132-010	12/29/2014	15:15
B-486_(7	E14-12132-011	12/29/2014	15:30
B-488_(4	E14-12132-012	12/29/2014	15:46
B-489_(4	E14-12132-013	12/29/2014	16:01
PE-4	E14-12073-002	12/29/2014	16:17
SED-1	E14-12168-001	12/29/2014	16:33
SED-2	E14-12168-002	12/29/2014	16:48
SED-3	E14-12168-003	12/29/2014	17:04
SED-4	E14-12168-004	12/29/2014	17:20
SED-5	E14-12168-007	12/29/2014	17:35
REP12171	E14-12168-008	12/29/2014	17:51
B-486_(7	E14-12132-011DL	12/29/2014	18:07

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A2934.D

DFTPP Injection Date : 12/15/2014

Inst ID: MSDA

DFTPP Injection Time: 10:44

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.9	
68	Less than 2.0% of mass 69	0.8	(1.8)1
69	Mass 69 relative abundance	44.9	
70	Less than 2.0% of mass 69	0.4	(0.9)1
127	40.0 - 60.0% of mass 198	52.6	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	23.7	
365	Greater than 1.0% of mass 198	2.8	
441	Present, but less than mass 443	6.43	(78.5)3
442	40.0 - 100.0% of mass 198	44.5	
443	17.0 - 23.0% of mass 442	8.2	(18.4)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN054-14	ICC001BNA1	A2936.D	12/15/2014	11:01
ABN055-14	ICC010BNA1	A2937.D	12/15/2014	11:17
ABN056-14	ICC020BNA1	A2938.D	12/15/2014	11:33
ABN057-14	ICC040BNA1	A2939.D	12/15/2014	11:49
ABN058-14	ICC080BNA1	A2940.D	12/15/2014	12:05
ABN082-14	ICC160BNA1	A2941.D	12/15/2014	12:21
ABN054-14	ICC001BNA1	A2942.D	12/15/2014	12:56
ABN083-14	ICC160BNA2	A2943.D	12/15/2014	13:12
ABN064-14	ICC080BNA2	A2944.D	12/15/2014	13:28
ABN063-14	ICC040BNA2	A2945.D	12/15/2014	13:43
ABN062-14	ICC020BNA2	A2946.D	12/15/2014	13:59
ABN061-14	ICC010BNA2	A2947.D	12/15/2014	14:15
ABN054-14	ICC001BNA1	A2948.D	12/15/2014	14:34
ABN060-14	ICC001BNA2	A2949.D	12/15/2014	14:50
ABN083-14	ICC160BNA2	A2950.D	12/15/2014	15:06
ABN066-14	ICV040BNA1	A2951.D	12/15/2014	15:21
ABN067-14	ICV040BNA2	A2952.D	12/15/2014	15:38

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A2985.D DFTPP Injection Date : 12/23/2014

Inst ID: MSDA DFTPP Injection Time: 07:57

m/z	Ion Abudance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	33.5		
68	Less than 2.0% of mass 69	0.5	(1.3	)1
69	Mass 69 relative abundance	37.5		
70	Less than 2.0% of mass 69	0.3	(0.7	)1
127	40.0 - 60.0% of mass 198	50.1		
197	Less than 1.0% of mass 198	0.5		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.7		
275	10.0 - 30.0% of mass 198	24.1		
365	Greater than 1.0% of mass 198	2.6		
441	Present, but less than mass 443	7.03	(75.1	)3
442	40.0 - 100.0% of mass 198	48.5		
443	17.0 - 23.0% of mass 442	9.4	(19.3	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN066-14	CCV040BNA1	A2986.D	12/23/2014	08:06
ABN067-14	CCV040BNA2	A2987.D	12/23/2014	08:22
.	BLKA141222-02	A3000.D	12/23/2014	11:32
.	LCSA141222-02	A3001.D	12/23/2014	11:48
.	E14-12156-020MS	A3002.D	12/23/2014	12:04
.	E14-12156-020MSD	A3003.D	12/23/2014	12:20
TW-4/5.9	E14-12156-019	A3004.D	12/23/2014	12:36
TW-3/9.4	E14-12156-020	A3005.D	12/23/2014	12:52
TW-5/11.	E14-12156-021	A3006.D	12/23/2014	13:08
TW-2/15.	E14-12156-022	A3007.D	12/23/2014	13:24
TW-1/13.	E14-12197-001	A3008.D	12/23/2014	13:40
FB-12-18	E14-12180-002	A3009.D	12/23/2014	13:56
L1-PZ/1.	E14-12180-003	A3010.D	12/23/2014	14:12
L2-PZ/1.	E14-12180-004	A3011.D	12/23/2014	14:28
SR-MW1	E14-12184-001	A3012.D	12/23/2014	14:44
SR-RW2	E14-12184-002	A3013.D	12/23/2014	15:00
FIELD_BL	E14-12099-008	A3014.D	12/23/2014	15:16
FB-12162	E14-12132-014	A3015.D	12/23/2014	15:32
.	BLKA141223-01	A3021.D	12/23/2014	17:00
.	SPLP141216	A3022.D	12/23/2014	17:16
.	SPLP141218	A3023.D	12/23/2014	17:32
.	LCSA141223-01	A3024.D	12/23/2014	17:48
.	E14-11765-005MS	A3025.D	12/23/2014	18:04

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A2985.D

DFTPP Injection Date : 12/23/2014

Inst ID: MSDA

DFTPP Injection Time: 07:57

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	33.5	
68	Less than 2.0% of mass 69	0.5	(1.3)1
69	Mass 69 relative abundance	37.5	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	50.1	
197	Less than 1.0% of mass 198	0.5	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	24.1	
365	Greater than 1.0% of mass 198	2.6	
441	Present, but less than mass 443	7.03	(75.1)3
442	40.0 - 100.0% of mass 198	48.5	
443	17.0 - 23.0% of mass 442	9.4	(19.3)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	E14-11765-005MSD	A3026.D	12/23/2014	18:20
SS-25B-0	E14-11786-018	A3027.D	12/23/2014	18:36
SS-25B-0	E14-11786-019	A3028.D	12/23/2014	18:52
SS-25B-0	E14-11786-020	A3029.D	12/23/2014	19:08
120414-5	E14-11765-005	A3030.D	12/23/2014	19:24

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C2625.D

DFTPP Injection Date : 12/18/2014

Inst ID: MSDC

DFTPP Injection Time: 11:17

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	35.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.9	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	48.8	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	24.5	
365	Greater than 1.0% of mass 198	1.8	
441	Present, but less than mass 443	10.60	(77.4)3
442	40.0 - 100.0% of mass 198	69.9	
443	17.0 - 23.0% of mass 442	13.7	(19.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN054-14	ICC001BNA1	C2632.D	12/18/2014	13:17
ABN055-14	ICC010BNA1	C2633.D	12/18/2014	13:32
ABN056-14	ICC020BNA1	C2634.D	12/18/2014	13:48
ABN057-14	ICC040BNA1	C2635.D	12/18/2014	14:03
ABN058-14	ICC080BNA1	C2636.D	12/18/2014	14:19
ABN082-14	ICC160BNA1	C2637.D	12/18/2014	14:35
ABN066-14	ICV040BNA1	C2638.D	12/18/2014	14:50
ABN083-14	ICC160BNA2	C2639.D	12/18/2014	15:06
ABN064-14	ICC080BNA2	C2640.D	12/18/2014	15:21
ABN063-14	ICC040BNA2	C2641.D	12/18/2014	15:37
ABN062-14	ICC020BNA2	C2642.D	12/18/2014	15:53
ABN061-14	ICC010BNA2	C2643.D	12/18/2014	16:09
ABN060-14	ICC001BNA2	C2644.D	12/18/2014	16:25
ABN067-14	ICV040BNA2	C2645.D	12/18/2014	16:41
.	BLKS141217-03	C2646.D	12/18/2014	16:56
.	LCSS141217-03	C2647.D	12/18/2014	17:12
.	E14-12052-006MS	C2648.D	12/18/2014	17:27
.	E14-12052-006MSD	C2649.D	12/18/2014	17:42
S-1	E14-11965-001	C2650.D	12/18/2014	17:58
COMP_1/0	E14-12052-002	C2651.D	12/18/2014	18:14
COMP_2/0	E14-12052-004	C2652.D	12/18/2014	18:29
COMP_3/0	E14-12052-006	C2653.D	12/18/2014	18:45
COMP_4/0	E14-12052-008	C2654.D	12/18/2014	19:00

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C2625.D

DFTPP Injection Date : 12/18/2014

Inst ID: MSDC

DFTPP Injection Time: 11:17

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	35.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.9	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	48.8	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	24.5	
365	Greater than 1.0% of mass 198	1.8	
441	Present, but less than mass 443	10.60	(77.4)3
442	40.0 - 100.0% of mass 198	69.9	
443	17.0 - 23.0% of mass 442	13.7	(19.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
COMP_5/0	E14-12052-010	C2655.D	12/18/2014	19:15
2	E14-11902-002	C2656.D	12/18/2014	19:31
WC-1	E14-12071-009	C2657.D	12/18/2014	19:46
WC-2	E14-12071-010	C2658.D	12/18/2014	20:02
WC-3	E14-12071-011	C2659.D	12/18/2014	20:17
WC-4	E14-12071-012	C2660.D	12/18/2014	20:33
WC-5	E14-12071-013	C2661.D	12/18/2014	20:48

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C2790.D

DFTPP Injection Date : 12/29/2014

Inst ID: MSDC

DFTPP Injection Time: 09:51

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	45.0	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	52.8	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	40.0 - 60.0% of mass 198	55.1	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.3	
275	10.0 - 30.0% of mass 198	22.3	
365	Greater than 1.0% of mass 198	1.2	
441	Present, but less than mass 443	7.70	(78.7)3
442	40.0 - 100.0% of mass 198	49.9	
443	17.0 - 23.0% of mass 442	9.8	(19.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN066-14	CCV040BNA1	C2791.D	12/29/2014	10:02
ABN067-14	CCV040BNA2	C2792.D	12/29/2014	10:17
.	BLKS141223-05	C2793.D	12/29/2014	10:33
.	LCSS141223-05	C2794.D	12/29/2014	10:48
.	E14-12116-002MS	C2795.D	12/29/2014	11:04
.	E14-12116-003MSD	C2796.D	12/29/2014	11:20
AA-C8-7-	E14-12116-001	C2797.D	12/29/2014	11:35
.	BLKS141222-03	C2798.D	12/29/2014	11:50
.	LCSS141222-03	C2799.D	12/29/2014	12:07
.	E14-12168-005MS	C2800.D	12/29/2014	12:22
.	E14-12168-006MSD	C2801.D	12/29/2014	12:38
B-491_(4	E14-12132-001	C2802.D	12/29/2014	12:54
B-491_(5	E14-12132-002	C2803.D	12/29/2014	13:09
B-492_(4	E14-12132-003	C2804.D	12/29/2014	13:25
B-492_(5	E14-12132-004	C2805.D	12/29/2014	13:41
B-490_(4	E14-12132-005	C2806.D	12/29/2014	13:56
B-490_(5	E14-12132-006	C2807.D	12/29/2014	14:12
B-490_(1	E14-12132-007	C2808.D	12/29/2014	14:27
B-490_(1	E14-12132-008	C2809.D	12/29/2014	14:43
B-487_(4	E14-12132-009	C2810.D	12/29/2014	14:59
B-486_(4	E14-12132-010	C2811.D	12/29/2014	15:15
B-486_(7	E14-12132-011	C2812.D	12/29/2014	15:30
B-488_(4	E14-12132-012	C2813.D	12/29/2014	15:46

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C2790.D

DFTPP Injection Date : 12/29/2014

Inst ID: MSDC

DFTPP Injection Time: 09:51

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	45.0	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	52.8	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	40.0 - 60.0% of mass 198	55.1	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.3	
275	10.0 - 30.0% of mass 198	22.3	
365	Greater than 1.0% of mass 198	1.2	
441	Present, but less than mass 443	7.70	(78.7)3
442	40.0 - 100.0% of mass 198	49.9	
443	17.0 - 23.0% of mass 442	9.8	(19.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
B-489_(4	E14-12132-013	C2814.D	12/29/2014	16:01
PE-4	E14-12073-002	C2815.D	12/29/2014	16:17
SED-1	E14-12168-001	C2816.D	12/29/2014	16:33
SED-2	E14-12168-002	C2817.D	12/29/2014	16:48
SED-3	E14-12168-003	C2818.D	12/29/2014	17:04
SED-4	E14-12168-004	C2819.D	12/29/2014	17:20
SED-5	E14-12168-007	C2820.D	12/29/2014	17:35
REP12171	E14-12168-008	C2821.D	12/29/2014	17:51
B-486_(7	E14-12132-011DL	C2822.D	12/29/2014	18:07

Response Factor Report MSD_A

Method Path : C:\MSDCHEM\1\METHODS\
Method File : AW1514.M
Title : BNA CALIBRATION METHOD
Last Update : Tue Dec 16 12:14:32 2014
Response Via : Initial Calibration

Calibration Files
1 =A2948.D 10 =A2937.D 20 =A2938.D 40 =A2939.D 80 =A2940.D
160 =A2941.D

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------	ISTD	----------					
2)	T	N-Nitrosodimet...	0.819	0.847	0.833	0.863	0.893	0.805	0.844	3.77
3)	T	Pyridine	1.442	1.444	1.370	1.174	1.278	1.134	1.307	10.24
4)	S	2-Fluorophenol	1.367	1.456	1.489	1.374	1.543	1.298	1.421	6.38
5)	T	Benzaldehyde	0.818	1.120	1.020	0.729	0.820	0.693	0.867	19.39
6)	S	Phenol-d5	1.786	1.812	1.858	1.753	1.959	1.659	1.804	5.61
7)	MC	Phenol	2.151	1.821	1.819	1.821	1.890	1.787	1.881	7.24
8)	T	Aniline	0.923	0.854	0.816	0.849	0.810	0.740	0.832	7.26
9)	T	Bis(2-chloroet...	1.108	1.032	1.056	1.072	1.099	1.047	1.069	2.80
10)	M	2-Chlorophenol	1.522	1.423	1.417	1.431	1.522	1.384	1.450	4.00
11)	T	1,3-Dichlorobe...	1.782	1.598	1.614	1.574	1.719	1.429	1.619	7.57
12)	MC	1,4-Dichlorobe...	1.893	1.701	1.643	1.546	1.708	1.453	1.657	9.14
13)	T	Benzyl alcohol	0.875	0.950	0.959	0.966	1.041	0.944	0.956	5.55
14)	T	1,2-Dichlorobe...	1.647	1.534	1.513	1.469	1.570	1.385	1.519	5.88
15)	T	2-Methylphenol	1.326	1.321	1.260	1.299	1.346	1.223	1.296	3.55
16)	T	Bis(2-chlorois...	2.537	2.353	2.274	2.244	2.296	1.946	2.275	8.44
17)	T	4-Methylphenol	1.285	1.271	1.287	1.349	1.441	1.300	1.322	4.84
18)	MP	N-Nitrosodi-n-...	1.245	1.263	1.201	1.157	1.186	1.034	1.181	6.94
19)	T	Acetophenone	2.150	2.060	1.980	2.003	2.024	1.806	2.004	5.66
20)	T	3-Methylphenol	1.285	1.271	1.287	1.349	1.441	1.299	1.322	4.85
21)	T	Hexachloroethane	0.692	0.600	0.599	0.570	0.632	0.538	0.605	8.75
23)	I	Naphthalene-d8	----------	ISTD	----------					
24)	S	Nitrobenzene-d5	0.405	0.417	0.419	0.373	0.454	0.438	0.418	6.66
25)	T	Nitrobenzene	0.498	0.379	0.381	0.365	0.379	0.328	0.388	14.71
26)	T	Isophorone	0.948	0.791	0.734	0.730	0.768	0.668	0.773	12.33
27)	TC	2-Nitrophenol	0.170	0.163	0.167	0.185	0.196	0.184	0.178	7.34
28)	T	2,4-Dimethylph...	0.327	0.348	0.340	0.362	0.373	0.335	0.347	4.95
29)	T	Bis(2-chloroet...	0.486	0.433	0.421	0.425	0.435	0.386	0.431	7.45
30)	T	Benzoic acid	0.115	0.126	0.137	0.164	0.159	0.124	0.138	14.54
31)	T	2,4-Dimethylan...	0.510	0.450	0.413	0.397	0.368	0.357	0.416	13.72
32)	TC	2,4-Dichloroph...	0.250	0.271	0.263	0.281	0.296	0.279	0.273	5.74
33)	M	1,2,4-Trichlor...	0.352	0.320	0.312	0.312	0.331	0.287	0.319	6.84
34)	T	Naphthalene	1.331	1.152	1.085	1.070	1.125	1.051	1.136	9.04
35)	T	4-Chloroaniline	0.428	0.558	0.532	0.552	0.558	0.523	0.525	9.48
36)	T	4-Aminotoluene	0.774	0.686	0.645	0.592	0.575	0.576	0.642	12.23
37)	TC	Hexachlorobuta...	0.236	0.184	0.182	0.185	0.194	0.175	0.193	11.56
38)	T	Caprolactam	0.167	0.187	0.166	0.168	0.171	0.152	0.169	6.80
39)	T	2-Aminotoluene	0.774	0.686	0.645	0.592	0.575	0.576	0.642	12.23
40)	MC	4-Chloro-3-met...	0.271	0.293	0.295	0.307	0.318	0.296	0.297	5.27
41)	T	2-Methylnaphth...	0.777	0.678	0.661	0.724	0.711	0.636	0.698	7.21
43)	I	Acenaphthene-d10	----------	ISTD	----------					
44)	TP	Hexachlorocycl...		0.265	0.189	0.265	0.227	0.225	0.234	13.69
45)	TC	2,4,6-Trichlor...	0.327	0.331	0.331	0.351	0.374	0.349	0.344	5.18
46)	T	2,4,5-Trichlor...	0.334	0.353	0.349	0.384	0.379	0.347	0.358	5.51
47)	S	2-Fluorobiphenyl	1.429	1.442	1.414	1.286	1.437	1.250	1.376	6.18
48)	T	1,1'-Biphenyl	1.629	1.417	1.416	1.522	1.522	1.388	1.482	6.19
49)	T	2-Chloronaphth...	1.143	1.116	1.079	1.080	1.164	0.987	1.095	5.74
50)	T	2-Nitroaniline	0.311	0.276	0.284	0.320	0.329	0.286	0.301	7.27
51)	T	Dimethyl phtha...	1.327	1.235	1.215	1.242	1.302	1.101	1.237	6.38
52)	T	2,6-Dinitrotol...	0.221	0.228	0.249	0.266	0.297	0.265	0.254	11.05
53)	T	Acenaphthylene	1.921	1.867	1.786	1.809	1.883	1.721	1.831	3.99

54)	T	3-Nitroaniline	0.274	0.302	0.314	0.360	0.376	0.335	0.327	11.61
55)	MC	Acenaphthene	1.261	1.113	1.085	1.088	1.178	1.051	1.129	6.83
56)	TP	2,4-Dinitrophenol		0.057	0.068	0.085	0.082	0.084	0.075	16.22
57)	MP	4-Nitrophenol	0.152	0.232	0.233	0.265	0.275	0.273	0.238	19.59
58)	M	2,4-Dinitrotol...	0.256	0.289	0.301	0.359	0.372	0.323	0.317	13.82
59)	T	Dibenzofuran	1.821	1.534	1.493	1.553	1.534	1.385	1.553	9.29
60)	T	Diethyl phthalate	1.281	1.269	1.231	1.259	1.293	1.158	1.249	3.94
61)	T	Fluorene	1.402	1.327	1.241	1.260	1.353	1.204	1.298	5.79
62)	T	4-Chlorophenyl...	0.653	0.607	0.595	0.614	0.628	0.542	0.607	6.16
63)	T	4-Nitroaniline	0.300	0.302	0.298	0.345	0.329	0.324	0.316	6.11
64)	T	1,2,4,5-Tetrac...	0.700	0.612	0.594	0.544	0.531	0.515	0.583	11.79
65)	T	2,3,4,6-Tetrac...	0.275	0.262	0.269	0.296	0.292	0.280	0.279	4.65
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-...		0.084	0.078	0.113	0.082	0.098	0.091	16.08
68)	TC	N-Nitrosodiphe...	0.551	0.536	0.538	0.555	0.582	0.509	0.545	4.42
69)	T	1,2-Diphenylhy...	1.106	1.009	1.010	0.945	1.054	0.876	1.000	8.09
70)	S	2,4,6-Tribromo...	0.125	0.126	0.134	0.128	0.137	0.108	0.126	8.01
71)	T	4-Bromophenyl ...	0.223	0.214	0.219	0.228	0.235	0.203	0.220	5.09
72)	T	Hexachlorobenzene	0.246	0.231	0.241	0.243	0.253	0.210	0.237	6.38
73)	T	Atrazine	0.225	0.196	0.197	0.195	0.192	0.197	0.200	5.97
74)	MC	Pentachlorophenol	0.099	0.108	0.129	0.144	0.165	0.153	0.133	19.38
75)	T	Phenanthrene	1.305	1.151	1.102	1.134	1.155	1.050	1.149	7.43
76)	T	Anthracene	1.213	1.116	1.126	1.139	1.168	1.052	1.136	4.74
77)	T	Carbazole	1.125	1.077	1.031	1.040	1.105	0.894	1.045	7.90
78)	T	Di-n-butyl pht...	1.320	1.270	1.286	1.339	1.418	1.146	1.297	6.93
79)	TC	Fluoranthene	1.543	1.177	1.169	1.148	1.256	1.067	1.227	13.57
80)	T	Benzidine	0.505	0.719	0.730	0.540	0.528	0.495	0.586	18.50
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.769	1.272	1.281	1.330	1.436	1.267	1.392	14.00
84)	S	Terphenyl-d14	1.183	1.070	1.119	1.025	1.145	0.965	1.084	7.44
85)	T	3,3'-Dimethylb...	0.668	0.860	0.869	0.694	0.699	0.580	0.728	15.63
86)	T	Butyl benzyl p...	0.657	0.571	0.585	0.615	0.653	0.570	0.608	6.50
87)	T	3,3'-Dichlorob...	0.480	0.443	0.417	0.404	0.368	0.263	0.396	19.01
88)	T	Benzo[a]anthra...	1.576	1.124	1.105	1.106	1.146	1.020	1.179	16.87
89)	T	Chrysene	1.249	1.036	1.004	0.993	1.045	0.944	1.045	10.16
90)	T	Bis(2-ethylhex...	1.077	0.789	0.794	0.849	0.871	0.764	0.857	13.39
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl pht...	2.692	2.237	2.404	2.611	2.594	1.992	2.422	11.04
94)	T	Benzo[b]fluora...	2.056	1.853	1.799	1.788	2.011	1.793	1.883	6.35
95)	T	Benzo[k]fluora...	2.372	1.782	1.793	1.886	1.880	1.376	1.848	17.23
96)	TC	Benzo[a]pyrene	1.908	1.674	1.634	1.663	1.763	1.457	1.683	8.84
97)	T	Indeno[1,2,3-c...	1.836	1.824	1.866	1.875	2.174	1.813	1.898	7.23
98)	T	Dibenz[a,h]ant...	1.562	1.504	1.572	1.617	1.850	1.545	1.608	7.71
99)	T	Benzo[g,h,i]pe...	1.671	1.536	1.551	1.538	1.787	1.503	1.598	6.85

(#) = Out of Range

AW1514.M Thu Dec 18 06:46:48 2014 MSD_A

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\12-15-14\
Data File : A2951.D
Acq On : 15 Dec 2014 15:21
Operator : JC
Sample : ABN066-14,ICV040BNA1
Misc : N/A,N/A,N/A,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 16 09:41:24 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS1514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Dec 16 08:40:38 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00
2	T	N-Nitrosodimethylamine	0.844	0.878	-4.0	109	0.00
3	T	Pyridine	1.307	1.080	17.4	99	0.00
4	S	2-Fluorophenol	1.421	1.329	6.5	104	0.00
5	T	Benzaldehyde	0.867	0.730	15.8	115	0.00
6	S	Phenol-d5	1.804	1.656	8.2	101	0.00
7	MC	Phenol	1.881	1.810	3.8	106	0.00
8	T	Aniline	0.832	0.878	-5.5	111	0.00
9	T	Bis(2-chloroethyl) ether	1.069	1.036	3.1	103	0.00
10	M	2-Chlorophenol	1.450	1.374	5.2	103	0.00
11	T	1,3-Dichlorobenzene	1.619	1.554	4.0	106	0.00
12	MC	1,4-Dichlorobenzene	1.657	1.529	7.7	106	0.00
13	T	Benzyl alcohol	0.956	0.929	2.8	103	0.00
14	T	1,2-Dichlorobenzene	1.519	1.427	6.1	104	0.00
15	T	2-Methylphenol	1.296	1.271	1.9	105	0.00
16	T	Bis(2-chloroisopropyl) ethe	2.275	2.183	4.0	104	0.00
17	T	4-Methylphenol	1.322	1.363	-3.1	108	0.00
18	MP	N-Nitrosodi-n-propylamine	1.181	1.071	9.3	99	0.01
19	T	Acetophenone	2.004	1.981	1.1	106	0.00
20	T	3-Methylphenol	1.322	1.363	-3.1	108	0.00
21	T	Hexachloroethane	0.605	0.560	7.4	105	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	104	0.00
24	S	Nitrobenzene-d5	0.418	0.362	13.4	101	0.00
25	T	Nitrobenzene	0.388	0.380	2.1	108	0.00
26	T	Isophorone	0.773	0.708	8.4	101	0.00
27	TC	2-Nitrophenol	0.178	0.183	-2.8	102	0.00
28	T	2,4-Dimethylphenol	0.347	0.364	-4.9	105	0.00
29	T	Bis(2-chloroethoxy) methane	0.431	0.428	0.7	105	0.00
30	T	Benzoic acid	0.138	0.151	-9.4	95	0.03
31	T	2,4-Dimethylaniline	0.416	0.418	-0.5	109	0.00
32	TC	2,4-Dichlorophenol	0.273	0.283	-3.7	105	0.00
33	M	1,2,4-Trichlorobenzene	0.319	0.320	-0.3	106	0.00
34	T	Naphthalene	1.136	1.031	9.2	100	0.00
35	T	4-Chloroaniline	0.525	0.575	-9.5	108	0.00
36	T	4-Aminotoluene	0.642	0.632	1.6	111	0.00
37	TC	Hexachlorobutadiene	0.193	0.182	5.7	102	0.00
38	T	Caprolactam	0.169	0.172	-1.8	106	0.02
39	T	2-Aminotoluene	0.642	0.632	1.6	111	0.00
40	MC	4-Chloro-3-methylphenol	0.297	0.297	0.0	101	0.00
41	T	2-Methylnaphthalene	0.698	0.727	-4.2	104	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	107	0.00
44	TP	Hexachlorocyclopentadiene	0.234	0.259	-10.7	105	0.00
45	TC	2,4,6-Trichlorophenol	0.344	0.341	0.9	104	0.00
46	T	2,4,5-Trichlorophenol	0.358	0.373	-4.2	104	0.00

47	S	2-Fluorobiphenyl	1.376	1.146	16.7	96	0.00
48	T	1,1'-Biphenyl	1.482	1.492	-0.7	105	0.00
49	T	2-Chloronaphthalene	1.095	1.030	5.9	102	0.00
50	T	2-Nitroaniline	0.301	0.330	-9.6	111	0.00
51	T	Dimethyl phthalate	1.237	1.215	1.8	105	0.00
52	T	2,6-Dinitrotoluene	0.254	0.262	-3.1	106	0.00
53	T	Acenaphthylene	1.831	1.730	5.5	103	0.00
54	T	3-Nitroaniline	0.327	0.363	-11.0	108	0.00
55	MC	Acenaphthene	1.129	1.030	8.8	102	0.00
56	TP	2,4-Dinitrophenol	0.075	0.088	-17.3	111	0.00
57	MP	4-Nitrophenol	0.238	0.260	-9.2	105	0.00
58	M	2,4-Dinitrotoluene	0.317	0.336	-6.0	101	0.00
59	T	Dibenzofuran	1.553	1.509	2.8	104	0.00
60	T	Diethyl phthalate	1.249	1.217	2.6	104	0.00
61	T	Fluorene	1.298	1.197	7.8	102	0.00
62	T	4-Chlorophenyl phenyl ether	0.607	0.592	2.5	103	0.00
63	T	4-Nitroaniline	0.316	0.328	-3.8	102	0.00
64	T	1,2,4,5-Tetrachlorobenzene	0.583	0.525	9.9	104	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.279	0.276	1.1	100	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	108	-0.01
67	T	4,6-Dinitro-2-methylphenol	0.091	0.105	-15.4	100	0.00
68	TC	N-Nitrosodiphenylamine	0.545	0.551	-1.1	107	0.00
69	T	1,2-Diphenylhydrazine	1.000	0.806	19.4	92	0.00
70	S	2,4,6-Tribromophenol	0.126	0.114	9.5	96	0.00
71	T	4-Bromophenyl phenyl ether	0.220	0.218	0.9	103	0.00
72	T	Hexachlorobenzene	0.237	0.233	1.7	104	0.00
73	T	Atrazine	0.200	0.234	-17.0	129	0.00
74	MC	Pentachlorophenol	0.133	0.133	0.0	100	-0.02
75	T	Phenanthrene	1.149	1.066	7.2	102	-0.01
76	T	Anthracene	1.136	1.069	5.9	102	-0.01
77	T	Carbazole	1.045	0.968	7.4	101	-0.02
78	T	Di-n-butyl phthalate	1.297	1.284	1.0	104	-0.02
79	TC	Fluoranthene	1.227	1.080	12.0	102	-0.04
80	T	Benzidine	0.586	0.475	18.9	101	0.04
82	I	Chrysene-d12	1.000	1.000	0.0	102	-0.09
83	M	Pyrene	1.392	1.307	6.1	100	-0.05
84	S	Terphenyl-d14	1.084	0.997	8.0	99	-0.05
85	T	3,3'-Dimethylbenzidine	0.728	0.742	-1.9	104	0.07
86	T	Butyl benzyl phthalate	0.608	0.644	-5.9	107	-0.07
87	T	3,3'-Dichlorobenzidine	0.396	0.390	1.5	98	-0.09
88	T	Benzo[a]anthracene	1.179	1.089	7.6	100	-0.09
89	T	Chrysene	1.045	0.997	4.6	102	-0.09
90	T	Bis(2-ethylhexyl) phthalate	0.857	0.887	-3.5	106	-0.09
92	I	Perylene-d12	1.000	1.000	0.0	101	-0.11
93	TC	Di-n-octyl phthalate	2.422	2.766	-14.2	107	-0.10
94	T	Benzo[b]fluoranthene	1.883	2.034	-8.0	115	-0.10
95	T	Benzo[k]fluoranthene	1.848	1.678	9.2	90	-0.10
96	TC	Benzo[a]pyrene	1.683	1.720	-2.2	105	-0.10
97	T	Indeno[1,2,3-cd]pyrene	1.898	1.863	1.8	100	-0.11
98	T	Dibenz[a,h]anthracene	1.608	1.576	2.0	99	-0.11
99	T	Benzo[g,h,i]perylene	1.598	1.539	3.7	101	-0.11

(#) = Out of Range SPCC's out = 0 CCC's out = 0

AS1514.M Tue Dec 16 10:49:15 2014 MSD_A

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\12-23-14\
Data File : A2986.D
Acq On : 23 Dec 2014 8:06
Operator : DANA
Sample : ABN066-14,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 29 06:37:25 2014
Quant Method : C:\MSDCHEM\1\METHODS\AW1514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Dec 16 12:14:32 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	111	0.00
2	T	N-Nitrosodimethylamine	0.844	0.944	-11.8	122	0.00
3	T	Pyridine	1.307	1.107	15.3	105	0.00
4	S	2-Fluorophenol	1.421	1.284	9.6	104	0.00
5	T	Benzaldehyde	0.867	0.756	12.8	176	0.00
6	S	Phenol-d5	1.804	1.604	11.1	102	0.00
7	MC	Phenol	1.881	1.815	3.5	111	0.00
8	T	Aniline	0.832	0.827	0.6	109	0.00
9	T	Bis(2-chloroethyl) ether	1.069	1.189	-11.2	123	0.00
10	M	2-Chlorophenol	1.450	1.437	0.9	112	0.00
11	T	1,3-Dichlorobenzene	1.619	1.830	-13.0	129	0.00
12	MC	1,4-Dichlorobenzene	1.657	1.908	-15.1	137	0.00
13	T	Benzyl alcohol	0.956	0.915	4.3	105	0.00
14	T	1,2-Dichlorobenzene	1.519	1.756	-15.6	133	0.00
15	T	2-Methylphenol	1.296	1.248	3.7	107	0.00
16	T	Bis(2-chloroisopropyl) ethe	2.275	2.421	-6.4	120	0.00
17	T	4-Methylphenol	1.322	1.306	1.2	108	0.00
18	MP	N-Nitrosodi-n-propylamine	1.181	1.278	-8.2	123	0.00
19	T	Acetophenone	2.004	2.069	-3.2	115	0.00
20	T	3-Methylphenol	1.322	1.306	1.2	108	0.00
21	T	Hexachloroethane	0.605	0.678	-12.1	133	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	104	0.00
24	S	Nitrobenzene-d5	0.418	0.392	6.2	109	0.00
25	T	Nitrobenzene	0.388	0.465	-19.8	132	0.00
26	T	Isophorone	0.773	0.921	-19.1	131	0.00
27	TC	2-Nitrophenol	0.178	0.200	-12.4	111	0.00
28	T	2,4-Dimethylphenol	0.347	0.380	-9.5	109	0.00
29	T	Bis(2-chloroethoxy) methane	0.431	0.460	-6.7	112	0.00
30	T	Benzoic acid	0.138	0.156	-13.0	99	0.02
31	T	2,4-Dimethylaniline	0.416	0.388	6.7	101	0.00
32	TC	2,4-Dichlorophenol	0.273	0.302	-10.6	111	0.00
33	M	1,2,4-Trichlorobenzene	0.319	0.292	8.5	97	0.00
34	T	Naphthalene	1.136	1.094	3.7	106	0.00
35	T	4-Chloroaniline	0.525	0.528	-0.6	99	0.00
36	T	4-Aminotoluene	0.642	0.596	7.2	104	0.00
37	TC	Hexachlorobutadiene	0.193	0.223	-15.5	125	0.00
38	T	Caprolactam	0.169	0.167	1.2	103	0.02
39	T	2-Aminotoluene	0.642	0.596	7.2	104	0.00
40	MC	4-Chloro-3-methylphenol	0.297	0.320	-7.7	108	0.00
41	T	2-Methylnaphthalene	0.698	0.674	3.4	96	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	102	0.00
44	TP	Hexachlorocyclopentadiene	0.234	0.227	3.0	87	0.00
45	TC	2,4,6-Trichlorophenol	0.344	0.355	-3.2	104	0.00
46	T	2,4,5-Trichlorophenol	0.358	0.355	0.8	95	0.00

47	S	2-Fluorobiphenyl	1.376	1.236	10.2	98	0.00
48	T	1,1'-Biphenyl	1.482	1.551	-4.7	104	0.00
49	T	2-Chloronaphthalene	1.095	1.035	5.5	98	0.00
50	T	2-Nitroaniline	0.301	0.319	-6.0	102	0.00
51	T	Dimethyl phthalate	1.237	1.289	-4.2	106	0.00
52	T	2,6-Dinitrotoluene	0.254	0.222	12.6	85	0.00
53	T	Acenaphthylene	1.831	1.866	-1.9	105	0.00
54	T	3-Nitroaniline	0.327	0.350	-7.0	99	0.00
55	MC	Acenaphthene	1.129	1.092	3.3	103	0.00
56	TP	2,4-Dinitrophenol	0.075	0.069	8.0	83	0.00
57	MP	4-Nitrophenol	0.238	0.254	-6.7	98	0.00
58	M	2,4-Dinitrotoluene	0.317	0.356	-12.3	101	0.00
59	T	Dibenzofuran	1.553	1.538	1.0	101	0.00
60	T	Diethyl phthalate	1.249	1.376	-10.2	112	0.00
61	T	Fluorene	1.298	1.274	1.8	103	0.00
62	T	4-Chlorophenyl phenyl ether	0.607	0.708	-16.6	118	0.00
63	T	4-Nitroaniline	0.316	0.297	6.0	88	0.00
64	T	1,2,4,5-Tetrachlorobenzene	0.583	0.510	12.5	96	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.279	0.307	-10.0	106	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	101	0.00
67	T	4,6-Dinitro-2-methylphenol	0.091	0.105	-15.4	94	0.00
68	TC	N-Nitrosodiphenylamine	0.545	0.553	-1.5	100	0.00
69	T	1,2-Diphenylhydrazine	1.000	1.195	-19.5	127	0.00
70	S	2,4,6-Tribromophenol	0.126	0.114	9.5	90	0.00
71	T	4-Bromophenyl phenyl ether	0.220	0.258	-17.3	114	0.00
72	T	Hexachlorobenzene	0.237	0.232	2.1	96	0.00
73	T	Atrazine	0.200	0.235	-17.5	121	0.00
74	MC	Pentachlorophenol	0.133	0.151	-13.5	105	-0.01
75	T	Phenanthrene	1.149	1.152	-0.3	102	-0.01
76	T	Anthracene	1.136	1.125	1.0	100	-0.01
77	T	Carbazole	1.045	0.892	14.6	86	-0.01
78	T	Di-n-butyl phthalate	1.297	1.548	-19.4	116	-0.02
79	TC	Fluoranthene	1.227	1.150	6.3	101	-0.02
80	T	Benzidine	0.586	0.506	13.7	159	0.03
82	I	Chrysene-d12	1.000	1.000	0.0	95	-0.03
83	M	Pyrene	1.392	1.437	-3.2	103	-0.02
84	S	Terphenyl-d14	1.084	1.015	6.4	94	-0.03
85	T	3,3'-Dimethylbenzidine	0.728	0.701	3.7	139	0.06
86	T	Butyl benzyl phthalate	0.608	0.673	-10.7	104	-0.03
87	T	3,3'-Dichlorobenzidine	0.396	0.384	3.0	90	-0.03
88	T	Benzo[a]anthracene	1.179	1.123	4.7	97	-0.03
89	T	Chrysene	1.045	1.050	-0.5	101	-0.03
90	T	Bis(2-ethylhexyl) phthalate	0.857	0.975	-13.8	109	-0.03
92	I	Perylene-d12	1.000	1.000	0.0	99	-0.04
93	TC	Di-n-octyl phthalate	2.422	2.819	-16.4	107	-0.03
94	T	Benzo[b]fluoranthene	1.883	1.821	3.3	100	-0.03
95	T	Benzo[k]fluoranthene	1.848	1.856	-0.4	97	-0.03
96	TC	Benzo[a]pyrene	1.683	1.652	1.8	98	-0.03
97	T	Indeno[1,2,3-cd]pyrene	1.898	1.831	3.5	96	-0.03
98	T	Dibenz[a,h]anthracene	1.608	1.544	4.0	94	-0.04
99	T	Benzo[g,h,i]perylene	1.598	1.529	4.3	98	-0.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0

AW1514.M Mon Dec 29 06:47:41 2014 MSD_A

Response Factor Report MSD_C

Method Path : C:\MSDCHEM\1\METHODS\
Method File : CS2514.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Dec 18 16:39:22 2014
Response Via : Initial Calibration

Calibration Files
1 =C2632.D 10 =C2633.D 20 =C2634.D
40 =C2635.D 80 =C2636.D 160 =C2637.D

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)	T	N-Nitrosodimethyl	0.983	0.804	0.752	0.915	0.817	0.821	0.849	9.92
3)	T	Pyridine	1.244	1.133	1.061	0.946	1.060	1.019	1.077	9.46
4)	S	2-Fluorophenol	1.262	1.206	1.259	1.260	1.410	1.169	1.261	6.52
5)	T	Benzaldehyde	0.747	0.717	0.761	0.759	0.701	0.707	0.732	3.69
6)	S	Phenol-d5	1.567	1.501	1.524	1.539	1.641	1.370	1.524	5.86
7)	MC	Phenol	2.090	1.636	1.588	1.472	1.564	1.401	1.625	14.95
8)	T	Aniline	0.750	0.627	0.603	0.736	0.593	0.565	0.646	12.10
9)	T	Bis(2-chloroethyl	0.892	0.748	0.783	0.853	0.801	0.670	0.791	9.91
10)	M	2-Chlorophenol	1.656	1.343	1.362	1.413	1.461	1.320	1.426	8.66
11)	T	1,3-Dichlorobenze	1.901	1.694	1.642	1.668	1.667	1.501	1.679	7.67
12)	MC	1,4-Dichlorobenze	1.748	1.543	1.536	1.519	1.650	1.334	1.555	8.95
13)	T	Benzyl alcohol	0.957	0.817	0.844	0.853	0.847	0.743	0.844	8.17
14)	T	1,2-Dichlorobenze	1.756	1.489	1.459	1.533	1.600	1.340	1.530	9.19
15)	T	2-Methylphenol	1.415	1.175	1.195	1.212	1.211	1.098	1.218	8.66
16)	T	Bis(2-chloroisopr	1.428	1.258	1.325	1.374	1.317	1.063	1.294	9.81
17)	T	4-Methylphenol	1.453	1.185	1.160	1.413	1.240	1.079	1.255	11.79
18)	MP	N-Nitrosodi-n-pro	1.007	0.884	0.897	0.888	0.929	0.771	0.896	8.57
19)	T	Acetophenone	1.900	1.693	1.726	1.792	1.732	1.544	1.731	6.78
20)	T	3-Methylphenol	1.455	1.182	1.158	1.412	1.239	1.115	1.260	11.18
21)	T	Hexachloroethane	0.668	0.505	0.520	0.501	0.532	0.467	0.532	13.17
22)	T	2,6-Dimethylpheno							0.000	-1.00
23)	I	Naphthalene-d8	----------ISTD----------							
24)	S	Nitrobenzene-d5	0.315	0.325	0.337	0.304	0.366	0.340	0.331	6.55
25)	T	Nitrobenzene	0.377	0.306	0.305	0.317	0.286	0.265	0.309	12.31
26)	T	Isophorone	0.752	0.598	0.591	0.593	0.607	0.510	0.609	12.91
27)	TC	2-Nitrophenol	0.214	0.181	0.178	0.190	0.196	0.179	0.190	7.39
28)	T	2,4-Dimethylpheno	0.338	0.307	0.305	0.355	0.341	0.307	0.326	6.65
29)	T	Bis(2-chloroethox	0.384	0.361	0.369	0.355	0.368	0.287	0.354	9.69
30)	T	Benzoic acid	0.080	0.102	0.113	0.135	0.125	0.123	0.113	17.59
31)	T	2,4-Dimethylanili	0.519	0.424	0.398	0.420	0.349	0.331	0.407	16.33
32)	TC	2,4-Dichloropheno	0.346	0.286	0.286	0.291	0.309	0.280	0.300	8.23
33)	M	1,2,4-Trichlorobe	0.399	0.336	0.333	0.331	0.339	0.288	0.338	10.48
34)	T	Naphthalene	1.326	1.090	1.044	1.049	1.121	0.960	1.098	11.29
35)	T	4-Chloroaniline	0.628	0.535	0.505	0.572	0.527	0.451	0.536	11.19
36)	T	4-Aminotoluene	0.779	0.654	0.630	0.644	0.566	0.517	0.632	14.12
37)	TC	Hexachlorobutadie	0.212	0.189	0.184	0.192	0.192	0.166	0.189	7.84
38)	T	Caprolactam	0.107	0.098	0.100	0.109	0.098	0.086	0.100	8.40
39)	T	2-Aminotoluene	0.779	0.654	0.630	0.644	0.566	0.517	0.632	14.12
40)	MC	4-Chloro-3-methyl	0.308	0.281	0.270	0.287	0.292	0.263	0.284	5.69
41)	T	2-Methylnaphthale	0.790	0.688	0.667	0.760	0.722	0.635	0.710	8.22
42)	T	2,5-Dimethylpheno							0.000	-1.00
43)	I	Acenaphthene-d10	----------ISTD----------							
44)	TP	Hexachlorocyclope	0.147	0.123	0.139	0.174	0.204	0.194	0.164	19.77
45)	TC	2,4,6-Trichloroph	0.444	0.365	0.355	0.363	0.366	0.348	0.374	9.47
46)	T	2,4,5-Trichloroph	0.440	0.367	0.366	0.411	0.375	0.338	0.383	9.55
47)	S	2-Fluorobiphenyl	1.521	1.558	1.559	1.275	1.546	1.291	1.458	9.37
48)	T	1,1'-Biphenyl	1.779	1.472	1.503	1.603	1.473	1.263	1.515	11.21
49)	T	2-Chloronaphthale	1.292	1.144	1.139	1.129	1.111	0.962	1.130	9.89
50)	T	2-Nitroaniline	0.255	0.209	0.223	0.243	0.222	0.204	0.226	8.71
51)	T	Dimethyl phthalat	1.434	1.194	1.190	1.257	1.215	1.050	1.223	10.18

52)	T	2,6-Dinitrotoluen	0.267	0.244	0.240	0.259	0.272	0.246	0.255	5.17
53)	T	Acenaphthylene	2.081	1.814	1.820	1.793	1.818	1.549	1.813	9.30
54)	T	3-Nitroaniline	0.287	0.248	0.246	0.297	0.265	0.246	0.265	8.47
55)	MC	Acenaphthene	1.366	1.154	1.130	1.113	1.185	1.007	1.159	10.17
56)	TP	2,4-Dinitrophenol	0.063	0.062	0.051	0.082	0.077	0.078	0.069	17.42
57)	MP	4-Nitrophenol	0.094	0.140	0.142	0.160	0.149	0.139	0.137	16.49
58)	M	2,4-Dinitrotoluen	0.268	0.277	0.294	0.302	0.317	0.282	0.290	6.18
59)	T	Dibenzofuran	1.995	1.555	1.518	1.657	1.565	1.356	1.608	13.30
60)	T	Diethyl phthalate	1.418	1.183	1.113	1.153	1.162	0.951	1.163	12.91
61)	T	Fluorene	1.502	1.289	1.305	1.261	1.338	1.170	1.311	8.38
62)	T	4-Chlorophenyl ph	0.768	0.631	0.629	0.659	0.657	0.548	0.649	10.96
63)	T	4-Nitroaniline	0.323	0.244	0.242	0.290	0.258	0.240	0.266	12.55
64)		1,2,4,5-Tetrachlo	0.860	0.670	0.660	0.622	0.585	0.522	0.653	17.60
65)	T	2,3,4,6-Tetrachlo	0.338	0.288	0.287	0.301	0.304	0.273	0.298	7.52
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met	0.080	0.064	0.070	0.093	0.096	0.090	0.082	16.02
68)	TC	N-Nitrosodiphenyl	0.649	0.587	0.592	0.644	0.602	0.512	0.598	8.28
69)	T	1,2-Diphenylhydra	0.783	0.751	0.815	0.690	0.835	0.634	0.751	10.23
70)	S	2,4,6-Tribromophe	0.159	0.161	0.163	0.153	0.162	0.131	0.155	7.86
71)	T	4-Bromophenyl phe	0.309	0.265	0.258	0.268	0.267	0.229	0.266	9.70
72)	T	Hexachlorobenzene	0.344	0.296	0.278	0.286	0.281	0.233	0.286	12.44
73)	T	Atrazine	0.271	0.204	0.191	0.240	0.179	0.180	0.211	17.53
74)	MC	Pentachlorophenol	0.140	0.122	0.131	0.136	0.157	0.148	0.139	8.89
75)	T	Phenanthrene	1.313	1.125	1.128	1.140	1.176	0.945	1.138	10.38
76)	T	Anthracene	1.320	1.129	1.130	1.141	1.140	0.947	1.134	10.40
77)	T	Carbazole	1.205	0.999	0.997	0.982	0.997	0.837	1.003	11.72
78)	T	Di-n-butyl phthal	1.300	1.121	1.149	1.174	1.183	0.965	1.149	9.47
79)	TC	Fluoranthene	1.274	1.083	1.050	1.014	1.086	0.945	1.075	10.30
80)	T	Benzidine	0.371	0.379	0.387	0.389	0.378	0.353	0.376	3.48
81)		4-Aminoaniline							0.000	-1.00
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.576	1.374	1.344	1.365	1.367	1.102	1.355	11.12
84)	S	Terphenyl-d14	1.240	1.287	1.295	1.114	1.204	0.947	1.181	11.19
85)	T	3,3'-Dimethylbenz	0.635	0.567	0.578	0.512	0.572	0.452	0.552	11.39
86)	T	Butyl benzyl phth	0.542	0.521	0.541	0.559	0.508	0.414	0.514	10.15
87)	T	3,3'-Dichlorobenz	0.389	0.378	0.375	0.363	0.371	0.248	0.354	14.88
88)	T	Benzo[a]anthracen	1.298	1.080	1.059	1.089	1.092	0.956	1.096	10.15
89)	T	Chrysene	1.281	1.041	1.010	1.026	1.054	0.904	1.053	11.79
90)	T	Bis(2-ethylhexyl)	0.841	0.685	0.709	0.759	0.675	0.568	0.706	12.88
91)	T	3,3'-Dimethoxyben							0.000	-1.00
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	2.277	1.907	1.915	1.894	1.639	1.318	1.825	17.59
94)	T	Benzo[b]fluoranth	2.149	1.853	1.728	1.702	1.787	1.505	1.787	11.89
95)	T	Benzo[k]fluoranth	2.169	1.696	1.761	1.794	1.721	1.461	1.767	12.99
96)	TC	Benzo[a]pyrene	2.048	1.569	1.562	1.693	1.633	1.398	1.651	13.23
97)	T	Indeno[1,2,3-cd]p	2.598	1.934	1.980	2.096	2.152	1.849	2.101	12.68
98)	T	Dibenz[a,h]anthra	2.185	1.617	1.612	1.730	1.801	1.537	1.747	13.41
99)	T	Benzo[g,h,i]peryl	2.126	1.678	1.655	1.697	1.814	1.520	1.748	11.88

(#) = Out of Range

CS2514.M Thu Dec 18 16:39:54 2014 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\12-18-14\
Data File : C2638.D
Acq On : 18 Dec 2014 14:50
Operator : EDM
Sample : ABN066-14,ICV040BNA1
Misc : NA,12/18/14,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Dec 18 16:22:17 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:04:57 2014
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	86	0.00
2	T	N-Nitrosodimethylamine	0.849	0.807	4.9	76	0.00
3	T	Pyridine	1.077	0.893	17.1	81	0.00
4	S	2-Fluorophenol	1.261	1.288	-2.1	88	0.00
5	T	Benzaldehyde	0.732	0.706	3.6	54	0.00
6	S	Phenol-d5	1.524	1.476	3.1	82	0.00
7	MC	Phenol	1.625	1.534	5.6	90	0.00
8	T	Aniline	0.646	0.701	-8.5	82	0.00
9	T	Bis(2-chloroethyl) ether	0.791	0.784	0.9	79	0.00
10	M	2-Chlorophenol	1.426	1.364	4.3	83	0.00
11	T	1,3-Dichlorobenzene	1.679	1.633	2.7	84	0.00
12	MC	1,4-Dichlorobenzene	1.555	1.441	7.3	81	0.00
13	T	Benzyl alcohol	0.844	0.837	0.8	84	0.00
14	T	1,2-Dichlorobenzene	1.530	1.444	5.6	81	0.00
15	T	2-Methylphenol	1.218	1.184	2.8	84	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.294	1.263	2.4	79	0.00
17	T	4-Methylphenol	1.255	1.309	-4.3	80	0.00
18	MP	N-Nitrosodi-n-propylamine	0.896	0.835	6.8	81	0.00
19	T	Acetophenone	1.731	1.808	-4.4	87	0.00
20	T	3-Methylphenol	1.260	1.322	-4.9	80	0.00
21	T	Hexachloroethane	0.532	0.466	12.4	80	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	81	0.00
24	S	Nitrobenzene-d5	0.331	0.300	9.4	80	0.00
25	T	Nitrobenzene	0.309	0.314	-1.6	80	0.00
26	T	Isophorone	0.609	0.598	1.8	82	0.00
27	TC	2-Nitrophenol	0.190	0.192	-1.1	82	0.00
28	T	2,4-Dimethylphenol	0.326	0.358	-9.8	82	0.00
29	T	Bis(2-chloroethoxy) methane	0.354	0.349	1.4	80	0.00
30	T	Benzoic acid	0.113	0.104	8.0	62	0.01
31	T	2,4-Dimethylaniline	0.407	0.427	-4.9	82	0.00
32	TC	2,4-Dichlorophenol	0.300	0.307	-2.3	85	0.00
33	M	1,2,4-Trichlorobenzene	0.338	0.349	-3.3	86	0.00
34	T	Naphthalene	1.098	1.070	2.6	83	0.00
35	T	4-Chloroaniline	0.536	0.577	-7.6	82	0.00
36	T	4-Aminotoluene	0.632	0.639	-1.1	80	0.00
37	TC	Hexachlorobutadiene	0.189	0.198	-4.8	84	0.00
38	T	Caprolactam	0.100	0.109	-9.0	81	0.02
39	T	2-Aminotoluene	0.632	0.639	-1.1	80	0.00
40	MC	4-Chloro-3-methylphenol	0.284	0.294	-3.5	83	0.00
41	T	2-Methylnaphthalene	0.710	0.782	-10.1	83	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	85	0.00
44	TP	Hexachlorocyclopentadiene	0.164	0.210	-28.0	103	0.00
45	TC	2,4,6-Trichlorophenol	0.374	0.410	-9.6	96	0.00

46	T	2,4,5-Trichlorophenol	0.383	0.410	-7.0	85	0.00
47	S	2-Fluorobiphenyl	1.458	1.247	14.5	83	0.00
48	T	1,1'-Biphenyl	1.515	1.554	-2.6	83	0.00
49	T	2-Chloronaphthalene	1.130	1.092	3.4	82	0.00
50	T	2-Nitroaniline	0.226	0.233	-3.1	82	0.00
51	T	Dimethyl phthalate	1.223	1.219	0.3	83	0.00
52	T	2,6-Dinitrotoluene	0.255	0.248	2.7	82	0.00
53	T	Acenaphthylene	1.813	1.746	3.7	83	0.00
54	T	3-Nitroaniline	0.265	0.280	-5.7	80	0.00
55	MC	Acenaphthene	1.159	1.112	4.1	85	0.00
56	TP	2,4-Dinitrophenol	0.069	0.076	-10.1	78	0.00
57	MP	4-Nitrophenol	0.137	0.142	-3.6	76	0.00
58	M	2,4-Dinitrotoluene	0.290	0.306	-5.5	87	0.01
59	T	Dibenzofuran	1.608	1.656	-3.0	85	0.00
60	T	Diethyl phthalate	1.163	1.175	-1.0	87	0.00
61	T	Fluorene	1.311	1.287	1.8	87	0.01
62	T	4-Chlorophenyl phenyl ether	0.649	0.673	-3.7	87	0.00
63	T	4-Nitroaniline	0.266	0.288	-8.3	85	0.01
64		1,2,4,5-Tetrachlorobenzene	0.653	0.628	3.8	86	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.298	0.313	-5.0	88	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	86	0.00
67	T	4,6-Dinitro-2-methylphenol	0.082	0.087	-6.1	81	0.00
68	TC	N-Nitrosodiphenylamine	0.598	0.648	-8.4	87	0.00
69	T	1,2-Diphenylhydrazine	0.751	0.638	15.0	80	0.00
70	S	2,4,6-Tribromophenol	0.155	0.161	-3.9	91	0.00
71	T	4-Bromophenyl phenyl ether	0.266	0.273	-2.6	88	0.00
72	T	Hexachlorobenzene	0.286	0.309	-8.0	93	0.00
73	T	Atrazine	0.211	0.245	-16.1	88	0.01
74	MC	Pentachlorophenol	0.139	0.142	-2.2	91	0.00
75	T	Phenanthrene	1.138	1.158	-1.8	88	0.01
76	T	Anthracene	1.134	1.162	-2.5	88	0.01
77	T	Carbazole	1.003	0.996	0.7	88	0.01
78	T	Di-n-butyl phthalate	1.149	1.184	-3.0	87	0.01
79	TC	Fluoranthene	1.075	1.066	0.8	91	0.01
80	T	Benzidine	0.376	0.484	-28.7	83	0.00
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	92	0.00
83	M	Pyrene	1.355	1.353	0.1	91	0.02
84	S	Terphenyl-d14	1.181	1.102	6.7	91	0.01
85	T	3,3'-Dimethylbenzidine	0.552	0.645	-16.8	106	0.04
86	T	Butyl benzyl phthalate	0.514	0.526	-2.3	87	0.01
87	T	3,3'-Dichlorobenzidine	0.354	0.361	-2.0	92	0.01
88	T	Benzo[a]anthracene	1.096	1.068	2.6	90	0.01
89	T	Chrysene	1.053	1.011	4.0	91	0.01
90	T	Bis(2-ethylhexyl) phthalate	0.706	0.716	-1.4	87	0.01
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	93	0.00
93	TC	Di-n-octyl phthalate	1.825	1.866	-2.2	92	0.01
94	T	Benzo[b]fluoranthene	1.787	1.693	5.3	92	0.01
95	T	Benzo[k]fluoranthene	1.767	1.767	0.0	92	0.01
96	TC	Benzo[a]pyrene	1.651	1.663	-0.7	91	0.01
97	T	Indeno[1,2,3-cd]pyrene	2.101	2.051	2.4	91	0.02
98	T	Dibenz[a,h]anthracene	1.747	1.725	1.3	93	0.02
99	T	Benzo[g,h,i]perylene	1.748	1.709	2.2	94	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS2514.M Thu Dec 18 16:49:58 2014 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\12-29-14\
Data File : C2791.D
Acq On : 29 Dec 2014 10:02
Operator : EDM
Sample : ABN066-14,CCV040BNA1
Misc : NA,12/24/14,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Dec 29 12:30:22 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	89	0.00
2	T	N-Nitrosodimethylamine	0.849	0.817	3.8	80	0.00
3	T	Pyridine	1.077	0.894	17.0	84	-0.01
4	S	2-Fluorophenol	1.261	1.197	5.1	85	0.00
5	T	Benzaldehyde	0.732	0.750	-2.5	80	0.00
6	S	Phenol-d5	1.524	1.555	-2.0	90	0.00
7	MC	Phenol	1.625	1.586	2.4	96	0.00
8	T	Aniline	0.646	0.711	-10.1	86	0.00
9	T	Bis(2-chloroethyl) ether	0.791	0.797	-0.8	84	0.00
10	M	2-Chlorophenol	1.426	1.358	4.8	86	0.00
11	T	1,3-Dichlorobenzene	1.679	1.619	3.6	87	0.00
12	MC	1,4-Dichlorobenzene	1.555	1.572	-1.1	93	0.00
13	T	Benzyl alcohol	0.844	0.849	-0.6	89	0.00
14	T	1,2-Dichlorobenzene	1.530	1.538	-0.5	90	0.00
15	T	2-Methylphenol	1.218	1.205	1.1	89	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.294	1.275	1.5	83	0.00
17	T	4-Methylphenol	1.255	1.399	-11.5	89	0.00
18	MP	N-Nitrosodi-n-propylamine	0.896	0.887	1.0	89	0.00
19	T	Acetophenone	1.731	1.804	-4.2	90	0.00
20	T	3-Methylphenol	1.260	1.405	-11.5	89	0.00
21	T	Hexachloroethane	0.532	0.497	6.6	89	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	91	0.00
24	S	Nitrobenzene-d5	0.331	0.291	12.1	87	0.00
25	T	Nitrobenzene	0.309	0.283	8.4	81	0.00
26	T	Isophorone	0.609	0.587	3.6	90	0.00
27	TC	2-Nitrophenol	0.190	0.184	3.2	88	0.00
28	T	2,4-Dimethylphenol	0.326	0.330	-1.2	85	0.00
29	T	Bis(2-chloroethoxy) methane	0.354	0.340	4.0	87	0.00
30	T	Benzoic acid	0.113	0.121	-7.1	81	0.01
31	T	2,4-Dimethylaniline	0.407	0.394	3.2	85	0.00
32	TC	2,4-Dichlorophenol	0.300	0.301	-0.3	94	0.00
33	M	1,2,4-Trichlorobenzene	0.338	0.347	-2.7	95	0.00
34	T	Naphthalene	1.098	1.031	6.1	89	0.00
35	T	4-Chloroaniline	0.536	0.562	-4.9	89	0.00
36	T	4-Aminotoluene	0.632	0.610	3.5	86	0.00
37	TC	Hexachlorobutadiene	0.189	0.195	-3.2	92	0.00
38	T	Caprolactam	0.100	0.109	-9.0	91	0.02
39	T	2-Aminotoluene	0.632	0.610	3.5	86	0.00
40	MC	4-Chloro-3-methylphenol	0.284	0.286	-0.7	91	0.01
41	T	2-Methylnaphthalene	0.710	0.763	-7.5	91	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	95	0.03
44	TP	Hexachlorocyclopentadiene	0.164	0.157	4.3	86	0.01
45	TC	2,4,6-Trichlorophenol	0.374	0.423	-13.1	111	0.01
46	T	2,4,5-Trichlorophenol	0.383	0.424	-10.7	98	0.01

47	S	2-Fluorobiphenyl	1.458	1.271	12.8	94	0.01
48	T	1,1'-Biphenyl	1.515	1.550	-2.3	92	0.02
49	T	2-Chloronaphthalene	1.130	1.121	0.8	94	0.02
50	T	2-Nitroaniline	0.226	0.241	-6.6	94	0.02
51	T	Dimethyl phthalate	1.223	1.264	-3.4	95	0.03
52	T	2,6-Dinitrotoluene	0.255	0.260	-2.0	95	0.03
53	T	Acenaphthylene	1.813	1.759	3.0	93	0.02
54	T	3-Nitroaniline	0.265	0.290	-9.4	92	0.03
55	MC	Acenaphthene	1.159	1.098	5.3	93	0.03
56	TP	2,4-Dinitrophenol	0.069	0.082	-18.8	94	0.02
57	MP	4-Nitrophenol	0.137	0.156	-13.9	93	0.02
58	M	2,4-Dinitrotoluene	0.290	0.314	-8.3	98	0.03
59	T	Dibenzofuran	1.608	1.697	-5.5	97	0.03
60	T	Diethyl phthalate	1.163	1.169	-0.5	96	0.04
61	T	Fluorene	1.311	1.271	3.1	95	0.04
62	T	4-Chlorophenyl phenyl ether	0.649	0.667	-2.8	96	0.04
63	T	4-Nitroaniline	0.266	0.317	-19.2	104	0.05
64		1,2,4,5-Tetrachlorobenzene	0.653	0.626	4.1	95	0.01
65	T	2,3,4,6-Tetrachlorophenol	0.298	0.325	-9.1	102	0.03
66	I	Phenanthrene-d10	1.000	1.000	0.0	99	0.05
67	T	4,6-Dinitro-2-methylphenol	0.082	0.092	-12.2	99	0.04
68	TC	N-Nitrosodiphenylamine	0.598	0.615	-2.8	95	0.04
69	T	1,2-Diphenylhydrazine	0.751	0.607	19.2	87	0.04
70	S	2,4,6-Tribromophenol	0.155	0.165	-6.5	107	0.04
71	T	4-Bromophenyl phenyl ether	0.266	0.273	-2.6	101	0.04
72	T	Hexachlorobenzene	0.286	0.304	-6.3	106	0.05
73	T	Atrazine	0.211	0.240	-13.7	99	0.06
74	MC	Pentachlorophenol	0.139	0.163	-17.3	119	0.04
75	T	Phenanthrene	1.138	1.148	-0.9	100	0.03
76	T	Anthracene	1.134	1.175	-3.6	102	0.06
77	T	Carbazole	1.003	1.045	-4.2	106	0.06
78	T	Di-n-butyl phthalate	1.149	1.203	-4.7	102	0.07
79	TC	Fluoranthene	1.075	1.129	-5.0	111	0.08
80	T	Benzidine	0.376	0.427	-13.6	105	0.00
82	I	Chrysene-d12	1.000	1.000	0.0	116	0.08
83	M	Pyrene	1.355	1.345	0.7	114	0.11
84	S	Terphenyl-d14	1.181	1.076	8.9	112	0.11
85	T	3,3'-Dimethylbenzidine	0.552	0.649	-17.6	141	0.04
86	T	Butyl benzyl phthalate	0.514	0.503	2.1	104	0.10
87	T	3,3'-Dichlorobenzidine	0.354	0.367	-3.7	117	0.08
88	T	Benzo[a]anthracene	1.096	1.073	2.1	114	0.08
89	T	Chrysene	1.053	1.027	2.5	116	0.09
90	T	Bis(2-ethylhexyl) phthalate	0.706	0.694	1.7	106	0.08
92	I	Perylene-d12	1.000	1.000	0.0	107	0.09
93	TC	Di-n-octyl phthalate	1.825	1.909	-4.6	107	0.09
94	T	Benzo[b]fluoranthene	1.787	1.712	4.2	107	0.09
95	T	Benzo[k]fluoranthene	1.767	1.794	-1.5	107	0.09
96	TC	Benzo[a]pyrene	1.651	1.653	-0.1	104	0.09
97	T	Indeno[1,2,3-cd]pyrene	2.101	2.022	3.8	103	0.11
98	T	Dibenz[a,h]anthracene	1.747	1.696	2.9	104	0.11
99	T	Benzo[g,h,i]perylene	1.748	1.667	4.6	105	0.12

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS2514.M Mon Dec 29 12:31:32 2014 RPT1

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A2939.D

Date Analyzed: 12/15/2014

Instrument ID: MSDA

Time Analyzed: 11:49

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	58572		3.40		233163		4.16		138365		5.17	
	UPPER LIMIT	117144		3.90		466326		4.66		276730		5.67	
	LOWER LIMIT	29286		2.90		116582		3.66		69183		4.67	
	LAB SAMPLE ID												
01	ICC001BNA1	51993		3.40		212525		4.15		125509		5.17	
02	ICC010BNA1	41827		3.40		167470		4.15		101926		5.17	
03	ICC020BNA1	45525		3.40		183357		4.15		109421		5.17	
04	ICC080BNA1	43164		3.40		174983		4.16		104074		5.17	
05	ICC160BNA1	49856		3.40		201332		4.16		120261		5.17	
06	ICC001BNA1	51914		3.40		206355		4.15		123380		5.18	
07	ICC160BNA2	65142		3.40		266068		4.15		163718		5.17	
08	ICC080BNA2	55635		3.40		224228		4.15		137648		5.17	
09	ICC040BNA2	60198		3.40		247149		4.15		146882		5.17	
10	ICC020BNA2	60924		3.40		253616		4.15		154044		5.17	
11	ICC010BNA2	66378		3.40		269273		4.15		166000		5.17	
12	ICC001BNA1	66228		3.40		256806		4.15		154419		5.18	
13	ICC001BNA2	75416		3.40		307358		4.15		186112		5.17	
14	ICC160BNA2	67742		3.40		272539		4.15		162913		5.17	
15	ICV040BNA1	62710		3.40		242145		4.15		148569		5.17	
16	ICV040BNA2	67288		3.40		258835		4.15		155855		5.18	
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A2939.D

Date Analyzed: 12/15/2014

Instrument ID: MSDA

Time Analyzed: 11:49

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	218466	6.02	189708	7.62	92186	8.85
	UPPER LIMIT	436932	6.52	379416	8.12	184372	9.35
	LOWER LIMIT	109233	5.52	94854	7.12	46093	8.35
	LAB SAMPLE ID						
01	ICC001BNA1	208674	6.02	201500	7.62	98645	8.85
02	ICC010BNA1	168813	6.02	163740	7.62	89517	8.85
03	ICC020BNA1	171187	6.02	156384	7.62	78732	8.85
04	ICC080BNA1	163246	6.02	142150	7.62	72378	8.85
05	ICC160BNA1	192686	6.02	155142	7.62	91025	8.85
06	ICC001BNA1	198760	6.03	184228	7.66	88648	8.91
07	ICC160BNA2	263878	6.02	218039	7.62	111037	8.85
08	ICC080BNA2	219991	6.02	169181	7.62	79467	8.85
09	ICC040BNA2	235723	6.02	183025	7.61	82447	8.84
10	ICC020BNA2	248497	6.02	188755	7.62	82692	8.85
11	ICC010BNA2	258268	6.02	199183	7.62	88761	8.85
12	ICC001BNA1	245963	6.03	207563	7.71	98666	8.95
13	ICC001BNA2	295386	6.02	216025	7.64	98437	8.88
14	ICC160BNA2	261749	6.02	223501	7.63	112646	8.86
15	ICV040BNA1	236521	6.02	193313	7.62	93191	8.85
16	ICV040BNA2	252074	6.03	184993	7.73	82253	8.98
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A2986.D

Date Analyzed: 12/23/2014

Instrument ID: MSDA

Time Analyzed: 08:06

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	65188		3.40		241483		4.15		141461		5.17	
	UPPER LIMIT	130376		3.90		482966		4.65		282922		5.67	
	LOWER LIMIT	32594		2.90		120742		3.65		70731		4.67	
	LAB SAMPLE ID												
01	CCV040BNA2	99411		3.40		385227		4.15		226650		5.17	
02	BLKA141222-02	60148		3.40		237904		4.15		144670		5.17	
03	LCSA141222-02	55447		3.40		217466		4.15		122477		5.17	
04	E14-12156-020MS	48999		3.40		186704		4.15		105736		5.17	
05	E14-12156-020MSD	49892		3.40		195340		4.15		110641		5.17	
06	E14-12156-019	55382		3.40		216612		4.15		125106		5.17	
07	E14-12156-020	50556		3.40		208719		4.15		120986		5.17	
08	E14-12156-021	53602		3.40		224033		4.15		133445		5.17	
09	E14-12156-022	54392		3.40		225750		4.15		132186		5.17	
10	E14-12197-001	58205		3.40		245196		4.15		141764		5.17	
11	E14-12180-002	51074		3.40		212156		4.15		123187		5.17	
12	E14-12180-003	56736		3.40		240420		4.15		138902		5.17	
13	E14-12180-004	54707		3.40		228450		4.15		130977		5.17	
14	E14-12184-001	50540		3.40		207143		4.15		122440		5.17	
15	E14-12184-002	58863		3.40		245853		4.15		145766		5.17	
16	E14-12099-008	52074		3.40		215304		4.15		124961		5.17	
17	E14-12132-014	52044		3.40		216545		4.15		128992		5.17	
18	BLKA141223-01	59992		3.40		234945		4.15		141572		5.17	
19	SPLP141216	59808		3.40		242659		4.15		140753		5.17	
20	SPLP141218	54635		3.40		221649		4.15		126647		5.17	
21	LCSA141223-01	50480		3.40		195937		4.15		116108		5.17	
22	E14-11765-005MS	44622		3.40		167031		4.15		95193		5.17	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A2986.D

Date Analyzed: 12/23/2014

Instrument ID: MSDA

Time Analyzed: 08:06

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	220127		6.02		180471		7.68		90951		8.92	
	UPPER LIMIT	440254		6.52		360942		8.18		181902		9.42	
	LOWER LIMIT	110064		5.52		90236		7.18		45476		8.42	
	LAB SAMPLE ID												
01	CCV040BNA2	369615		6.03		261283		7.72		120552		8.97	
02	BLKA141222-02	230032		6.02		195633		7.62		122817		8.85	
03	LCSA141222-02	192770		6.01		159602		7.62		103942		8.84	
04	E14-12156-020MS	172980		6.02		147927		7.61		96302		8.84	
05	E14-12156-020MSD	177425		6.02		139465		7.62		88255		8.85	
06	E14-12156-019	201368		6.02		170436		7.63		110709		8.86	
07	E14-12156-020	195112		6.02		162441		7.64		103231		8.87	
08	E14-12156-021	212788		6.02		176670		7.63		113275		8.86	
09	E14-12156-022	209974		6.02		177923		7.62		113070		8.85	
10	E14-12197-001	231923		6.01		195703		7.61		127407		8.84	
11	E14-12180-002	197305		6.01		171104		7.62		107047		8.85	
12	E14-12180-003	223763		6.02		190002		7.62		123525		8.85	
13	E14-12180-004	213204		6.02		177704		7.62		113903		8.85	
14	E14-12184-001	199761		6.01		171522		7.62		109477		8.84	
15	E14-12184-002	227663		6.01		188412		7.61		118914		8.84	
16	E14-12099-008	199866		6.01		170414		7.62		110151		8.84	
17	E14-12132-014	206131		6.01		169351		7.62		109966		8.85	
18	BLKA141223-01	225244		6.01		192962		7.63		126028		8.86	
19	SPLP141216	229993		6.02		196545		7.63		128922		8.86	
20	SPLP141218	207512		6.02		175887		7.62		110834		8.85	
21	LCSA141223-01	182546		6.02		162521		7.63		109284		8.86	
22	E14-11765-005MS	150364		6.02		130735		7.61		90884		8.84	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A2986.D

Date Analyzed: 12/23/2014

Instrument ID: MSDA

Time Analyzed: 08:06

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	65188		3.40		241483		4.15		141461		5.17	
	UPPER LIMIT	130376		3.90		482966		4.65		282922		5.67	
	LOWER LIMIT	32594		2.90		120742		3.65		70731		4.67	
	LAB SAMPLE ID												
01	E14-11765-005MSD	53499		3.40		199796		4.15		113887		5.17	
02	E14-11786-018	49068		3.4		201003		4.15		118327		5.17	
03	E14-11786-019	47969		3.4		199237		4.15		114740		5.17	
04	E14-11786-020	45223		3.4		187654		4.15		111631		5.17	
05	E14-11765-005	45651		3.4		190059		4.15		106620		5.17	
06													
07													
08													
09													
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12													
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15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A2986.D

Date Analyzed: 12/23/2014

Instrument ID: MSDA

Time Analyzed: 08:06

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	220127	6.02	180471	7.68	90951	8.92
	UPPER LIMIT	440254	6.52	360942	8.18	181902	9.42
	LOWER LIMIT	110064	5.52	90236	7.18	45476	8.42
	LAB SAMPLE ID						
01	E14-11765-005MSD	179911	6.02	149061	7.62	100982	8.84
02	E14-11786-018	186497	6.01	156781	7.61	99826	8.84
03	E14-11786-019	182756	6.01	154386	7.61	102859	8.84
04	E14-11786-020	180445	6.02	154466	7.61	101854	8.84
05	E14-11765-005	168735	6.01	142130	7.61	93804	8.84
06							
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20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2632.D

Date Analyzed: 12/18/2014

Instrument ID: MSDC

Time Analyzed: 13:17

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	243158		2.50		931182		3.05		553112		3.87	
	UPPER LIMIT	486316		3.00		1862364		3.55		1106224		4.37	
	LOWER LIMIT	121579		2.00		465591		2.55		276556		3.37	
	LAB SAMPLE ID												
01	ICC010BNA1	275646		2.50		1054303		3.05		625719		3.87	
02	ICC020BNA1	279718		2.50		1091092		3.05		634721		3.87	
03	ICC040BNA1	266739		2.50		1067610		3.05		637592		3.87	
04	ICC080BNA1	200012		2.50		812201		3.05		492810		3.87	
05	ICC160BNA1	215326		2.50		892193		3.05		530505		3.88	
06	ICV040BNA1	229105		2.50		865340		3.05		543389		3.88	
07	ICC160BNA2	285070		2.50		1106066		3.05		647537		3.87	
08	ICC080BNA2	246994		2.50		977589		3.05		600718		3.87	
09	ICC040BNA2	319599		2.50		1175946		3.05		694789		3.88	
10	ICC020BNA2	311613		2.50		1206009		3.05		697962		3.87	
11	ICC010BNA2	286301		2.50		1083383		3.05		671592		3.89	
12	ICC001BNA2	221313		2.50		844822		3.05		548045		3.89	
13	ICV040BNA2	154100		2.50		585743		3.05		373415		3.89	
14	BLKS141217-03	151916		2.50		590439		3.05		370079		3.88	
15	LCSS141217-03	172018		2.50		660904		3.05		425789		3.88	
16	E14-12052-006MS	189709		2.50		742533		3.05		471687		3.88	
17	E14-12052-006MSD	215107		2.50		844297		3.05		529967		3.88	
18	E14-11965-001	199423		2.50		796297		3.05		534988		3.88	
19	E14-12052-002	192540		2.50		739683		3.05		470935		3.87	
20	E14-12052-004	160284		2.50		600641		3.05		377922		3.87	
21	E14-12052-006	154167		2.50		568682		3.05		366452		3.87	
22	E14-12052-008	163586		2.50		605624		3.04		380369		3.86	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2632.D

Date Analyzed: 12/18/2014

Instrument ID: MSDC

Time Analyzed: 13:17

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	925006	4.65	781172	6.43	395614	7.82
	UPPER LIMIT	1850012	5.15	1562344	6.93	791228	8.32
	LOWER LIMIT	462503	4.15	390586	5.93	197807	7.32
	LAB SAMPLE ID						
01	ICC010BNA1	970715	4.65	771996	6.42	401447	7.81
02	ICC020BNA1	965767	4.63	752407	6.41	392997	7.81
03	ICC040BNA1	980410	4.64	745435	6.41	422092	7.81
04	ICC080BNA1	765545	4.65	614547	6.43	395071	7.83
05	ICC160BNA1	823203	4.66	704119	6.45	488288	7.84
06	ICV040BNA1	846562	4.65	685748	6.44	392189	7.83
07	ICC160BNA2	1100519	4.65	847984	6.44	505912	7.83
08	ICC080BNA2	1007443	4.65	685821	6.44	335521	7.82
09	ICC040BNA2	1081969	4.67	674138	6.46	357114	7.86
10	ICC020BNA2	1102340	4.65	691164	6.43	341509	7.83
11	ICC010BNA2	1080276	4.67	722420	6.47	357883	7.86
12	ICC001BNA2	969072	4.67	881787	6.46	440365	7.85
13	ICV040BNA2	654818	4.67	629120	6.47	346109	7.85
14	BLKS141217-03	667008	4.67	744390	6.46	541033	7.85
15	LCSS141217-03	730537	4.66	739111	6.45	491619	7.84
16	E14-12052-006MS	783483	4.67	751232	6.46	390766	7.85
17	E14-12052-006MSD	884013	4.66	749584	6.45	386794	7.84
18	E14-11965-001	812909	4.65	817175	6.42	600844	7.81
19	E14-12052-002	769395	4.65	687424	6.43	512036	7.81
20	E14-12052-004	662020	4.64	675052	6.41	502856	7.80
21	E14-12052-006	636093	4.64	604851	6.41	453970	7.80
22	E14-12052-008	613461	4.62	622842	6.40	520340	7.80

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2632.D

Date Analyzed: 12/18/2014

Instrument ID: MSDC

Time Analyzed: 13:17

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	243158	2.50	931182	3.05	553112	3.87
	UPPER LIMIT	486316	3.00	1862364	3.55	1106224	4.37
	LOWER LIMIT	121579	2.00	465591	2.55	276556	3.37
	LAB SAMPLE ID						
01	E14-12052-010	170964	2.50	663572	3.04	413283	3.86
02	E14-11902-002	150366	2.5	578922	3.04	371239	3.87
03	E14-12071-009	162200	2.5	612683	3.05	393297	3.86
04	E14-12071-010	146293	2.5	564864	3.04	364440	3.86
05	E14-12071-011	152287	2.5	576532	3.04	363933	3.86
06	E14-12071-012	173935	2.5	669064	3.04	423662	3.86
07	E14-12071-013	145264	2.5	575159	3.04	348730	3.86
08							
09							
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21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2632.D

Date Analyzed: 12/18/2014

Instrument ID: MSDC

Time Analyzed: 13:17

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	925006	4.65	781172	6.43	395614	7.82
	UPPER LIMIT	1850012	5.15	1562344	6.93	791228	8.32
	LOWER LIMIT	462503	4.15	390586	5.93	197807	7.32
	LAB SAMPLE ID						
01	E14-12052-010	686238	4.63	637851	6.40	498015	7.8
02	E14-11902-002	609237	4.63	588579	6.40	458462	7.8
03	E14-12071-009	660180	4.62	641262	6.39	509985	7.79
04	E14-12071-010	597431	4.61	619069	6.38	494202	7.78
05	E14-12071-011	601976	4.61	619816	6.38	498713	7.77
06	E14-12071-012	701160	4.61	684608	6.38	529215	7.78
07	E14-12071-013	574172	4.61	585895	6.38	464345	7.79
08							
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21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2791.D

Date Analyzed: 12/29/2014

Instrument ID: MSDC

Time Analyzed: 10:02

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	238429		2.49		971425		3.05		603689		3.90	
	UPPER LIMIT	476858		2.99		1942850		3.55		1207378		4.40	
	LOWER LIMIT	119215		1.99		485713		2.55		301845		3.40	
	LAB SAMPLE ID												
01	CCV040BNA2	216691		2.49		862982		3.04		545100		3.88	
02	BLKS141223-05	138830		2.49		516153		3.04		316718		3.89	
03	LCSS141223-05	147851		2.49		571543		3.04		358372		3.89	
04	E14-12116-002MS	155760		2.49		593513		3.04		366927		3.88	
05	E14-12116-003MSD	153526		2.49		603123		3.04		380692		3.88	
06	E14-12116-001	164006		2.49		631047		3.04		396091		3.88	
07	BLKS141222-03	141391		2.49		523425		3.05		311546		3.89	
08	LCSS141222-03	138612		2.49		526245		3.04		337635		3.89	
09	E14-12168-005MS	164582		2.49		608456		3.04		356016		3.88	
10	E14-12168-006MSD	170412		2.49		647678		3.04		374933		3.88	
11	E14-12132-001	147429		2.49		553901		3.04		317281		3.88	
12	E14-12132-002	157088		2.49		565654		3.04		338272		3.87	
13	E14-12132-003	178319		2.49		654155		3.04		374684		3.88	
14	E14-12132-004	193405		2.49		727339		3.04		424110		3.88	
15	E14-12132-005	174465		2.49		646494		3.04		392514		3.87	
16	E14-12132-006	174657		2.49		648372		3.04		385863		3.87	
17	E14-12132-007	168177		2.49		626694		3.04		371931		3.87	
18	E14-12132-008	165401		2.49		604723		3.04		350444		3.87	
19	E14-12132-009	175356		2.49		643622		3.04		385223		3.87	
20	E14-12132-010	162859		2.49		586098		3.04		355696		3.87	
21	E14-12132-011	161556		2.49		592468		3.04		355569		3.87	
22	E14-12132-012	179330		2.49		646878		3.04		390959		3.87	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2791.D

Date Analyzed: 12/29/2014

Instrument ID: MSDC

Time Analyzed: 10:02

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	973258		4.70		861103		6.51		449779		7.91	
	UPPER LIMIT	1946516		5.20		1722206		7.01		899558		8.41	
	LOWER LIMIT	486629		4.20		430552		6.01		224890		7.41	
	LAB SAMPLE ID												
01	CCV040BNA2	941648		4.67		829304		6.47		388987		7.87	
02	BLKS141223-05	543595		4.68		502159		6.48		251601		7.88	
03	LCSS141223-05	618364		4.68		616629		6.48		340808		7.88	
04	E14-12116-002MS	598438		4.66		498183		6.46		281102		7.86	
05	E14-12116-003MSD	620327		4.67		546376		6.47		322238		7.87	
06	E14-12116-001	663389		4.68		567055		6.47		337085		7.88	
07	BLKS141222-03	501026		4.69		500388		6.51		307581		7.90	
08	LCSS141222-03	552944		4.68		481859		6.48		279361		7.88	
09	E14-12168-005MS	513324		4.66		506865		6.47		330002		7.87	
10	E14-12168-006MSD	577486		4.66		590722		6.46		385093		7.87	
11	E14-12132-001	503543		4.66		480502		6.45		300295		7.86	
12	E14-12132-002	507000		4.65		466723		6.44		307277		7.85	
13	E14-12132-003	571469		4.66		529236		6.46		331890		7.86	
14	E14-12132-004	618357		4.66		577433		6.45		355284		7.86	
15	E14-12132-005	613792		4.65		567936		6.45		347231		7.84	
16	E14-12132-006	607322		4.64		518748		6.43		308021		7.83	
17	E14-12132-007	560845		4.64		511832		6.43		311955		7.83	
18	E14-12132-008	537873		4.65		495985		6.43		311260		7.83	
19	E14-12132-009	588537		4.64		544810		6.42		332006		7.84	
20	E14-12132-010	550538		4.64		516847		6.42		315682		7.83	
21	E14-12132-011	550333		4.64		504526		6.42		306631		7.84	
22	E14-12132-012	610675		4.65		530076		6.43		307871		7.83	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2791.D

Date Analyzed: 12/29/2014

Instrument ID: MSDC

Time Analyzed: 10:02

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	238429		2.49		971425		3.05		603689		3.90	
	UPPER LIMIT	476858		2.99		1942850		3.55		1207378		4.40	
	LOWER LIMIT	119215		1.99		485713		2.55		301845		3.40	
	LAB SAMPLE ID												
01	E14-12132-013	177009		2.49		647870		3.04		386308		3.87	
02	E14-12073-002	165751		2.49		593679		3.04		367022		3.87	
03	E14-12168-001	190940		2.49		678174		3.04		399676		3.88	
04	E14-12168-002	174581		2.49		649113		3.04		388496		3.89	
05	E14-12168-003	177788		2.49		647121		3.04		371133		3.88	
06	E14-12168-004	149694		2.49		557863		3.04		320660		3.89	
07	E14-12168-007	172928		2.49		648283		3.04		365780		3.87	
08	E14-12168-008	156818		2.49		583245		3.04		338255		3.87	
09	E14-12132-011DL	202413		2.50		725208		3.07		426744		3.96	
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C2791.D

Date Analyzed: 12/29/2014

Instrument ID: MSDC

Time Analyzed: 10:02

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	973258		4.70		861103		6.51		449779		7.91	
	UPPER LIMIT	1946516		5.20		1722206		7.01		899558		8.41	
	LOWER LIMIT	486629		4.20		430552		6.01		224890		7.41	
	LAB SAMPLE ID												
01	E14-12132-013	587741		4.64		534261		6.42		320831		7.83	
02	E14-12073-002	547849		4.65		497849		6.44		302442		7.84	
03	E14-12168-001	585183		4.66		572222		6.46		371764		7.86	
04	E14-12168-002	606250		4.68		601573		6.49		400100		7.88	
05	E14-12168-003	586845		4.67		603155		6.47		389734		7.88	
06	E14-12168-004	505944		4.67		515890		6.47		330694		7.88	
07	E14-12168-007	565319		4.65		554028		6.44		360262		7.84	
08	E14-12168-008	533479		4.66		521917		6.45		339095		7.86	
09	E14-12132-011DL	638990		4.82		626078		6.67		394365		8.08	
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMI-VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2802.D
Acq On : 29 Dec 2014 12:54
Operator : EDM
Sample : B-491_(4,E14-12132-001,S,15.38g,22.9,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 29 13:22:11 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	147429	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	553901	40.00	UG	0.00
43) Acenaphthene-d10	3.88	164	317281	40.00	UG	0.00
66) Phenanthrene-d10	4.66	188	503543	40.00	UG	0.01
82) Chrysene-d12	6.45	240	480502	40.00	UG	0.02
92) Perylene-d12	7.86	264	300295	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.72	82	146273	31.91	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery = 63.82%			
47) 2-Fluorobiphenyl	3.52	172	404527	34.97	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery = 69.94%			
70) 2,4,6-Tribromophenol	4.28	330	981	0.50	UG	0.01
Spiked Amount 100.000	Range 32 - 112		Recovery = 0.50%#			
84) Terphenyl-d14	5.60	244	627844	44.24	UG	0.03
Spiked Amount 50.000	Range 19 - 118		Recovery = 88.48%			

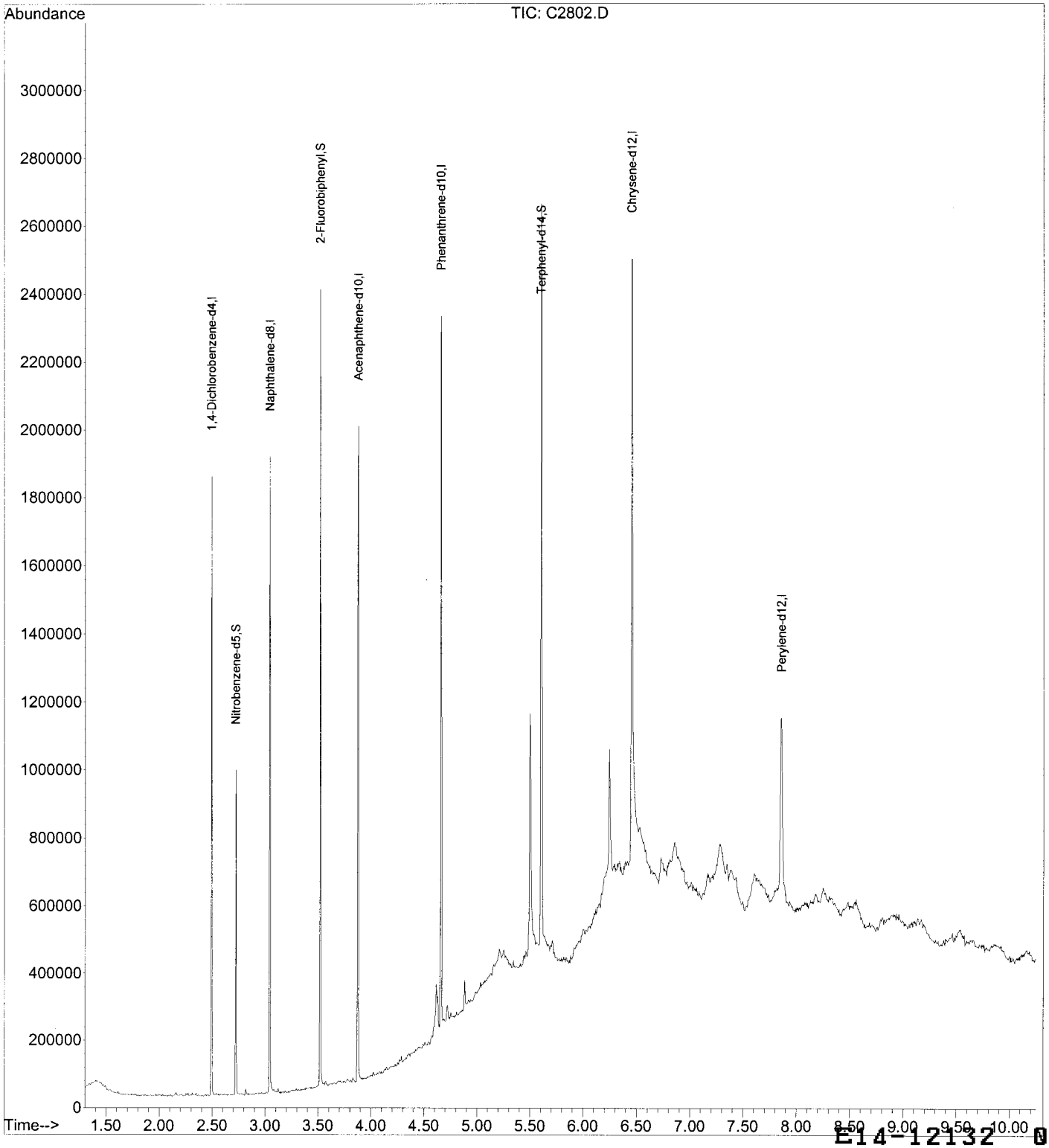
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2802.D
Acq On : 29 Dec 2014 12:54
Operator : EDM
Sample : B-491_(4,E14-12132-001,S,15.38g,22.9,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 29 13:22:11 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2803.D
Acq On : 29 Dec 2014 13:09
Operator : EDM
Sample : B-491_(5,E14-12132-002,S,15.49g,21.9,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 29 13:24:59 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	157088	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	565654	40.00	UG	0.00
43) Acenaphthene-d10	3.87	164	338272	40.00	UG	0.00
66) Phenanthrene-d10	4.65	188	507000	40.00	UG	0.00
82) Chrysene-d12	6.44	240	466723	40.00	UG	0.01
92) Perylene-d12	7.85	264	307277m	40.00	UG	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.72	82	138099	29.50	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery = 59.00%			
47) 2-Fluorobiphenyl	3.52	172	433033	35.11	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery = 70.22%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery = 0.00%#			
84) Terphenyl-d14	5.59	244	597114	43.32	UG	0.02
Spiked Amount 50.000	Range 19 - 118		Recovery = 86.64%			

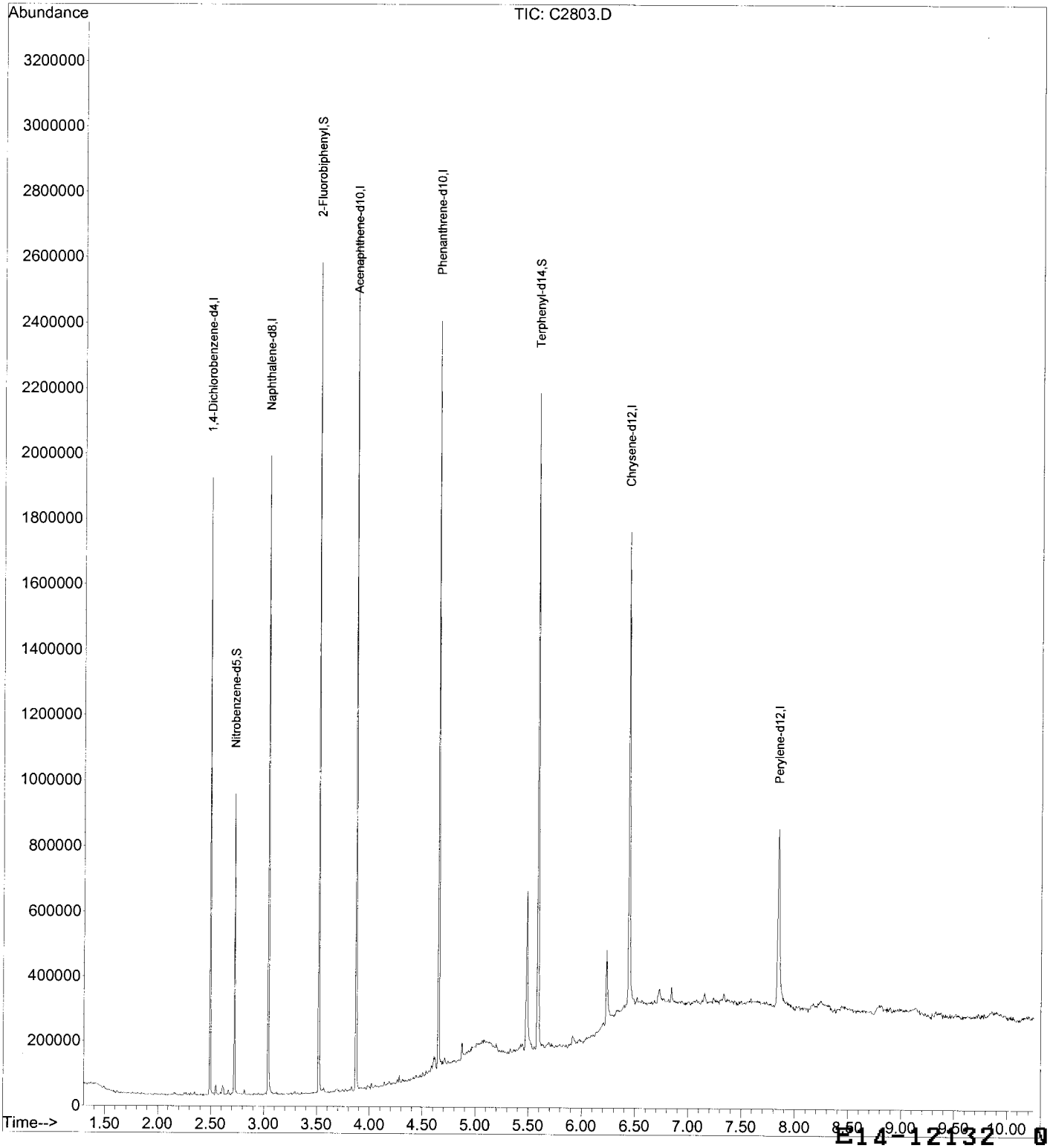
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2803.D
Acq On : 29 Dec 2014 13:09
Operator : EDM
Sample : B-491 (5,E14-12132-002,S,15.49g,21.9,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 29 13:24:59 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2804.D
Acq On : 29 Dec 2014 13:25
Operator : EDM
Sample : B-492_(4,E14-12132-003,S,15.65g,18.6,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 29 13:48:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	178319	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	654155	40.00	UG	0.00
43) Acenaphthene-d10	3.88	164	374684	40.00	UG	0.00
66) Phenanthrene-d10	4.66	188	571469	40.00	UG	0.02
82) Chrysene-d12	6.46	240	529236	40.00	UG	0.03
92) Perylene-d12	7.86	264	331890	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	189179	34.95	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	69.90%		
47) 2-Fluorobiphenyl	3.52	172	523869	38.35	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery =	76.70%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.61	244	673503	43.09	UG	0.04
Spiked Amount 50.000	Range 19 - 118		Recovery =	86.18%		

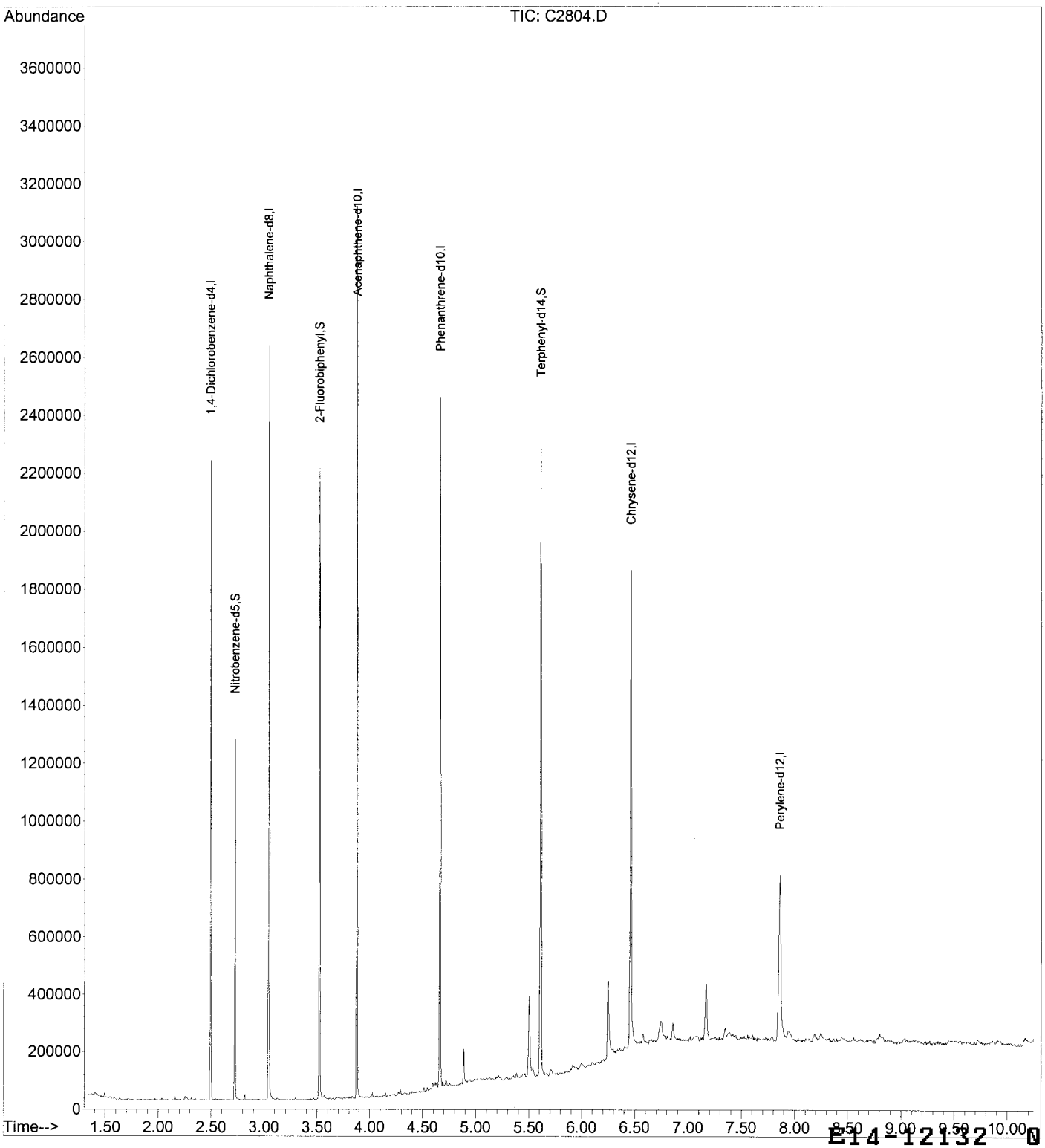
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2804.D
Acq On : 29 Dec 2014 13:25
Operator : EDM
Sample : B-492_(4,E14-12132-003,S,15.65g,18.6,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 29 13:48:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0082

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\C_Dec-14\12-29-14\
Data File : C2805.D
Acq On : 29 Dec 2014 13:41
Operator : EDM
Sample : B-492_(5,E14-12132-004,S,15.76g,16.4,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 30 07:29:34 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	193405	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	727339	40.00	UG	0.00
43) Acenaphthene-d10	3.88	164	424110	40.00	UG	0.00
66) Phenanthrene-d10	4.66	188	618357	40.00	UG	0.01
82) Chrysene-d12	6.45	240	577433	40.00	UG	0.02
92) Perylene-d12	7.86	264	355284	40.00	UG	0.03

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	186090	30.92	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	61.84%		
47) 2-Fluorobiphenyl	3.52	172	528763	34.19	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery =	68.38%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.60	244	740896	43.44	UG	0.03
Spiked Amount 50.000	Range 19 - 118		Recovery =	86.88%		

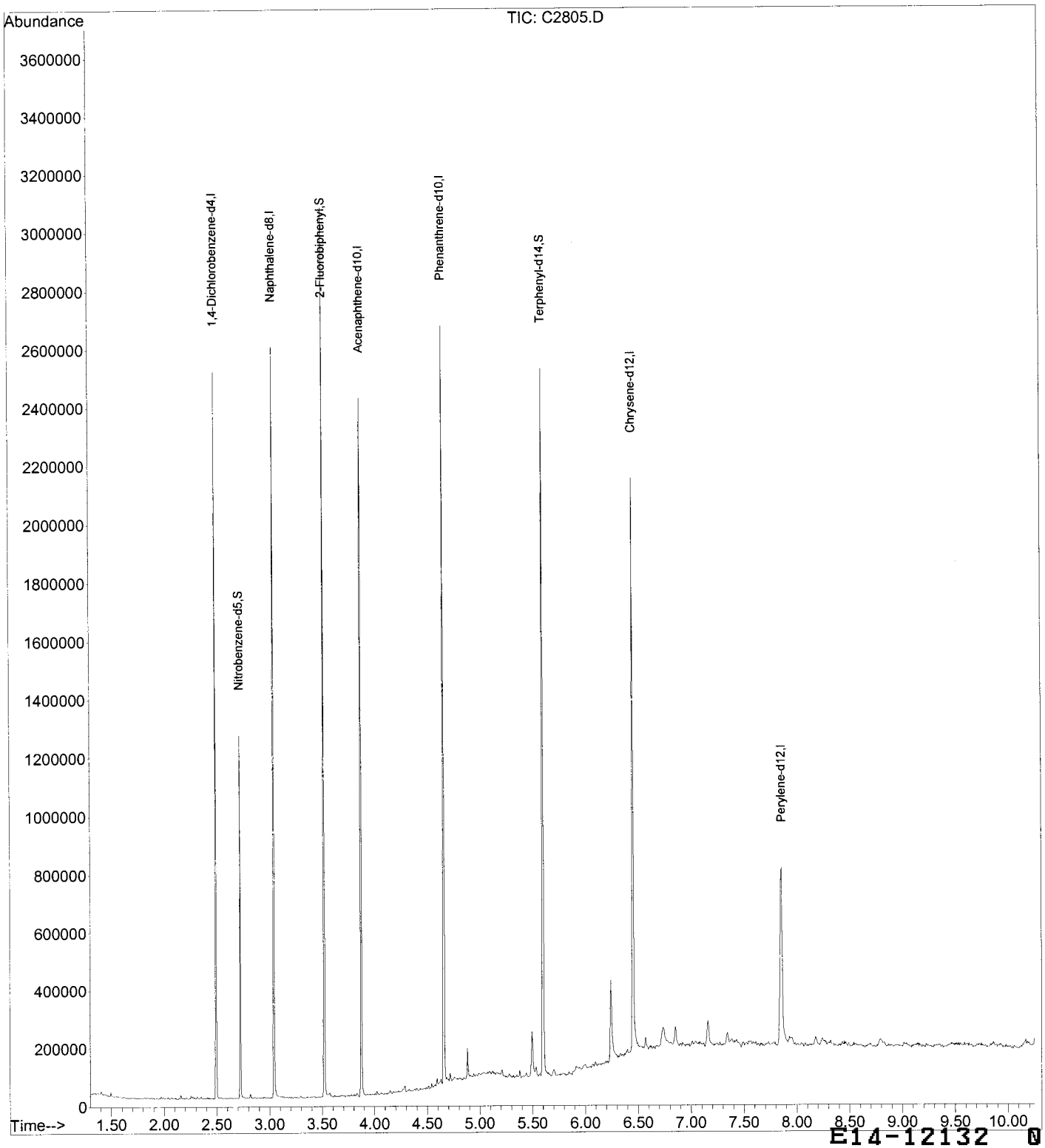
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\C_Dec-14\12-29-14\
Data File : C2805.D
Acq On : 29 Dec 2014 13:41
Operator : EDM
Sample : B-492_(5,E14-12132-004,S,15.76g,16.4,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Dec 30 07:29:34 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2806.D
Acq On : 29 Dec 2014 13:56
Operator : EDM
Sample : B-490_(4,E14-12132-005,S,15.57g,15.4,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 30 07:30:24 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	174465	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	646494	40.00	UG	0.00
43) Acenaphthene-d10	3.87	164	392514	40.00	UG	0.00
66) Phenanthrene-d10	4.65	188	613792	40.00	UG	0.00
82) Chrysene-d12	6.45	240	567936	40.00	UG	0.02
92) Perylene-d12	7.84	264	347231	40.00	UG	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	165952	31.02	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	62.04%		
47) 2-Fluorobiphenyl	3.52	172	480349	33.56	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery =	67.12%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.59	244	701658	41.83	UG	0.02
Spiked Amount 50.000	Range 19 - 118		Recovery =	83.66%		

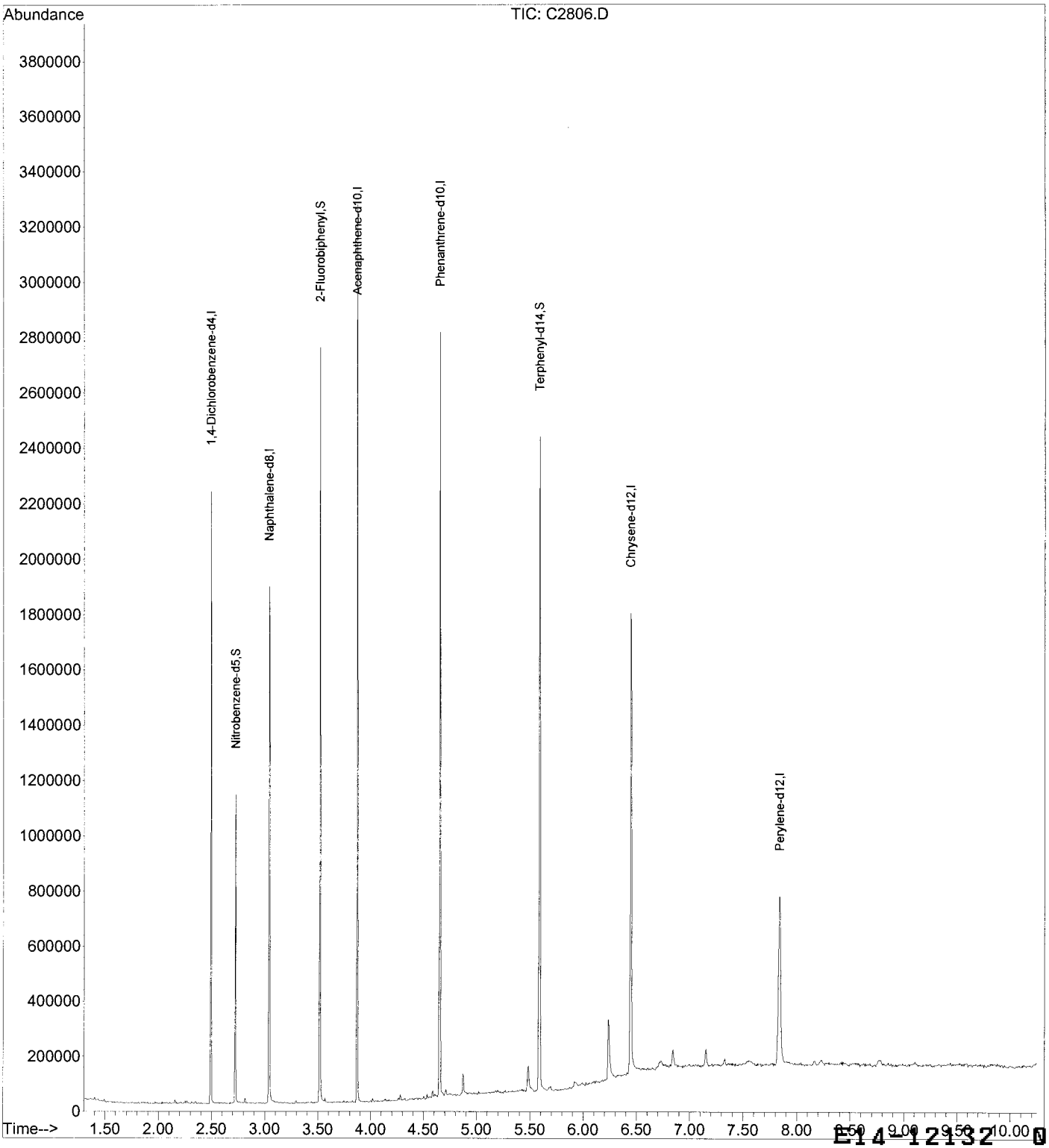
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2806.D
Acq On : 29 Dec 2014 13:56
Operator : EDM
Sample : B-490_(4,E14-12132-005,S,15.57g,15.4,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Dec 30 07:30:24 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0086

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2807.D
Acq On : 29 Dec 2014 14:12
Operator : EDM
Sample : B-490_(5,E14-12132-006,S,15.13g,13.8,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 30 07:31:04 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	174657	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	648372	40.00	UG	-0.01
43) Acenaphthene-d10	3.87	164	385863	40.00	UG	0.00
66) Phenanthrene-d10	4.64	188	607322	40.00	UG	0.00
82) Chrysene-d12	6.43	240	518748	40.00	UG	0.00
92) Perylene-d12	7.83	264	308021	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	166926	31.11	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	62.22%		
47) 2-Fluorobiphenyl	3.51	172	484074	34.41	UG	-0.01
Spiked Amount 50.000	Range 34 - 96		Recovery =	68.82%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.56	244	653473	42.65	UG	0.00
Spiked Amount 50.000	Range 19 - 118		Recovery =	85.30%		

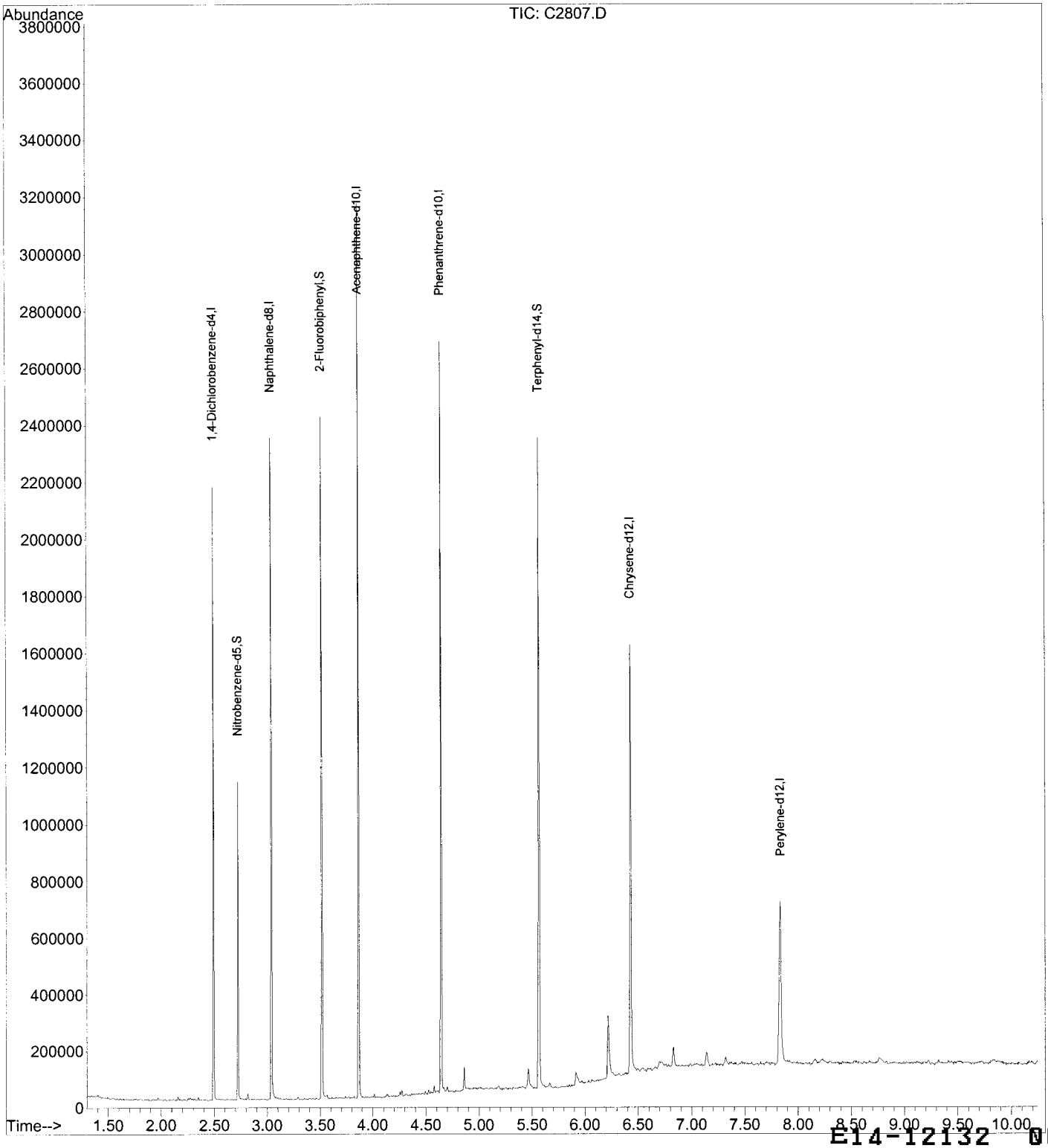
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2807.D
Acq On : 29 Dec 2014 14:12
Operator : EDM
Sample : B-490_(5,E14-12132-006,S,15.13g,13.8,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Dec 30 07:31:04 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0088

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2808.D
Acq On : 29 Dec 2014 14:27
Operator : EDM
Sample : B-490_(1,E14-12132-007,S,15.32g,16.7,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 30 07:32:22 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

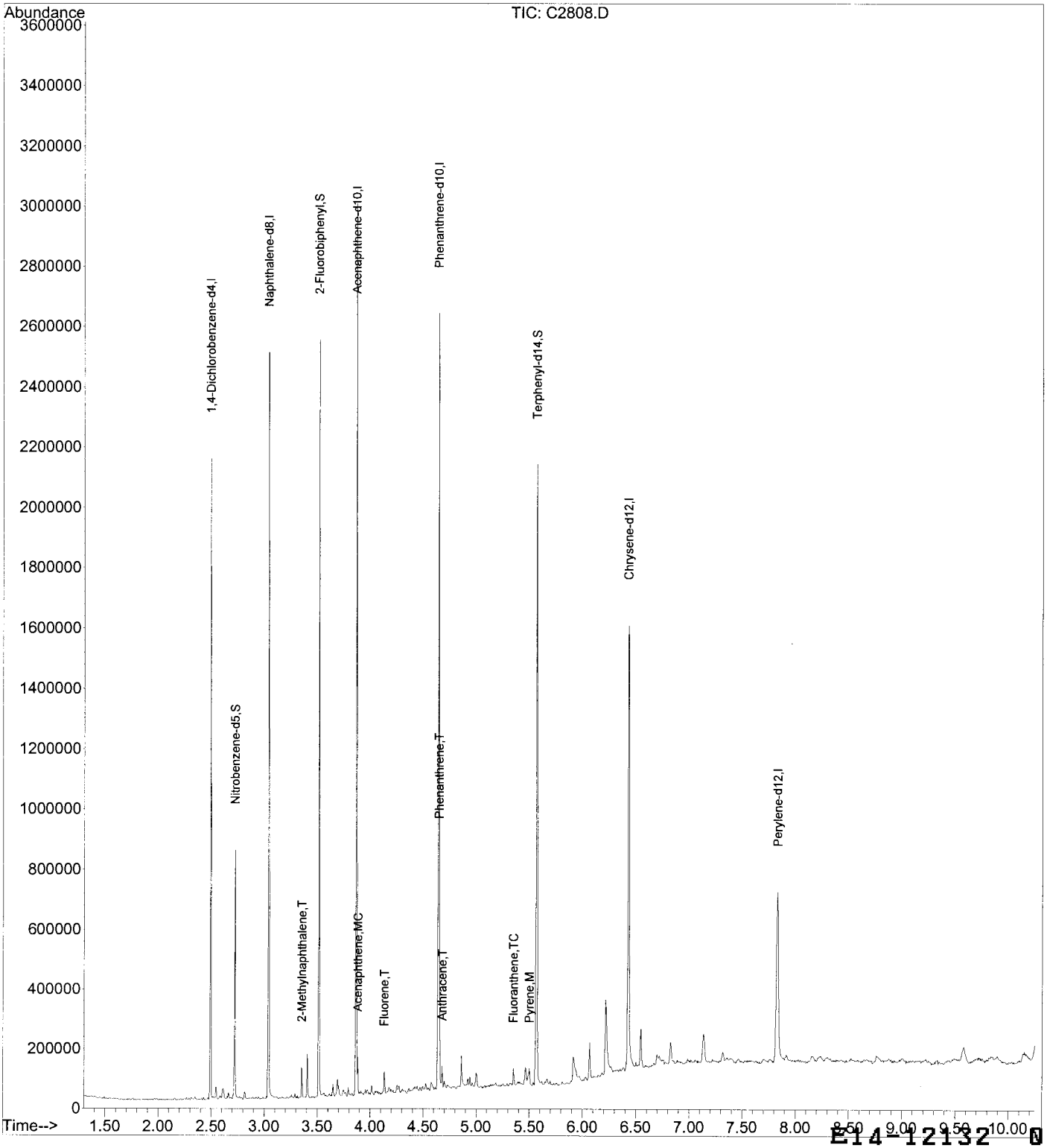
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	168177	40.00	UG		0.00
23) Naphthalene-d8	3.04	136	626694	40.00	UG		-0.01
43) Acenaphthene-d10	3.87	164	371931	40.00	UG		0.00
66) Phenanthrene-d10	4.64	188	560845	40.00	UG		0.00
82) Chrysene-d12	6.43	240	511832	40.00	UG		0.00
92) Perylene-d12	7.83	264	311955	40.00	UG		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0d	0.00	UG		
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG		
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#			
24) Nitrobenzene-d5	2.72	82	125013	24.11	UG		0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	48.22%			
47) 2-Fluorobiphenyl	3.51	172	420226	30.99	UG		-0.01
Spiked Amount 50.000	Range 34 - 96		Recovery =	61.98%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#			
84) Terphenyl-d14	5.56	244	605386	40.05	UG		0.00
Spiked Amount 50.000	Range 19 - 118		Recovery =	80.10%			
Target Compounds							Qvalue
41) 2-Methylnaphthalene	3.35	142	16685	1.50	UG		97
55) Acenaphthene	3.88	153	15685	1.46	UG		93
61) Fluorene	4.13	166	11809	0.97	UG	#	99
75) Phenanthrene	4.65	178	59294m	3.72	UG		
76) Anthracene	4.68	178	17874	1.12	UG		96
79) Fluoranthene	5.35	202	13861	0.92	UG	#	81
83) Pyrene	5.50	202	15360	0.89	UG	#	77

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2808.D
Acq On : 29 Dec 2014 14:27
Operator : EDM
Sample : B-490_(1,E14-12132-007,S,15.32g,16.7,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 30 07:32:22 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0090

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2809.D
Acq On : 29 Dec 2014 14:43
Operator : EDM
Sample : B-490_(1,E14-12132-008,S,15.72g,15.8,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 30 07:33:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

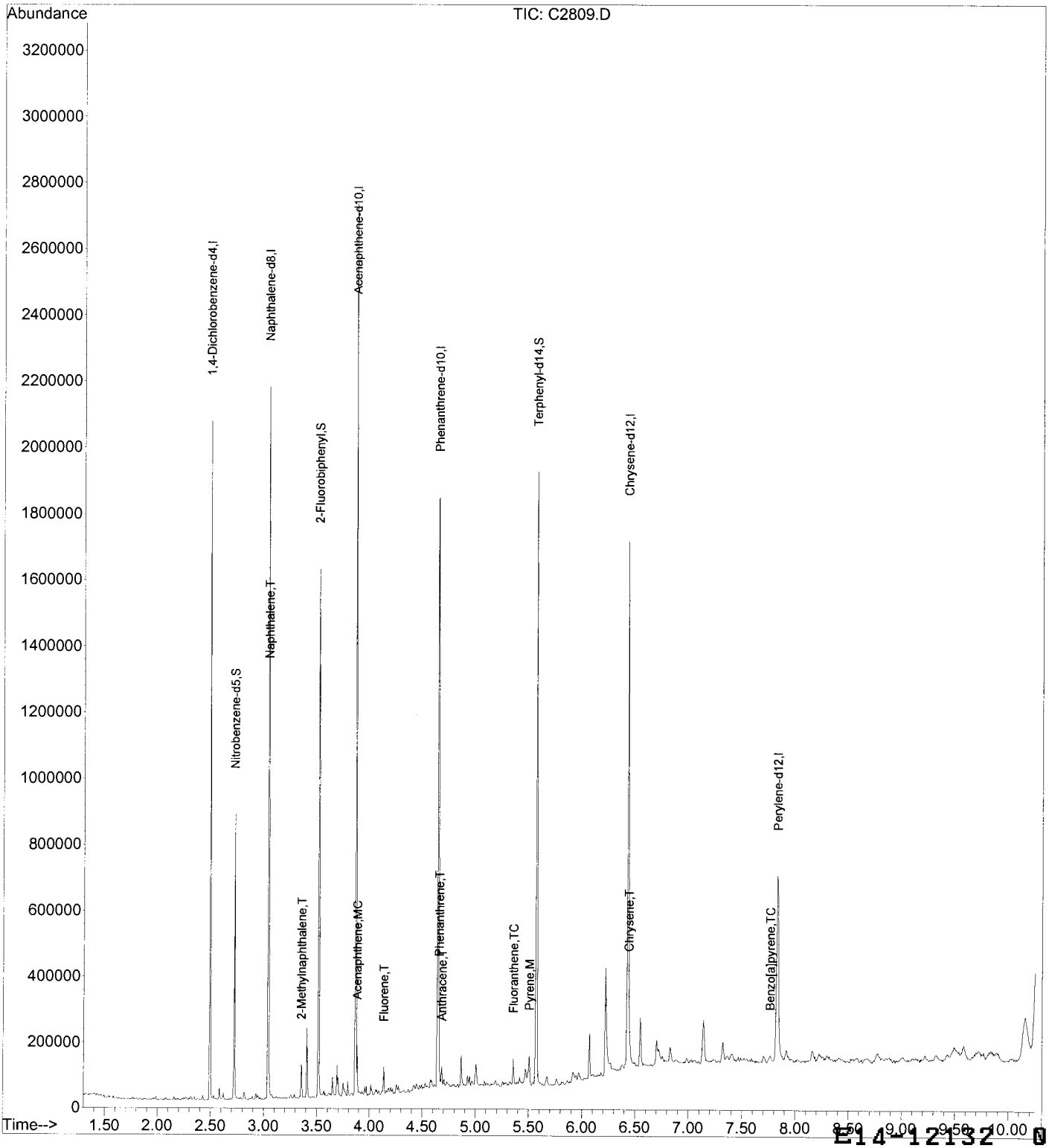
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	165401	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	604723	40.00	UG	-0.01
43) Acenaphthene-d10	3.87	164	350444	40.00	UG	0.00
66) Phenanthrene-d10	4.65	188	537873	40.00	UG	0.00
82) Chrysene-d12	6.43	240	495985	40.00	UG	0.00
92) Perylene-d12	7.83	264	311260	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	129236	25.82	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	51.64%		
47) 2-Fluorobiphenyl	3.51	172	360370	28.20	UG	-0.01
Spiked Amount 50.000	Range 34 - 96		Recovery =	56.40%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.57	244	543337	37.09	UG	0.00
Spiked Amount 50.000	Range 19 - 118		Recovery =	74.18%		
Target Compounds						Qvalue
34) Naphthalene	3.05	128	13833	0.83	UG	# 59
41) 2-Methylnaphthalene	3.36	142	22160	2.06	UG	100
55) Acenaphthene	3.88	153	20620	2.03	UG	89
61) Fluorene	4.14	166	12467	1.09	UG	# 92
75) Phenanthrene	4.66	178	57659m	3.77	UG	
76) Anthracene	4.68	178	16703	1.10	UG	97
79) Fluoranthene	5.36	202	21286	1.47	UG	# 89
83) Pyrene	5.51	202	26549	1.58	UG	# 84
89) Chrysene	6.45	228	10086	0.77	UG	# 76
96) Benzo[a]pyrene	7.77	252	8291	0.65	UG	# 89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2809.D
Acq On : 29 Dec 2014 14:43
Operator : EDM
Sample : B-490_(1,E14-12132-008,S,15.72g,15.8,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 30 07:33:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0092

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2810.D
Acq On : 29 Dec 2014 14:59
Operator : EDM
Sample : B-487_(4,E14-12132-009,S,15.29g,17.2,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 30 07:34:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	175356	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	643622	40.00	UG	-0.01
43) Acenaphthene-d10	3.87	164	385223	40.00	UG	0.00
66) Phenanthrene-d10	4.64	188	588537	40.00	UG	0.00
82) Chrysene-d12	6.42	240	544810	40.00	UG	0.00
92) Perylene-d12	7.84	264	332006	40.00	UG	0.01

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	156612	29.40	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	58.80%		
47) 2-Fluorobiphenyl	3.51	172	442488	31.50	UG	-0.01
Spiked Amount 50.000	Range 34 - 96		Recovery =	63.00%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.56	244	662872	41.20	UG	-0.01
Spiked Amount 50.000	Range 19 - 118		Recovery =	82.40%		

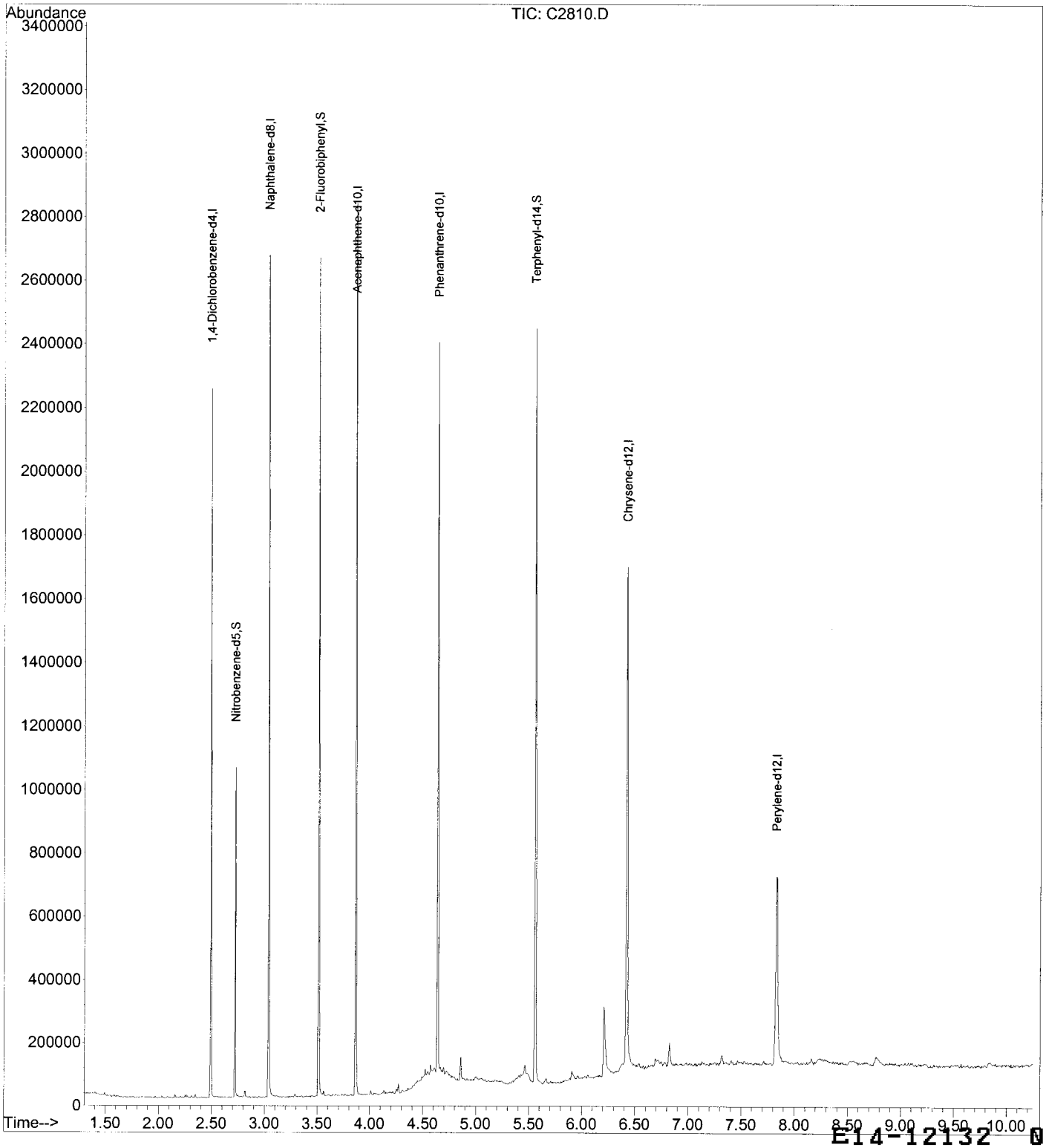
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2810.D
Acq On : 29 Dec 2014 14:59
Operator : EDM
Sample : B-487_(4,E14-12132-009,S,15.29g,17.2,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 30 07:34:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2811.D
Acq On : 29 Dec 2014 15:15
Operator : EDM
Sample : B-486_(4,E14-12132-010,S,15.49g,11.7,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 30 07:35:02 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	162859	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	586098	40.00	UG	-0.01
43) Acenaphthene-d10	3.87	164	355696	40.00	UG	0.00
66) Phenanthrene-d10	4.64	188	550538	40.00	UG	-0.01
82) Chrysene-d12	6.42	240	516847	40.00	UG	0.00
92) Perylene-d12	7.83	264	315682	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	167646	34.56	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	69.12%		
47) 2-Fluorobiphenyl	3.51	172	482089	37.17	UG	-0.01
Spiked Amount 50.000	Range 34 - 96		Recovery =	74.34%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.56	244	681507	44.65	UG	0.00
Spiked Amount 50.000	Range 19 - 118		Recovery =	89.30%		

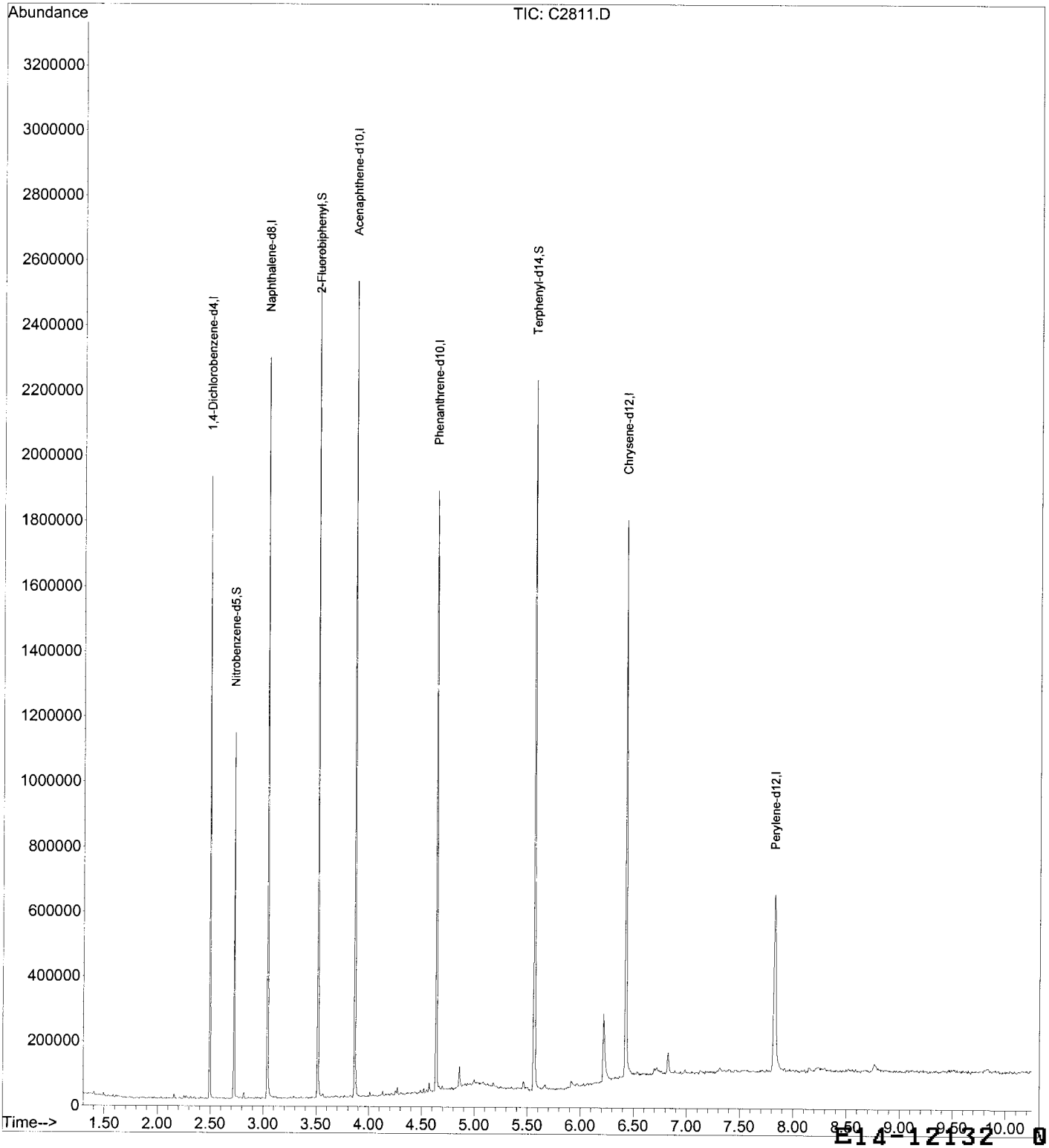
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2811.D
Acq On : 29 Dec 2014 15:15
Operator : EDM
Sample : B-486_(4,E14-12132-010,S,15.49g,11.7,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 30 07:35:02 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2812.D
Acq On : 29 Dec 2014 15:30
Operator : EDM
Sample : B-486_(7,E14-12132-011,S,15.79g,37.1,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 30 07:38:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

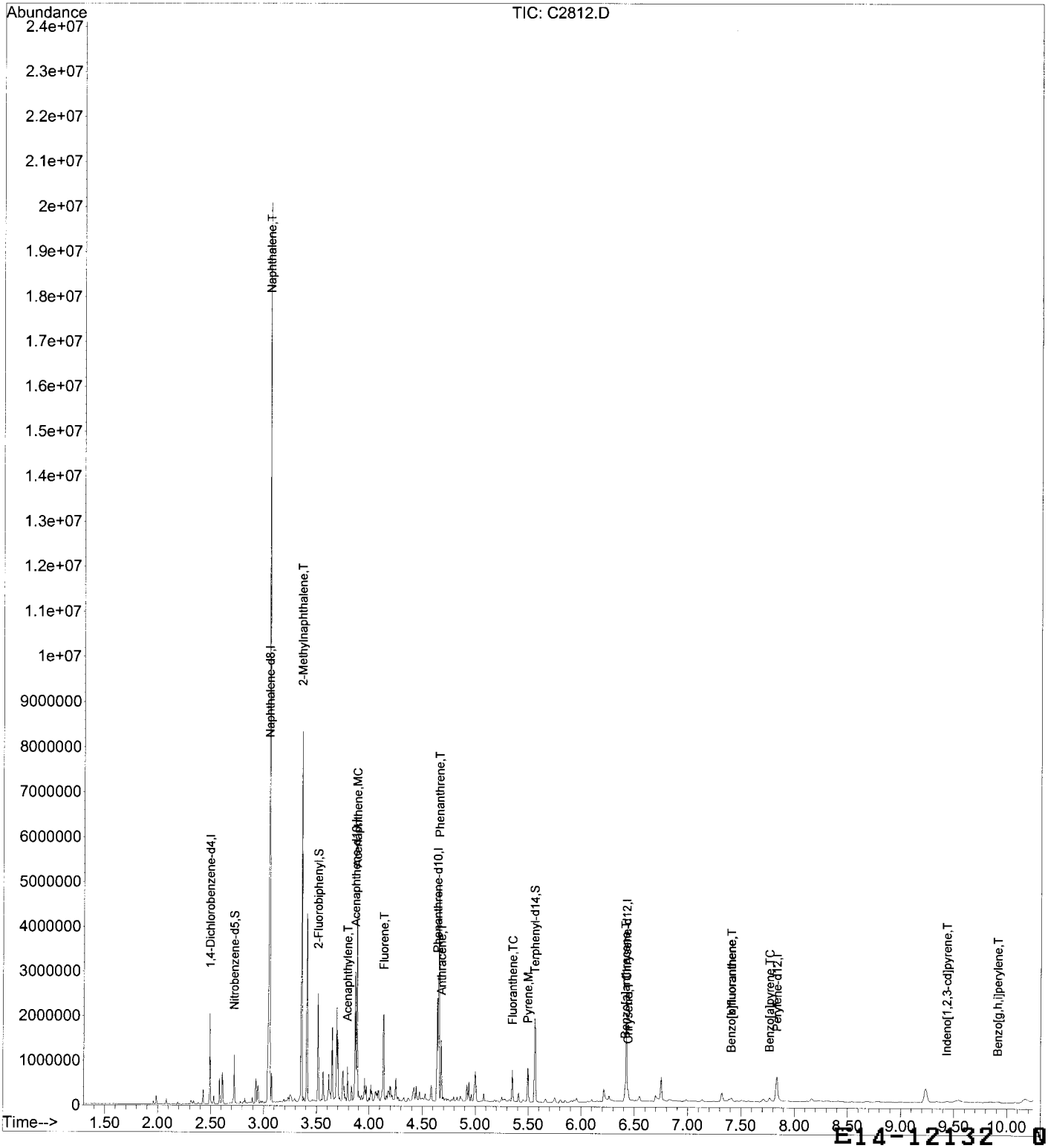
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	161556	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	592468	40.00	UG	0.00
43) Acenaphthene-d10	3.87	164	355569	40.00	UG	0.00
66) Phenanthrene-d10	4.64	188	550333	40.00	UG	0.00
82) Chrysene-d12	6.42	240	504526	40.00	UG	0.00
92) Perylene-d12	7.84	264	306631	40.00	UG	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	155560	31.73	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	63.46%		
47) 2-Fluorobiphenyl	3.51	172	452230	34.88	UG	-0.01
Spiked Amount 50.000	Range 34 - 96		Recovery =	69.76%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.56	244	626950	42.07	UG	0.00
Spiked Amount 50.000	Range 19 - 118		Recovery =	84.14%		
Target Compounds						Qvalue
34) Naphthalene	3.05	128	4181768	257.06	UG	# 58
41) 2-Methylnaphthalene	3.36	142	1355949	128.89	UG	99
53) Acenaphthylene	3.79	152	35563	2.21	UG	# 66
55) Acenaphthene	3.88	153	580062	56.30	UG	93
61) Fluorene	4.14	166	438716	37.65	UG	97
75) Phenanthrene	4.66	178	1361385m	86.98	UG	
76) Anthracene	4.68	178	343406	22.01	UG	98
79) Fluoranthene	5.35	202	194182	13.12	UG	# 93
83) Pyrene	5.50	202	259259	15.17	UG	# 88
88) Benzo[a]anthracene	6.41	228	59742	4.32	UG	94
89) Chrysene	6.44	228	65682m	4.95	UG	
94) Benzo[b]fluoranthene	7.40	252	30949m	2.26	UG	
95) Benzo[k]fluoranthene	7.41	252	28719m	2.12	UG	
96) Benzo[a]pyrene	7.77	252	47659	3.77	UG	# 93
97) Indeno[1,2,3-cd]pyrene	9.44	276	22207	1.38	UG	# 50
99) Benzo[g,h,i]perylene	9.92	276	19804	1.48	UG	# 84

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2812.D
Acq On : 29 Dec 2014 15:30
Operator : EDM
Sample : B-486_(7,E14-12132-011,S,15.79g,37.1,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 30 07:38:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0098

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2822.D
Acq On : 29 Dec 2014 18:07
Operator : EDM
Sample : B-486_(7,E14-12132-011DL,S,15.79g,37.1,0.5
Misc : 141222-03,12/22/14,12/18/14,2
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 30 08:14:53 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

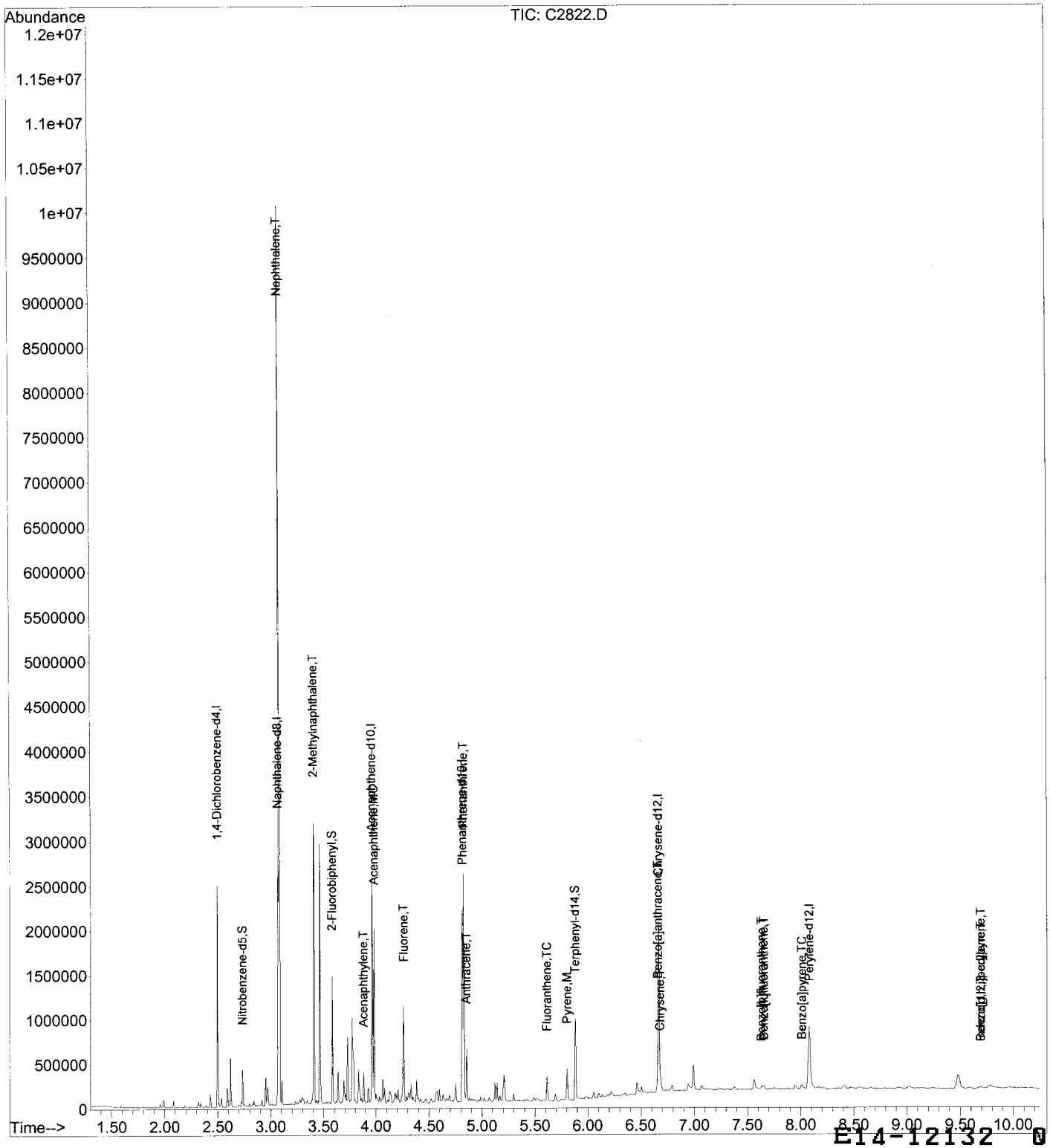
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.50	152	202413	40.00	UG	0.00
23) Naphthalene-d8	3.07	136	725208	40.00	UG	0.02
43) Acenaphthene-d10	3.96	164	426744	40.00	UG	0.09
66) Phenanthrene-d10	4.82	188	638990m	40.00	UG	0.17
82) Chrysene-d12	6.67	240	626078m	40.00	UG	0.23
92) Perylene-d12	8.08	264	394365	40.00	UG	0.26
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.73	82	78452	13.07	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	26.14%		
47) 2-Fluorobiphenyl	3.58	172	246073	15.82	UG	0.06
Spiked Amount 50.000	Range 34 - 96		Recovery =	31.64%#		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.89	244	316864m	17.14	UG	0.32
Spiked Amount 50.000	Range 19 - 118		Recovery =	34.28%		
Target Compounds						Qvalue
34) Naphthalene	3.08	128	2771101	139.16	UG	# 54
41) 2-Methylnaphthalene	3.41	142	698552	54.25	UG	100
53) Acenaphthylene	3.89	152	20416	1.06	UG	# 70
55) Acenaphthene	3.98	153	308796	24.97	UG	92
61) Fluorene	4.26	166	222296	15.90	UG	98
75) Phenanthrene	4.83	178	658319	36.23	UG	98
76) Anthracene	4.85	178	172111m	9.50	UG	
79) Fluoranthene	5.61	202	99597m	5.80	UG	
83) Pyrene	5.81	202	134697m	6.35	UG	
88) Benzo[a]anthracene	6.65	228	34719	2.02	UG	99
89) Chrysene	6.69	228	35130m	2.13	UG	
94) Benzo[b]fluoranthene	7.63	252	14713m	0.83	UG	
95) Benzo[k]fluoranthene	7.65	252	20378m	1.17	UG	
96) Benzo[a]pyrene	8.02	252	26258	1.61	UG	# 90
97) Indeno[1,2,3-cd]pyrene	9.69	276	13416m	0.65	UG	
99) Benzo[g,h,i]perylene	9.69	276	12974m	0.75	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2822.D
Acq On : 29 Dec 2014 18:07
Operator : EDM
Sample : B-486_(7,E14-12132-011DL,S,15.79g,37.1,0.5
Misc : 141222-03,12/22/14,12/18/14,2
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Dec 30 08:14:53 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2813.D
Acq On : 29 Dec 2014 15:46
Operator : EDM
Sample : B-488_(4,E14-12132-012,S,15.56g,16.3,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 30 07:38:56 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	179330	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	646878	40.00	UG	-0.01
43) Acenaphthene-d10	3.87	164	390959	40.00	UG	0.00
66) Phenanthrene-d10	4.65	188	610675	40.00	UG	0.00
82) Chrysene-d12	6.43	240	530076	40.00	UG	0.00
92) Perylene-d12	7.83	264	307871	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	175196	32.73	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	65.46%		
47) 2-Fluorobiphenyl	3.52	172	524192	36.77	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery =	73.54%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.57	244	733440	46.85	UG	0.00
Spiked Amount 50.000	Range 19 - 118		Recovery =	93.70%		

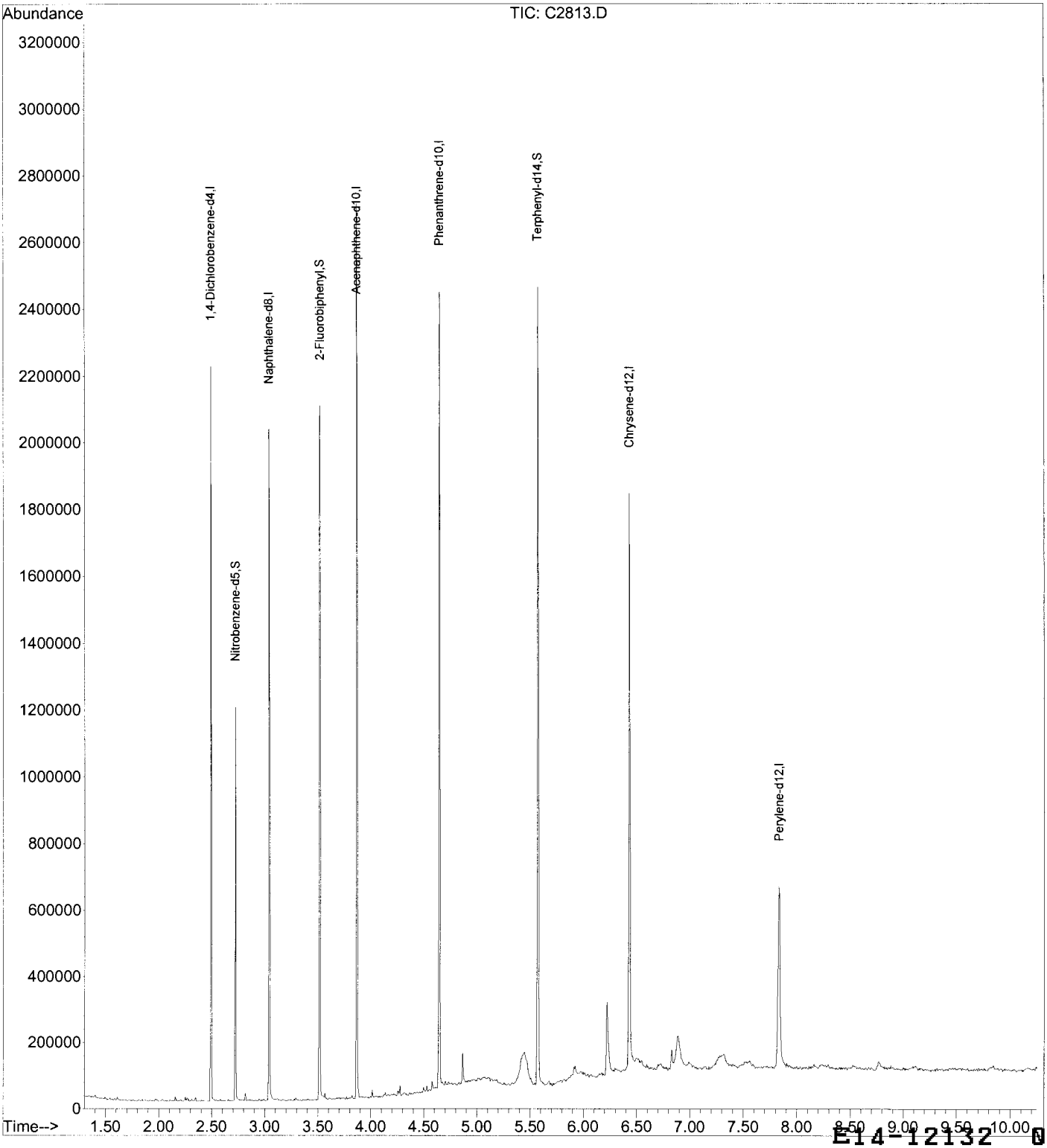
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2813.D
Acq On : 29 Dec 2014 15:46
Operator : EDM
Sample : B-488_(4,E14-12132-012,S,15.56g,16.3,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Dec 30 07:38:56 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0102

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2814.D
Acq On : 29 Dec 2014 16:01
Operator : EDM
Sample : B-489_(4,E14-12132-013,S,15.34g,13.2,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 30 07:39:42 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	177009	40.00	UG	0.00
23) Naphthalene-d8	3.04	136	647870	40.00	UG	-0.01
43) Acenaphthene-d10	3.87	164	386308	40.00	UG	0.00
66) Phenanthrene-d10	4.64	188	587741	40.00	UG	0.00
82) Chrysene-d12	6.42	240	534261	40.00	UG	0.00
92) Perylene-d12	7.83	264	320831	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.72	82	163514	30.50	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	61.00%		
47) 2-Fluorobiphenyl	3.51	172	482144	34.23	UG	-0.01
Spiked Amount 50.000	Range 34 - 96		Recovery =	68.46%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.56	244	681563	43.19	UG	0.00
Spiked Amount 50.000	Range 19 - 118		Recovery =	86.38%		

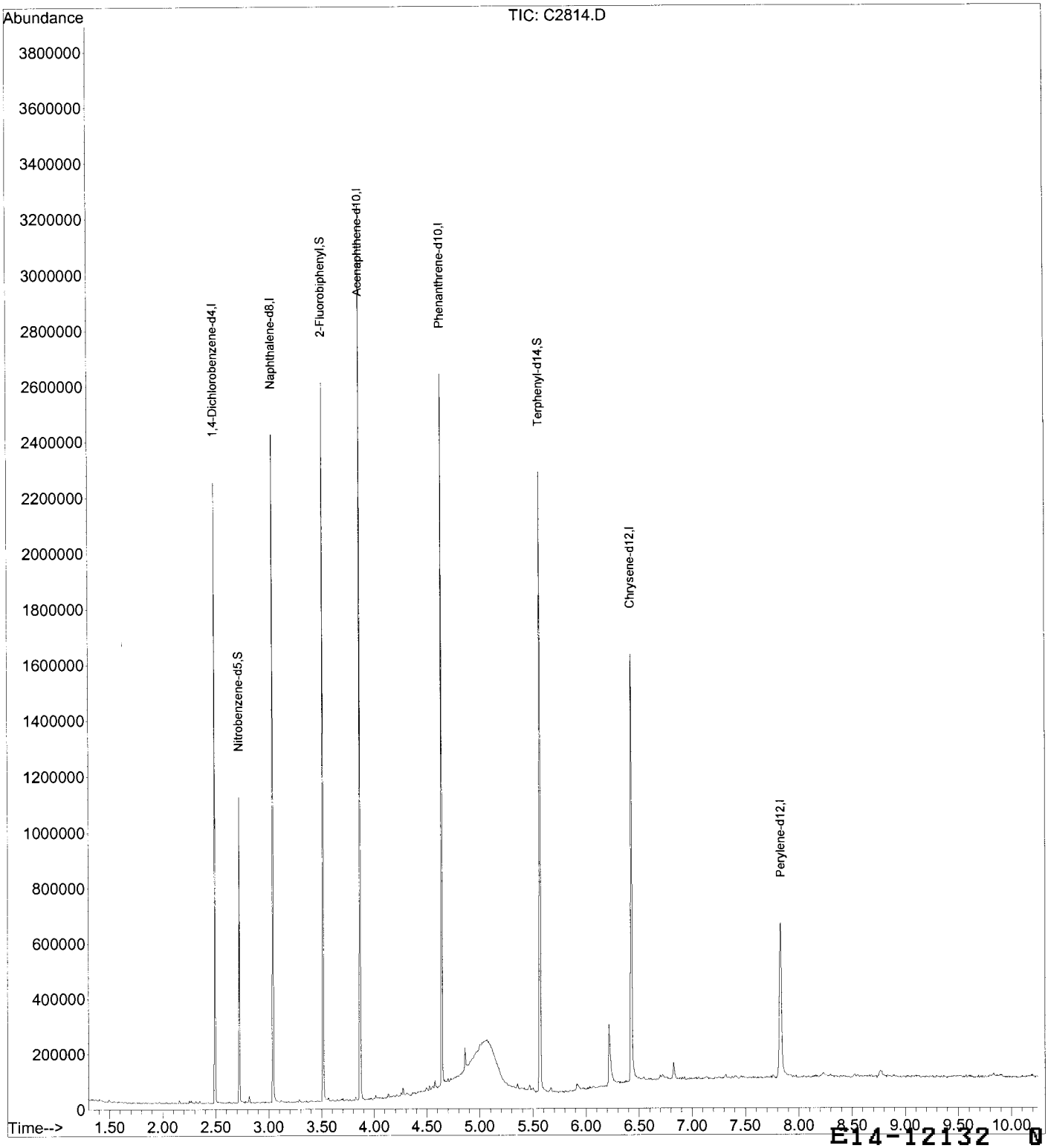
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\12-29-14\
Data File : C2814.D
Acq On : 29 Dec 2014 16:01
Operator : EDM
Sample : B-489_(4,E14-12132-013,S,15.34g,13.2,0.5
Misc : 141222-03,12/22/14,12/18/14,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Dec 30 07:39:42 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0104

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\12-23-14\
Data File : A3015.D
Acq On : 23 Dec 2014 15:32
Operator : DANA
Sample : FB-12162,E14-12132-014,A,1000ml,100,1
Misc : 141222-02,12/22/14,12/18/14,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Dec 29 07:29:32 2014
Quant Method : C:\MSDCHEM\1\METHODS\AW1514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Dec 16 12:14:32 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.396	152	52044	40.00	UG	0.00
23) Naphthalene-d8	4.150	136	216545	40.00	UG	0.00
43) Acenaphthene-d10	5.166	164	128992	40.00	UG	-0.01
66) Phenanthrene-d10	6.011	188	206131	40.00	UG	-0.02
82) Chrysene-d12	7.616	240	169351	40.00	UG	-0.09
92) Perylene-d12	8.846	264	109966	40.00	UG	-0.11

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.722	82	55542	24.56	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 49.12%			
47) 2-Fluorobiphenyl	4.765	172	137784	31.04	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 62.08%			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	6.931	244	176251	38.39	UG	-0.05
Spiked Amount 50.000	Range 33 - 113		Recovery = 76.78%			

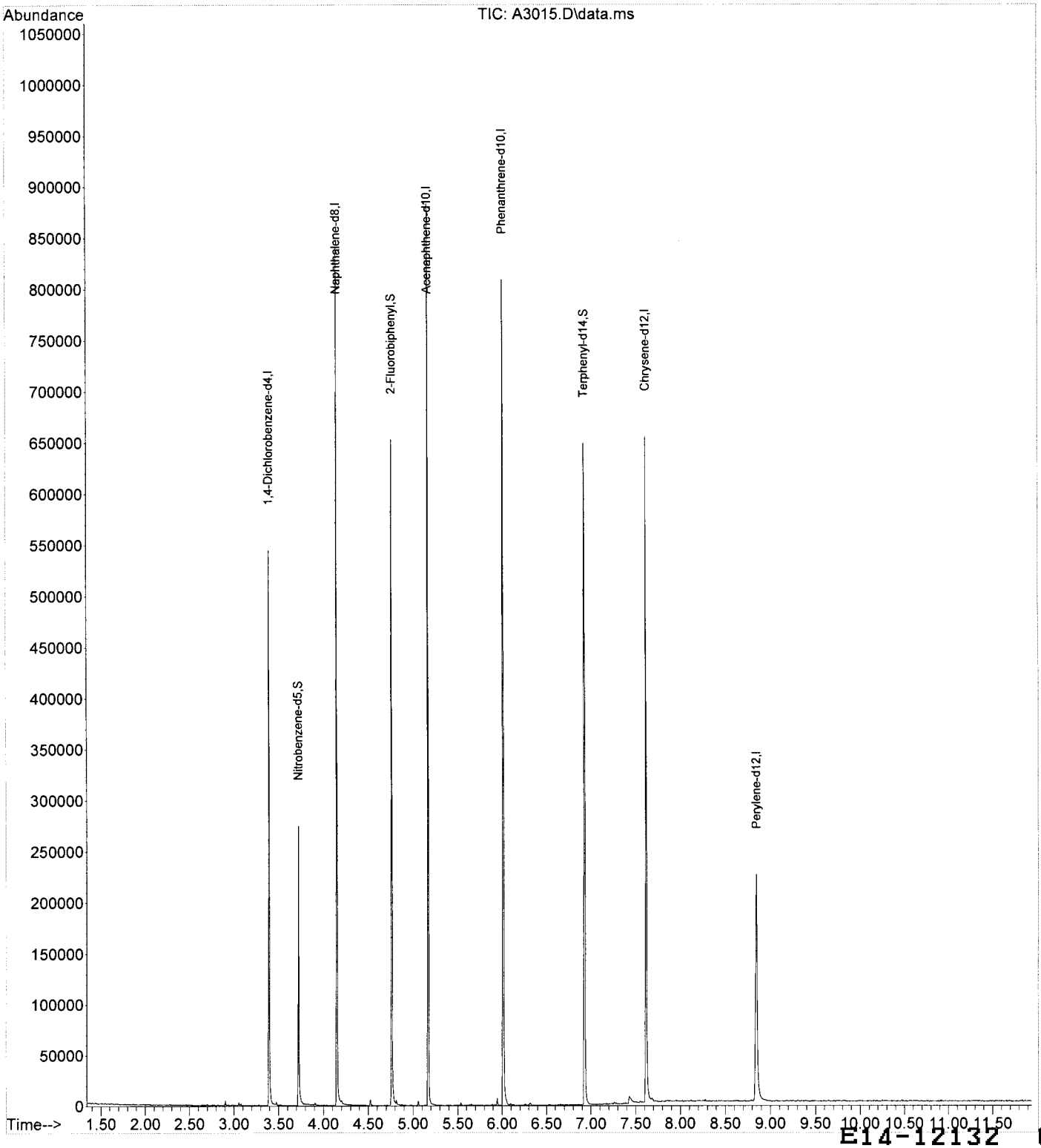
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\12-23-14\
Data File : A3015.D
Acq On : 23 Dec 2014 15:32
Operator : DANA
Sample : FB-12162,E14-12132-014,A,1000ml,100,1
Misc : 141222-02,12/22/14,12/18/14,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Dec 29 07:29:32 2014
Quant Method : C:\MSDCHEM\1\METHODS\AW1514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Dec 16 12:14:32 2014
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA141222-02
Client ID: .
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/23/2014
Data file: A3000.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		1.00	0.403
Pyridine	ND		1.00	0.236
Benzaldehyde	ND		1.00	0.295
Phenol	ND		1.00	0.450
Aniline	ND		1.00	0.236
Bis(2-chloroethyl) ether	ND		1.00	0.428
2-Chlorophenol	ND		1.00	0.284
1,3-Dichlorobenzene	ND		1.00	0.366
1,4-Dichlorobenzene	ND		1.00	0.427
Benzyl alcohol	ND		1.00	0.389
1,2-Dichlorobenzene	ND		1.00	0.306
2-Methylphenol	ND		1.00	0.425
Bis(2-chloroisopropyl) ether	ND		1.00	0.438
4-Methylphenol **	ND		1.00	0.450
N-Nitrosodi-n-propylamine	ND		1.00	0.331
Acetophenone	ND		1.00	0.460
3-Methylphenol	ND		1.00	0.450
Hexachloroethane	ND		1.00	0.372
Nitrobenzene	ND		1.00	0.265
Isophorone	ND		1.00	0.263
2-Nitrophenol	ND		1.00	0.311
2,4-Dimethylphenol	ND		1.00	0.323
Bis(2-chloroethoxy) methane	ND		1.00	0.259
Benzoic acid	ND		1.00	0.263
2,4-Dimethylaniline	ND		1.00	0.217
2,4-Dichlorophenol	ND		1.00	0.457
1,2,4-Trichlorobenzene	ND		1.00	0.319
Naphthalene	ND		1.00	0.273
4-Chloroaniline	ND		1.00	0.305
4-Aminotoluene	ND		1.00	0.215
Hexachlorobutadiene	ND		1.00	0.378
Caprolactam	ND		1.00	0.513
2-Aminotoluene	ND		1.00	0.249
4-Chloro-3-methylphenol	ND		1.00	0.256
2-Methylnaphthalene	ND		1.00	0.433
Hexachlorocyclopentadiene	ND		10.0	0.223
2,4,6-Trichlorophenol	ND		1.00	0.223
2,4,5-Trichlorophenol	ND		1.00	0.218
1,1'-Biphenyl	ND		1.00	0.268
2-Chloronaphthalene	ND		1.00	0.223
2-Nitroaniline	ND		1.00	0.243
Dimethyl phthalate	ND		1.00	0.329

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA141222-02
Client ID: .
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/23/2014
Data file: A3000.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		1.00	0.391
Acenaphthylene	ND		1.00	0.316
3-Nitroaniline	ND		1.00	0.237
Acenaphthene	ND		1.00	0.261
2,4-Dinitrophenol	ND		10.0	0.318
4-Nitrophenol	ND		1.00	0.582
2,4-Dinitrotoluene	ND		1.00	0.230
Dibenzofuran	ND		1.00	0.275
Diethyl phthalate	ND		1.00	0.449
Fluorene	ND		1.00	0.447
4-Chlorophenyl phenyl ether	ND		1.00	0.476
4-Nitroaniline	ND		1.00	0.331
1,2,4,5-Tetrachlorobenzene	ND		1.00	0.218
2,3,4,6-Tetrachlorophenol	ND		1.00	0.224
4,6-Dinitro-2-methylphenol	ND		10.0	0.280
N-Nitrosodiphenylamine	ND		1.00	0.310
1,2-Diphenylhydrazine	ND		1.00	0.366
4-Bromophenyl phenyl ether	ND		1.00	0.481
Hexachlorobenzene	ND		1.00	0.357
Atrazine	ND		1.00	0.418
Pentachlorophenol	ND		1.00	0.223
Phenanthrene	ND		1.00	0.372
Anthracene	ND		1.00	0.322
Carbazole	ND		1.00	0.276
Di-n-butyl phthalate	ND		1.00	0.264
Fluoranthene	ND		1.00	0.362
Benzidine	ND		1.00	0.265
Pyrene	ND		1.00	0.308
3,3'-Dimethylbenzidine	ND		1.00	0.233
Butyl benzyl phthalate	ND		1.00	0.304
3,3'-Dichlorobenzidine	ND		1.00	0.285
Benzo[a]anthracene	ND		1.00	0.243
Chrysene	ND		1.00	0.243
Bis(2-ethylhexyl) phthalate	ND		1.00	0.304
Di-n-octyl phthalate	ND		1.00	0.507
Benzo[b]fluoranthene	ND		1.00	0.716
Benzo[k]fluoranthene	ND		1.00	0.683
Benzo[a]pyrene	ND		1.00	0.381
Indeno[1,2,3-cd]pyrene	ND		1.00	0.509
Dibenz[a,h]anthracene	ND		1.00	0.514
Benzo[g,h,i]perylene	ND		1.00	0.468

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4 Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\12-23-14\
Data File : A3000.D
Acq On : 23 Dec 2014 11:32
Operator : DANA
Sample : .,BLKA141222-02,A,1000ml,100,1
Misc : 141222-02,12/22/14,NA,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 23 14:35:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\AW1514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Dec 16 12:14:32 2014
Response via : Initial Calibration

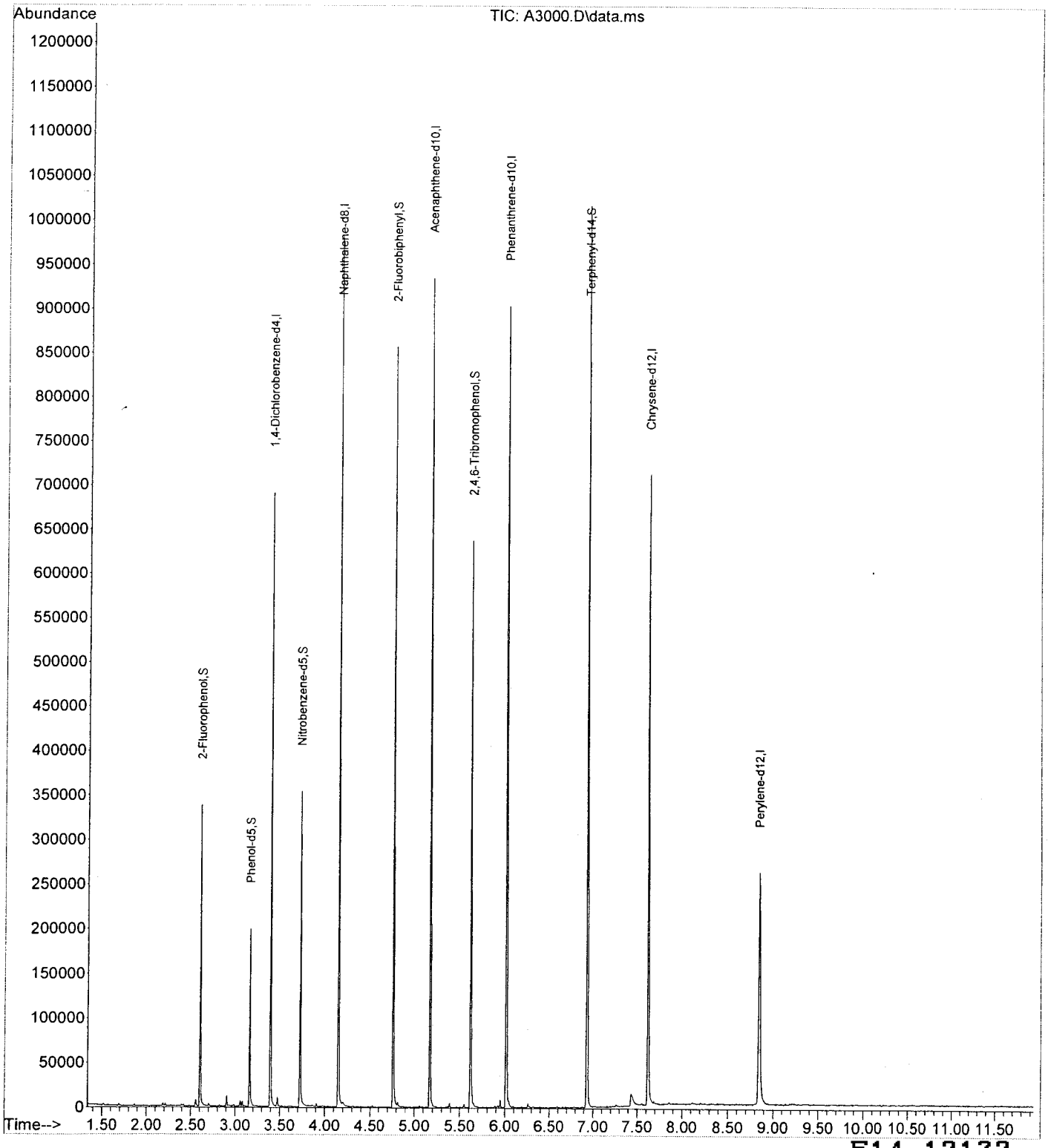
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.396	152	60148	40.00	UG	0.00
23) Naphthalene-d8	4.150	136	237904	40.00	UG	0.00
43) Acenaphthene-d10	5.166	164	144670	40.00	UG	-0.01
66) Phenanthrene-d10	6.017	188	230032	40.00	UG	-0.01
82) Chrysene-d12	7.622	240	195633	40.00	UG	-0.09
92) Perylene-d12	8.846	264	122817	40.00	UG	-0.11
System Monitoring Compounds						
4) 2-Fluorophenol	2.604	112	55114	25.79	UG	0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 25.79%			
6) Phenol-d5	3.161	99	42827	15.78	UG	0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 15.78%			
24) Nitrobenzene-d5	3.722	82	70588	28.41	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 56.82%			
47) 2-Fluorobiphenyl	4.765	172	164513	33.05	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 66.10%			
70) 2,4,6-Tribromophenol	5.621	330	49461	68.13	UG	0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 68.13%			
84) Terphenyl-d14	6.932	244	210284	39.65	UG	-0.05
Spiked Amount 50.000	Range 33 - 113		Recovery = 79.30%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\DATA\12-23-14\
Data File : A3000.D
Acq On : 23 Dec 2014 11:32
Operator : DANA
Sample : .,BLKA141222-02,A,1000ml,100,1
Misc : 141222-02,12/22/14,NA,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 23 14:35:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\AW1514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Dec 16 12:14:32 2014
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS141222-03
Client ID: .
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2798.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		0.033	0.020
Pyridine	ND		0.033	0.020
Benzaldehyde	ND		0.033	0.020
Phenol	ND		0.033	0.020
Aniline	ND		0.033	0.023
Bis(2-chloroethyl) ether	ND		0.033	0.020
2-Chlorophenol	ND		0.033	0.031
1,3-Dichlorobenzene	ND		0.033	0.020
1,4-Dichlorobenzene	ND		0.033	0.029
Benzyl alcohol	ND		0.033	0.027
1,2-Dichlorobenzene	ND		0.033	0.029
2-Methylphenol	ND		0.033	0.025
Bis(2-chloroisopropyl) ether	ND		0.033	0.022
4-Methylphenol **	ND		0.033	0.024
N-Nitrosodi-n-propylamine	ND		0.033	0.030
Acetophenone	ND		0.033	0.029
3-Methylphenol	ND		0.033	0.024
Hexachloroethane	ND		0.033	0.029
Nitrobenzene	ND		0.033	0.022
Isophorone	ND		0.033	0.033
2-Nitrophenol	ND		0.033	0.020
2,4-Dimethylphenol	ND		0.033	0.020
Bis(2-chloroethoxy) methane	ND		0.033	0.028
Benzoic acid	ND		0.033	0.025
2,4-Dimethylaniline	ND		0.033	0.020
2,4-Dichlorophenol	ND		0.033	0.025
1,2,4-Trichlorobenzene	ND		0.033	0.020
Naphthalene	ND		0.033	0.020
4-Chloroaniline	ND		0.033	0.020
4-Aminotoluene	ND		0.033	0.020
Hexachlorobutadiene	ND		0.033	0.026
Caprolactam	ND		0.033	0.020
2-Aminotoluene	ND		0.033	0.020
4-Chloro-3-methylphenol	ND		0.033	0.021
2-Methylnaphthalene	ND		0.033	0.025
Hexachlorocyclopentadiene	ND		0.033	0.020
2,4,6-Trichlorophenol	ND		0.033	0.020
2,4,5-Trichlorophenol	ND		0.033	0.020
1,1'-Biphenyl	ND		0.033	0.020
2-Chloronaphthalene	ND		0.033	0.020
2-Nitroaniline	ND		0.033	0.020
Dimethyl phthalate	ND		0.033	0.022

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS141222-03
Client ID: .
Date Received: NA
Date Extracted: 12/22/2014
Date Analyzed: 12/29/2014
Data file: C2798.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		0.033	0.020
Acenaphthylene	ND		0.033	0.020
3-Nitroaniline	ND		0.033	0.025
Acenaphthene	ND		0.033	0.031
2,4-Dinitrophenol	ND		0.033	0.020
4-Nitrophenol	ND		0.033	0.031
2,4-Dinitrotoluene	ND		0.033	0.020
Dibenzofuran	ND		0.033	0.027
Diethyl phthalate	ND		0.033	0.020
Fluorene	ND		0.033	0.020
4-Chlorophenyl phenyl ether	ND		0.033	0.020
4-Nitroaniline	ND		0.033	0.020
1,2,4,5-Tetrachlorobenzene	ND		0.033	0.020
2,3,4,6-Tetrachlorophenol	ND		0.033	0.020
4,6-Dinitro-2-methylphenol	ND		0.033	0.020
N-Nitrosodiphenylamine	ND		0.033	0.020
1,2-Diphenylhydrazine	ND		0.033	0.020
4-Bromophenyl phenyl ether	ND		0.033	0.020
Hexachlorobenzene	ND		0.033	0.020
Atrazine	ND		0.033	0.020
Pentachlorophenol	ND		0.033	0.020
Phenanthrene	ND		0.033	0.020
Anthracene	ND		0.033	0.020
Carbazole	ND		0.033	0.020
Di-n-butyl phthalate	ND		0.033	0.020
Fluoranthene	ND		0.033	0.020
Benzidine	ND		0.033	0.020
Pyrene	ND		0.033	0.020
3,3'-Dimethylbenzidine	ND		0.033	0.020
Butyl benzyl phthalate	ND		0.033	0.020
3,3'-Dichlorobenzidine	ND		0.033	0.020
Benzo[a]anthracene	ND		0.033	0.020
Chrysene	ND		0.033	0.020
Bis(2-ethylhexyl) phthalate	ND		0.033	0.020
Di-n-octyl phthalate	ND		0.033	0.020
Benzo[b]fluoranthene	ND		0.033	0.020
Benzo[k]fluoranthene	ND		0.033	0.020
Benzo[a]pyrene	ND		0.033	0.020
Indeno[1,2,3-cd]pyrene	ND		0.033	0.020
Dibenz[a,h]anthracene	ND		0.033	0.020
Benzo[g,h,i]perylene	ND		0.033	0.020

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4 Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\12-29-14\
Data File : C2798.D
Acq On : 29 Dec 2014 11:50
Operator : EDM
Sample : .,BLKS141222-03,S,15.00g,0,0.5
Misc : 141222-03,12/22/14,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 29 12:20:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.49	152	141391	40.00	UG	0.00
23) Naphthalene-d8	3.05	136	523425	40.00	UG	0.00
43) Acenaphthene-d10	3.89	164	311546	40.00	UG	0.02
66) Phenanthrene-d10	4.69	188	501026	40.00	UG	0.05
82) Chrysene-d12	6.51	240	500388	40.00	UG	0.07
92) Perylene-d12	7.90	264	307581	40.00	UG	0.07
System Monitoring Compounds						
4) 2-Fluorophenol	1.97	112	251213	56.36	UG	0.00
Spiked Amount 100.000	Range 24 - 101		Recovery = 56.36%			
6) Phenol-d5	2.31	99	303934	56.43	UG	0.00
Spiked Amount 100.000	Range 23 - 108		Recovery = 56.43%			
24) Nitrobenzene-d5	2.72	82	132508	30.59	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery = 61.18%			
47) 2-Fluorobiphenyl	3.53	172	424383	37.36	UG	0.01
Spiked Amount 50.000	Range 34 - 96		Recovery = 74.72%			
70) 2,4,6-Tribromophenol	4.31	330	180604	93.22	UG	0.04
Spiked Amount 100.000	Range 32 - 112		Recovery = 93.22%			
84) Terphenyl-d14	5.68	244	679153	45.95	UG	0.11
Spiked Amount 50.000	Range 19 - 118		Recovery = 91.90%			

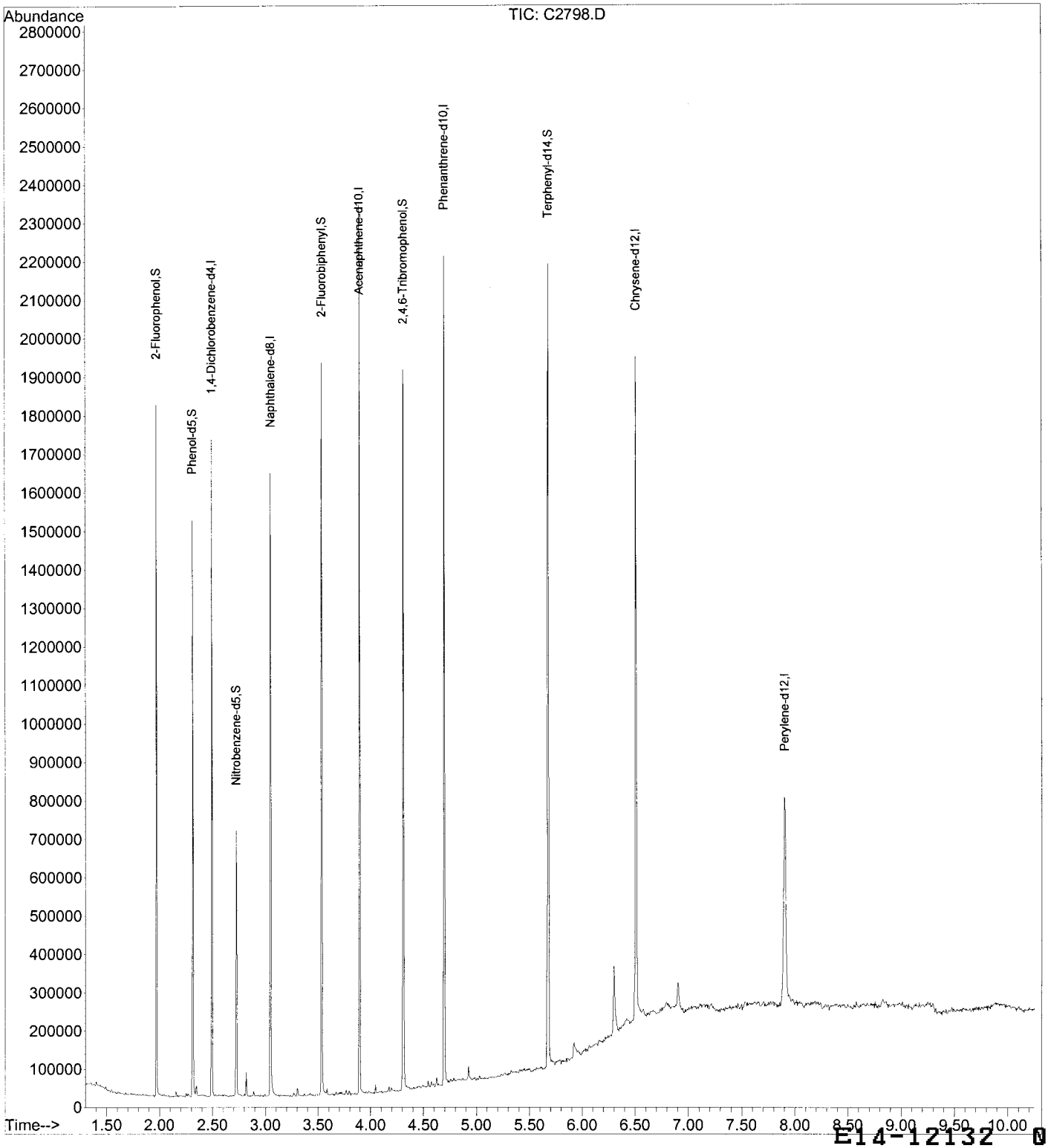
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\12-29-14\
Data File : C2798.D
Acq On : 29 Dec 2014 11:50
Operator : EDM
Sample : .,BLKS141222-03,S,15.00g,0,0.5
Misc : 141222-03,12/22/14,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 29 12:20:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS2514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Dec 18 16:39:22 2014
Response via : Initial Calibration



E14-12132 0114

SAMPLE TRACKING

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

Customer Information	Reporting Information
Company: GEI Consultants	REPORT TO:
Address: 18000 Horizon Way Suite 200 Mt. Laurel, NJ, 08054	Address: BMannino@geiconsultants.com
Telephone #: 856-608-6860	Attn: Brian Mannino
Fax #: 856-608-6864	FAX #
Project Manager: Chris Dailey	INVOICE TO:
EMAIL Address: Cdailey@geiconsultants.com	Address: Same
Project Name: SIC	Attn:
Project Location (State): NJ	PO #
Bottle Order #: B04311	Quote #
☐ "Report to"/"Invoice To" same as above	
Sampled by: Luke Cuccurullo	

Rush TAT Charge
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables
NJ, CT, PA: ☐ Results Only; ☑ Reduced; ☐ Regulatory/ Full*
NY: ☐ ASP Category A; ☐ ASP Category B*

EDDs
☑ NJ SRP
☐ NYSDEC EQuIS
☑ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected:
(Low) Med High
These samples have been previously analyzed by IAL
☐ YES ☑ NO

Turn-Around Time (TAT)
Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Std 3 week
Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED
☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015
TAT for PHC (if other than 2 weeks):

Regulatory Requirement

New Jersey	New York
☐ GWQS	☐ AWQS (TOGS Table 1)
☐ IGW	☐ GWEL (TOGS Table 5)
☐ SRS	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	OTHER Reg. Req. (specify)

COMPLETED BY IAL: ____ Field Sampling ____ Equipment Rental

Sample Matrix
DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (Specify)
OI - Oil; S - Soil; SOL - Solid; SL - Sludge; W - Wipe; B - Biphasic

SAMPLE INFORMATION

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	PAH	Sample Specific Notes:
B-491 (4-4.5)	(4-4.5)	12/16/14	0945	S	1	1	X	
B-491 (5-5.5)	(5-5.5)	12/16/14	1000	S	1	2	X	
B-492 (4-4.5)	(4-4.5)	12/16/14	1030	S	1	3	X	
B-492 (5-5.5)	(5-5.5)	12/16/14	1035	S	1	4	X	
B-490 (4.5-5)	(4.5-5)	12/16/14	1050	S	1	5	X	
B-490 (5.5-6)	(5.5-6)	12/16/14	1055	S	1	6	X	
B-490 (11.5-12)	(11.5-12)	12/16/14	1100	S	1	7	X	
B-496 (14.5-15)	(14.5-15)	12/16/14	1105	S	1	9	X	

Known Hazard: YES / NO
Describe:

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other
Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore
Preservative (use code)
Container Type (use code)

Special Instructions/QC Requirements & Comments:

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one :
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
Luke Cuccurullo	12/17/14			12/18/14	1005
	12/18/14	1820		12/19/14	18:20

FOR LAB USE ONLY
SDG #: 12192
Cooler Temp: 4 °C

IAL Rev 2/2014

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

IAL
Integrated Analytical Laboratories LLC

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

Customer Information

Company: GEI Consultants
Address: 18000 Horizon Way St 200
Mt. Laurel, NJ, 08054
Telephone #: 856-608-6860
Fax #: 856-608-6864
Project Manager: Chris Dailey
EMAIL Address: cdailey@geiconsultants.com
Project Name: SIC
Project Location (State): NJ
Bottle Order #: B04311
☐ "Report to"/"Invoice To" same as above
Sampled by: Luke Cuccurullo

Reporting Information

REPORT TO:
Address:
BManning@geiconsultants.com
Attn: Brian Manning
FAX #
INVOICE TO:
Address:
Same
Attn:
PO #
Quote #

**Rush TAT Charge

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables

NJ, CT, PA	NY
☐ Results Only	☐ ASP Category A
☑ Reduced	☐ ASP Category B*
☐ Regulatory/ Full*	

EDDs

☑ NJ SRP
☐ NYSDEC EQuIS
☑ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected:

(Low) Med High

These samples have been previously analyzed by IAL

☐ YES ☐ NO

Turn-Around Time (TAT)

Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Std 3 week
Other - call for price

Regulatory Requirement

New Jersey	New York
☐ GWQS	☐ AWQS (TOGS Table 1)
☐ IGW	☐ GWEL (TOGS Table 5)
☐ SRS	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	OTHER Req. Req. (specify)

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015
TAT for PHC (if other than 2 weeks):

Sample Matrix

DW - Drinking Water
WW - Waste Water
GW - Groundwater
SW - Surface Water
LIQ - Liquid (Specify)
OI - Oil
S - Soil
SOL - Solid
SL - Sludge
W - Wipe
B - Biphasic

COMPLETED BY IAL:
Field Sampling Equipment Rental

SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	PAH
B-487 (4.5-5)	(4.5-5)	12/16/14	1120	S	1	9	X
B-486 (4.5-5)	(4.5-5)	12/16/14	1130	S	1	10	X
B-486 (7.5-8)	(7.5-8)	12/16/14	1135	S	1	11	X
B-488 (4.5-5)	(4.5-5)	12/16/14	1200	S	1	12	X
B-489 (4.5-5)	(4.5-5)	12/16/14	1235	S	1	13	X
FB-12162014	—	12/16/14	14:20	Aq	2	14	X

Sample Specific Notes:

Known Hazard: YES / NO
Describe:

Preservative Code:
1 = None
2 = HCl
3 = HNO3
4 = MeOH
5 = NaOH
6 = H2SO4
7 = Other

Container Code:
A = Amber Glass
B = Plastic
C = Vial
D = Glass
E = EnCore
T = Terracore

Preservative (use code)
Container Type (use code)

Special Instructions/QC Requirements & Comments:

FOR LAB USE ONLY
SDG #: 12132
Cooler Temp: 4 °C

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one :
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
Luke Cuccurullo	12/17/14			12/18/14	1008
	12/18/14	1820			1820

IAL Rev 2/2014

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E14-12132: SIC

To: Brian Mannino
GEI Consultants, Inc.
Fax: 1(856) 608-6864
EMail: bmannino@geiconsultants.com;data

Report To

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054
Attn: Brian Mannino

Bill To

GEI Consultants, Inc.
400 Unicorn Park Drive

Woburn, MA 01801
Attn: Accounts Payable

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Reduced		Dec 18, 2014 @ 18:20	NA	Jan 07, 2015	Jan 14, 2015 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. SRP TXT, Equis GEI

**** QC Requirement (must meet):** NJ IGW

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
12132-001	B-491 (4-4.5)	4/4.5	12/16/14@09:45	Soil	mg/Kg (ppm)	
12132-002	B-491 (5-5.5)	5/5.5	12/16/14@10:00	Soil	mg/Kg (ppm)	
12132-003	B-492 (4-4.5)	4/4.5	12/16/14@10:30	Soil	mg/Kg (ppm)	
12132-004	B-492 (5-5.5)	5/5.5	12/16/14@10:35	Soil	mg/Kg (ppm)	
12132-005	B-490 (4.5-5)	4.5/5	12/16/14@10:50	Soil	mg/Kg (ppm)	
12132-006	B-490 (5.5-6)	5.5/6	12/16/14@10:55	Soil	mg/Kg (ppm)	
12132-007	B-490 (11.5-12)	11.5/12	12/16/14@11:00	Soil	mg/Kg (ppm)	
12132-008	B-490 (14.5-15)	14.5/15	12/16/14@11:05	Soil	mg/Kg (ppm)	
12132-009	B-487 (4.5-5)	4.5/5	12/16/14@11:20	Soil	mg/Kg (ppm)	
12132-010	B-486 (4.5-5)	4.5/5	12/16/14@11:30	Soil	mg/Kg (ppm)	
12132-011	B-486 (7.5-8)	7.5/8	12/16/14@11:35	Soil	mg/Kg (ppm)	
12132-012	B-488 (4.5-5)	4.5/5	12/16/14@12:00	Soil	mg/Kg (ppm)	
12132-013	B-489 (4.5-5)	4.5/5	12/16/14@12:35	Soil	mg/Kg (ppm)	
12132-014	FB-12162014	NA	12/16/14@14:20	Aqueous	mg/L (ppm)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
002	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
003	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
004	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
005	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
006	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
007	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
008	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
009	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E14-12132: SIC

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
010	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
011	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
012	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
013	TCL/PAH	Analyze	8270D	STD/2 WKS	12/30/2014
014	TCL/PAH	Analyze	8270D	STD/2 WKS	12/23/2014

Project Notes:

NOTE 1 taken by Ellen on 12/18/2014 11:35
ANY E QUALIFIED RESULTS NEED A COMBINED FORM 1.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 14** **12132** CLIENT: GEI SIC

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

COC: (COMPLETE) / INCOMPLETE **Comments**

KEY
✓ = YES/NA
✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol
(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✓	no-Extra Bottles	
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✓	pH Check (exclude VOs)[1]	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✓	**Chain of Custody is Clear**	

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL RA DATE 12/18/14

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ✓

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐
PROJECT CONTACT:
SUBCONTRACTED LAB:
DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL MF DATE 12/19/14

E14-12132 0120

REV 03/2013

Laboratory Custody Chronicle

IAL Case No.

E14-12132

Client GEI Consultants, Inc.

Project SIC

Received On 12/18/2014@18:20

Department: Semivolatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL/PAH	12132-001	Soil	12/22/14	Kou-Liang	12/29/14	JC
"	-002	"	12/22/14	Kou-Liang	12/29/14	JC
"	-003	"	12/22/14	Kou-Liang	12/29/14	JC
"	-004	"	12/22/14	Kou-Liang	12/29/14	JC
"	-005	"	12/22/14	Kou-Liang	12/29/14	JC
"	-006	"	12/22/14	Kou-Liang	12/29/14	JC
"	-007	"	12/22/14	Kou-Liang	12/29/14	JC
"	-008	"	12/22/14	Kou-Liang	12/29/14	JC
"	-009	"	12/22/14	Kou-Liang	12/29/14	JC
"	-010	"	12/22/14	Kou-Liang	12/29/14	JC
"	-011	"	12/22/14	Kou-Liang	12/29/14	JC
"	-012	"	12/22/14	Kou-Liang	12/29/14	JC
"	-013	"	12/22/14	Kou-Liang	12/29/14	JC
"	-014	Aqueous	12/22/14	Kou-Liang	12/23/14	JC

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054

Project Name: **SEA ISLE CITY**
IAL Case Number: **E14-02636**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

Sample Summary

IAL Case No.

E14-02636

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 3/28/2014@20:00

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
02636-001	B-476 (2.5-3)	2.5/3	3/27/2014@15:00	Soil	1
02636-002	B-476 (11.5-12)	11.5/12	3/27/2014@15:15	Soil	1
02636-003	B-476 (14.5-15)	14.5/15	3/27/2014@15:20	Soil	1
02636-004	B-475 (3-3.5)	3/3.5	3/27/2014@14:36	Soil	1
02636-005	B-475 (8-8.5)	8/8.5	3/27/2014@14:36	Soil	1
02636-006	B-475 (9-9.5)	9/9.5	3/27/2014@14:45	Soil	1
02636-007	B-475 (11.5-12)	11.5/12	3/27/2014@14:45	Soil	1
02636-008	B-478 (3-3.5)	3/3.5	3/27/2014@14:06	Soil	1
02636-009	B-478 (8.5-9)	8.5/9	3/27/2014@14:08	Soil	1
02636-010	B-478 (9-9.5)	9/9.5	3/27/2014@14:25	Soil	1
02636-011	B-478 (11.5-12)	11.5/12	3/27/2014@14:27	Soil	1
02636-012	B-479 (2.5-3)	2.5/3	3/27/2014@13:23	Soil	1
02636-013	B-479 (3.5-4)	3.5/4	3/27/2014@13:27	Soil	1
02636-014	B-479 (8-8.5)	8/8.5	3/27/2014@13:00	Soil	1
02636-015	B-480 (4-4.5)	4/4.5	3/27/2014@13:03	Soil	1
02636-016	B-480 (6-6.5)	6/6.5	3/27/2014@13:05	Soil	1
02636-017	B-480 (8.5-9)	8.5/9	3/27/2014@13:05	Soil	1
02636-018	B-481 (2.5-3)	2.5/3	3/27/2014@08:00	Soil	1
02636-019	B-481 (3.5-4)	3.5/4	3/27/2014@09:40	Soil	1
02636-020	B-481 (8-8.5)	8/8.5	3/27/2014@09:42	Soil	1
02636-021	B-481 (11.5-12)	11.5/12	3/27/2014@09:50	Soil	1
02636-022	B-482 (2.5-3)	2.5/3	3/27/2014@09:00	Soil	1
02636-023	B-482 (3.5-4)	3.5/4	3/27/2014@10:01	Soil	1
02636-024	B-482 (8-8.5)	8/8.5	3/27/2014@10:05	Soil	1
02636-025	B-482 (11.5-12)	11.5/12	3/27/2014@10:10	Soil	1
02636-026	B-483 (6-6.5)	6/6.5	3/27/2014@10:25	Soil	1
02636-027	B-483 (8.5-9)	8.5/9	3/27/2014@10:27	Soil	1
02636-028	B-483 (12-12.5)	12/12.5	3/27/2014@10:31	Soil	1
02636-029	B-484 (6.5-7)	6.5/7	3/27/2014@10:53	Soil	1
02636-030	B-484 (9-9.5)	9/9.5	3/27/2014@11:05	Soil	1
02636-031	B-484 (12.5-13)	12.5/13	3/27/2014@11:10	Soil	1
02636-032	B-485 (4-4.5)	4/4.5	3/27/2014@11:17	Soil	1
02636-033	B-485 (5-5.5)	5/5.5	3/27/2014@11:15	Soil	1
02636-034	B-485 (13.5-14)	13.5/14	3/27/2014@11:25	Soil	1
02636-035	FIELD BLANK	n/a	3/27/2014@15:26	Aqueous	2

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

This report was finalized on June 05, 2014

* Methodology is included in the IAL Project Information Page

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

CONFORMANCE / NON-CONFORMANCE SUMMARIES

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received one (1) aqueous and thirty-four (34) soil sample(s) from GEI Consultants, Inc. (IAL SDG # E14-02636, Project: SEA ISLE CITY) on March 28, 2014 for the analysis of:

(27) TCL/PAH

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

6/3/14
Date

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-02636

Semivolatiles By **8270D/625**

Batch ID: 140401-02	**Matrix:** Aqueous

QC
- Calibration Curve met criteria.
- Internal standard recovery met criteria.
- Surrogate recovery met criteria.
- Method blank met criteria.
- Laboratory control sample recovery met criteria.
- Matrix Spike / Matrix Spike Duplicate recoveries met criteria.

E14-02636
- 8270D
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- All samples were analyzed as a straight run and no further dilutions were required.

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-diphenylhydrazine will be directly compared to the applicable criteria for azobenzene and/or 1,2-diphenylhydrazine.

4/3/2014

Signature E14-02636 0004

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-02636

Semivolatiles By **8270D/625**

Batch ID: 140331-05	**Matrix:** Soil

QC
- Calibration Curve met criteria.
- Internal standard recovery met criteria.
- Surrogate recovery met criteria.
- Method blank met criteria.
- Laboratory control sample recovery met criteria.
- Matrix Spike / Matrix Spike Duplicate recoveries met criteria.

E14-02636
- 8270D
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- 02636-002 performed 5x dilution because of high target compounds;
- The following samples were analyzed as a straight run and no further dilutions were required: 001, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 003, 004, 005, 006, 007, 008, 009
- 02636-010: HOLD02636-011: HOLD02636-012: HOLD02636-018: HOLD02636-003: HOLD02636-007: HOLD

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-diphenylhydrazine will be directly compared to the applicable criteria for azobenzene and/or 1,2-diphenylhydrazine.

4/2/2014

Signature E14-02636 0005

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-02636

Semivolatiles By **8270D/625**

Batch ID: 140331-06	**Matrix:** Soil

QC
- Calibration Curve met criteria.
- Internal standard recovery met criteria.
- Surrogate recovery met criteria.
- Method blank met criteria.
- Laboratory control sample recovery met criteria.
- Matrix Spike / Matrix Spike Duplicate recoveries met criteria.
- LCS has double BN and Acid surrogates.

E14-02636
- 8270D
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- All samples were analyzed as a straight run and no further dilutions were required.
- 02636-021: HOLD02636-022: HOLD02636-025: HOLD

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-diphenylhydrazine will be directly compared to the applicable criteria for azobenzene and/or 1,2-diphenylhydrazine.

4/2/2014

Signature E14-02636 0006

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-02636

Semivolatiles By **8270D/625**

Batch ID: 140401-03	**Matrix:** Soil

QC
- Calibration Curve met criteria.
- Internal standard recovery met criteria.
- Surrogate recovery met criteria.
- Method blank met criteria.
- Laboratory control sample recovery met criteria.
- Matrix Spike / Matrix Spike Duplicate recoveries met criteria.

E14-02636
- 8270D
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- All samples were analyzed as a straight run and no further dilutions were required.

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-diphenylhydrazine will be directly compared to the applicable criteria for azobenzene and/or 1,2-diphenylhydrazine.

4/3/2014

Signature E14-02636 0007

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

	Lab ID:	02636-035		
	Client ID:	FIELD BLANK		
	Matrix:	Aqueous		
	Sampled Date	3/27/14		
PARAMETER(Units)		Conc	Q	MDL
Semivolatiles - PAH (Units)		*(mg/L)*		
Naphthalene		ND		0.000273
2-Methylnaphthalene		ND		0.000433
Acenaphthylene		ND		0.000316
Acenaphthene		ND		0.000261
Fluorene		ND		0.000447
Phenanthrene		ND		0.000372
Anthracene		ND		0.000322
Fluoranthene		ND		0.000362
Pyrene		ND		0.000308
Benzo[a]anthracene		ND		0.000243
Chrysene		ND		0.000243
Benzo[b]fluoranthene		ND		0.000716
Benzo[k]fluoranthene		ND		0.000683
Benzo[a]pyrene		ND		0.000381
Indeno[1,2,3-cd]pyrene		ND		0.000509
Dibenz[a,h]anthracene		ND		0.000514
Benzo[g,h,i]perylene		ND		0.000468

	Lab ID:	02636-001			02636-002			02636-003			02636-004		
	Client ID:	B-476 (2.5-3)			B-476 (11.5-12)			B-476 (14.5-15)			B-475 (3-3.5)		
	Depth:	2.5/3			11.5/12			14.5/15			3/3.5		
	Matrix:	Soil			Soil			Soil			Soil		
	Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)		*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene		ND		0.025	13.4	D	0.125	2.26		0.024	ND		0.024
2-Methylnaphthalene		ND		0.030	14.2	D	0.154	1.91		0.030	ND		0.030
Acenaphthylene		ND		0.025	5.39	D	0.125	0.475		0.024	ND		0.024
Acenaphthene		ND		0.038	19.1	D	0.191	2.28		0.037	ND		0.037
Fluorene		ND		0.025	18.5	D	0.125	2.30		0.024	ND		0.024
Phenanthrene		ND		0.025	21.8	D	0.125	3.12		0.024	ND		0.024
Anthracene		ND		0.025	14.7	D	0.125	2.29		0.024	ND		0.024
Fluoranthene		ND		0.025	16.7	D	0.125	2.50		0.024	ND		0.024
Pyrene		ND		0.025	24.1	D	0.125	3.53		0.024	ND		0.024
Benzo[a]anthracene		ND		0.025	16.5	D	0.125	1.78		0.024	ND		0.024
Chrysene		ND		0.025	17.9	D	0.125	1.80		0.024	ND		0.024
Benzo[b]fluoranthene		ND		0.025	8.68	D	0.125	0.798		0.024	ND		0.024
Benzo[k]fluoranthene		ND		0.025	6.78	D	0.125	0.839		0.024	ND		0.024
Benzo[a]pyrene		ND		0.025	14.8	D	0.125	1.50		0.024	ND		0.024
Indeno[1,2,3-cd]pyrene		ND		0.025	4.15	D	0.125	0.426		0.024	ND		0.024
Dibenz[a,h]anthracene		ND		0.025	1.79	D	0.125	0.157		0.024	ND		0.024
Benzo[g,h,i]perylene		ND		0.025	4.32	D	0.125	0.488		0.024	ND		0.024

ND = Analyzed for but Not Detected at the MDL
D = The compound was reported from the Diluted analysis

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

Lab ID:	02636-005			02636-006			02636-007			02636-008		
Client ID:	B-475 (8-8.5)			B-475 (9-9.5)			B-475 (11.5-12)			B-478 (3-3.5)		
Depth:	8/8.5			9/9.5			11.5/12			3/3.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.025	ND		0.024	~		~	ND		0.024
2-Methylnaphthalene	ND		0.030	ND		0.029	~		~	ND		0.030
Acenaphthylene	ND		0.025	ND		0.024	~		~	ND		0.024
Acenaphthene	ND		0.038	ND		0.036	~		~	ND		0.037
Fluorene	ND		0.025	ND		0.024	~		~	ND		0.024
Phenanthrene	ND		0.025	ND		0.024	~		~	ND		0.024
Anthracene	ND		0.025	ND		0.024	~		~	ND		0.024
Fluoranthene	ND		0.025	ND		0.024	~		~	ND		0.024
Pyrene	ND		0.025	ND		0.024	~		~	ND		0.024
Benzo[a]anthracene	ND		0.025	ND		0.024	~		~	ND		0.024
Chrysene	ND		0.025	ND		0.024	~		~	ND		0.024
Benzo[b]fluoranthene	ND		0.025	ND		0.024	~		~	ND		0.024
Benzo[k]fluoranthene	ND		0.025	ND		0.024	~		~	ND		0.024
Benzo[a]pyrene	ND		0.025	ND		0.024	~		~	ND		0.024
Indeno[1,2,3-cd]pyrene	ND		0.025	ND		0.024	~		~	ND		0.024
Dibenz[a,h]anthracene	ND		0.025	ND		0.024	~		~	ND		0.024
Benzo[g,h,i]perylene	ND		0.025	ND		0.024	~		~	ND		0.024

ND = Analyzed for but Not Detected at the MDL
~ Sample not analyzed fo r

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

Lab ID:	02636-009			02636-010			02636-011			02636-012		
Client ID:	B-478 (8.5-9)			B-478 (9-9.5)			B-478 (11.5-12)			B-479 (2.5-3)		
Depth:	8.5/9			9/9.5			11.5/12			2.5/3		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	0.083		0.025	~		~	~		~	~		~
2-Methylnaphthalene	ND		0.031	~		~	~		~	~		~
Acenaphthylene	ND		0.025	~		~	~		~	~		~
Acenaphthene	0.043		0.038	~		~	~		~	~		~
Fluorene	ND		0.025	~		~	~		~	~		~
Phenanthrene	0.064		0.025	~		~	~		~	~		~
Anthracene	ND		0.025	~		~	~		~	~		~
Fluoranthene	0.031	J	0.025	~		~	~		~	~		~
Pyrene	0.048		0.025	~		~	~		~	~		~
Benzo[a]anthracene	ND		0.025	~		~	~		~	~		~
Chrysene	ND		0.025	~		~	~		~	~		~
Benzo[b]fluoranthene	ND		0.025	~		~	~		~	~		~
Benzo[k]fluoranthene	ND		0.025	~		~	~		~	~		~
Benzo[a]pyrene	ND		0.025	~		~	~		~	~		~
Indeno[1,2,3-cd]pyrene	ND		0.025	~		~	~		~	~		~
Dibenz[a,h]anthracene	ND		0.025	~		~	~		~	~		~
Benzo[g,h,i]perylene	ND		0.025	~		~	~		~	~		~

ND = Analyzed for but Not Detected at the MDL
~ Sample not analyzed fo r

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

Lab ID:	02636-013			02636-014			02636-015			02636-016		
Client ID:	B-479 (3.5-4)			B-479 (8-8.5)			B-480 (4-4.5)			B-480 (6-6.5)		
Depth:	3.5/4			8/8.5			4/4.5			6/6.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
2-Methylnaphthalene	ND		0.029	ND		0.031	ND		0.029	ND		0.031
Acenaphthylene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Acenaphthene	ND		0.036	ND		0.039	ND		0.037	ND		0.039
Fluorene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Phenanthrene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Anthracene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Fluoranthene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Pyrene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Benzo[a]anthracene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Chrysene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Benzo[b]fluoranthene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Benzo[k]fluoranthene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Benzo[a]pyrene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Indeno[1,2,3-cd]pyrene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Dibenz[a,h]anthracene	ND		0.023	ND		0.025	ND		0.024	ND		0.025
Benzo[g,h,i]perylene	ND		0.023	ND		0.025	ND		0.024	ND		0.025

ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

Lab ID:	02636-017			02636-018			02636-019			02636-020		
Client ID:	B-480 (8.5-9)			B-481 (2.5-3)			B-481 (3.5-4)			B-481 (8-8.5)		
Depth:	8.5/9			2.5/3			3.5/4			8/8.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	0.053		0.031	~		~	ND		0.028	ND		0.028
2-Methylnaphthalene	ND		0.038	~		~	ND		0.035	ND		0.034
Acenaphthylene	0.366		0.031	~		~	ND		0.028	ND		0.028
Acenaphthene	0.138		0.047	~		~	ND		0.044	ND		0.042
Fluorene	0.098		0.031	~		~	ND		0.028	ND		0.028
Phenanthrene	0.541		0.031	~		~	0.073		0.028	ND		0.028
Anthracene	0.400		0.031	~		~	ND		0.028	ND		0.028
Fluoranthene	0.818		0.031	~		~	0.058		0.028	ND		0.028
Pyrene	1.50		0.031	~		~	0.066		0.028	ND		0.028
Benzo[a]anthracene	1.79		0.031	~		~	0.070		0.028	ND		0.028
Chrysene	2.11		0.031	~		~	0.124		0.028	ND		0.028
Benzo[b]fluoranthene	0.996		0.031	~		~	0.035	J	0.028	ND		0.028
Benzo[k]fluoranthene	1.21		0.031	~		~	0.036	J	0.028	ND		0.028
Benzo[a]pyrene	2.17		0.031	~		~	0.037	J	0.028	ND		0.028
Indeno[1,2,3-cd]pyrene	0.645		0.031	~		~	ND		0.028	ND		0.028
Dibenz[a,h]anthracene	0.218		0.031	~		~	ND		0.029	ND		0.028
Benzo[g,h,i]perylene	0.727		0.031	~		~	ND		0.028	ND		0.028

ND = Analyzed for but Not Detected at the MDL
~ Sample not analyzed fo r

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

Lab ID:	02636-021			02636-022			02636-023			02636-024		
Client ID:	B-481 (11.5-12)			B-482 (2.5-3)			B-482 (3.5-4)			B-482 (8-8.5)		
Depth:	11.5/12			2.5/3			3.5/4			8/8.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	~		~	~		~	ND		0.024	ND		0.026
2-Methylnaphthalene	~		~	~		~	ND		0.030	ND		0.032
Acenaphthylene	~		~	~		~	ND		0.024	ND		0.026
Acenaphthene	~		~	~		~	ND		0.037	ND		0.040
Fluorene	~		~	~		~	ND		0.024	ND		0.026
Phenanthrene	~		~	~		~	ND		0.024	ND		0.026
Anthracene	~		~	~		~	ND		0.024	ND		0.026
Fluoranthene	~		~	~		~	ND		0.024	ND		0.026
Pyrene	~		~	~		~	ND		0.024	ND		0.026
Benzo[a]anthracene	~		~	~		~	ND		0.024	ND		0.026
Chrysene	~		~	~		~	ND		0.024	ND		0.026
Benzo[b]fluoranthene	~		~	~		~	ND		0.024	ND		0.026
Benzo[k]fluoranthene	~		~	~		~	ND		0.024	ND		0.026
Benzo[a]pyrene	~		~	~		~	ND		0.024	ND		0.026
Indeno[1,2,3-cd]pyrene	~		~	~		~	ND		0.024	ND		0.026
Dibenz[a,h]anthracene	~		~	~		~	ND		0.024	ND		0.026
Benzo[g,h,i]perylene	~		~	~		~	ND		0.024	ND		0.026

ND = Analyzed for but Not Detected at the MDL
~ Sample not analyzed fo r

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

Lab ID:	02636-025			02636-026			02636-027			02636-028		
Client ID:	B-482 (11.5-12)			B-483 (6-6.5)			B-483 (8.5-9)			B-483 (12-12.5)		
Depth:	11.5/12			6/6.5			8.5/9			12/12.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	~		~	ND		0.030	ND		0.036	ND		0.025
2-Methylnaphthalene	~		~	ND		0.037	ND		0.044	ND		0.031
Acenaphthylene	~		~	ND		0.030	ND		0.036	0.042		0.025
Acenaphthene	~		~	ND		0.046	ND		0.055	ND		0.038
Fluorene	~		~	ND		0.030	ND		0.036	ND		0.025
Phenanthrene	~		~	ND		0.030	ND		0.036	0.118		0.025
Anthracene	~		~	ND		0.030	ND		0.036	0.073		0.025
Fluoranthene	~		~	ND		0.030	ND		0.036	0.288		0.025
Pyrene	~		~	ND		0.030	ND		0.036	0.435		0.025
Benzo[a]anthracene	~		~	ND		0.030	ND		0.036	0.199		0.025
Chrysene	~		~	ND		0.030	ND		0.036	0.259		0.025
Benzo[b]fluoranthene	~		~	ND		0.030	ND		0.036	0.144		0.025
Benzo[k]fluoranthene	~		~	ND		0.030	ND		0.036	0.169		0.025
Benzo[a]pyrene	~		~	ND		0.030	ND		0.036	0.242		0.025
Indeno[1,2,3-cd]pyrene	~		~	ND		0.030	ND		0.036	0.096		0.025
Dibenz[a,h]anthracene	~		~	ND		0.030	ND		0.036	ND		0.025
Benzo[g,h,i]perylene	~		~	ND		0.030	ND		0.036	0.092		0.025

Lab ID:	02636-029			02636-030			02636-031			02636-032		
Client ID:	B-484 (6.5-7)			B-484 (9-9.5)			B-484 (12.5-13)			B-485 (4-4.5)		
Depth:	6.5/7			9/9.5			12.5/13			4/4.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	3/27/14			3/27/14			3/27/14			3/27/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
2-Methylnaphthalene	ND		0.028	ND		0.028	ND		0.030	ND		0.030
Acenaphthylene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Acenaphthene	ND		0.035	ND		0.035	ND		0.037	ND		0.038
Fluorene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Phenanthrene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Anthracene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Fluoranthene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Pyrene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Benzo[a]anthracene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Chrysene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Benzo[b]fluoranthene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Benzo[k]fluoranthene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Benzo[a]pyrene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Indeno[1,2,3-cd]pyrene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Dibenz[a,h]anthracene	ND		0.023	ND		0.023	ND		0.024	ND		0.025
Benzo[g,h,i]perylene	ND		0.023	ND		0.023	ND		0.024	ND		0.025

ND = Analyzed for but Not Detected at the MDL
~ Sample not analyzed fo r

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02636

	Lab ID:	02636-033			02636-034		
	Client ID:	B-485 (5-5.5)			B-485 (13.5-14)		
	Depth:	5/5.5			13.5/14		
	Matrix:	Soil			Soil		
	Sampled Date	3/27/14			3/27/14		
PARAMETER(Units)		Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)		*(mg/Kg)*			*(mg/Kg)*		
Naphthalene		ND		0.023	ND		0.030
2-Methylnaphthalene		ND		0.028	ND		0.037
Acenaphthylene		ND		0.023	ND		0.030
Acenaphthene		ND		0.035	ND		0.047
Fluorene		ND		0.023	ND		0.030
Phenanthrene		ND		0.023	ND		0.030
Anthracene		ND		0.023	ND		0.030
Fluoranthene		ND		0.023	ND		0.030
Pyrene		ND		0.023	ND		0.030
Benzo[a]anthracene		ND		0.023	ND		0.030
Chrysene		ND		0.023	ND		0.030
Benzo[b]fluoranthene		ND		0.023	ND		0.030
Benzo[k]fluoranthene		ND		0.023	ND		0.030
Benzo[a]pyrene		ND		0.023	ND		0.030
Indeno[1,2,3-cd]pyrene		ND		0.023	ND		0.030
Dibenz[a,h]anthracene		ND		0.023	ND		0.031
Benzo[g,h,i]perylene		ND		0.023	ND		0.030

ND = Analyzed for but Not Detected at the MDL

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-001
Client ID: B-476_(2
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5143.D

GC/MS Column: DB-5
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.8

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.041	0.025
2-Methylnaphthalene	ND		0.041	0.030
Acenaphthylene	ND		0.041	0.025
Acenaphthene	ND		0.041	0.038
Fluorene	ND		0.041	0.025
Phenanthrene	ND		0.041	0.025
Anthracene	ND		0.041	0.025
Fluoranthene	ND		0.041	0.025
Pyrene	ND		0.041	0.025
Benzo[a]anthracene	ND		0.041	0.025
Chrysene	ND		0.041	0.025
Benzo[b]fluoranthene	ND		0.041	0.025
Benzo[k]fluoranthene	ND		0.041	0.025
Benzo[a]pyrene	ND		0.041	0.025
Indeno[1,2,3-cd]pyrene	ND		0.041	0.025
Dibenz[a,h]anthracene	ND		0.041	0.025
Benzo[g,h,i]perylene	ND		0.041	0.025

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0018

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-002
Client ID: B-476_(1
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5144.D

GC/MS Column: DB-5
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 5
% Moisture: 20.2

Compound	Concentration	Q	RL	MDL
Naphthalene	13.4	D	0.208	0.125
2-Methylnaphthalene	14.2	D	0.208	0.154
Acenaphthylene	5.39	D	0.208	0.125
Acenaphthene	19.1	D	0.208	0.191
Fluorene	18.5	D	0.208	0.125
Phenanthrene	21.8	D	0.208	0.125
Anthracene	14.7	D	0.208	0.125
Fluoranthene	16.7	D	0.208	0.125
Pyrene	24.1	D	0.208	0.125
Benzo[a]anthracene	16.5	D	0.208	0.125
Chrysene	17.9	D	0.208	0.125
Benzo[b]fluoranthene	8.68	D	0.208	0.125
Benzo[k]fluoranthene	6.78	D	0.208	0.125
Benzo[a]pyrene	14.8	D	0.208	0.125
Indeno[1,2,3-cd]pyrene	4.15	D	0.208	0.125
Dibenz[a,h]anthracene	1.79	D	0.208	0.125
Benzo[g,h,i]perylene	4.32	D	0.208	0.125
Total Target Compounds (17):	223	D		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0019

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-003
Client ID: B-476_(1
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5159.D

GC/MS Column: DB-5
Sample wt/vol: 15.32g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.7

Compound	Concentration	Q	RL	MDL
Naphthalene	2.26		0.040	0.024
2-Methylnaphthalene	1.91		0.040	0.030
Acenaphthylene	0.475		0.040	0.024
Acenaphthene	2.28		0.040	0.037
Fluorene	2.30		0.040	0.024
Phenanthrene	3.12		0.040	0.024
Anthracene	2.29		0.040	0.024
Fluoranthene	2.50		0.040	0.024
Pyrene	3.53		0.040	0.024
Benzo[a]anthracene	1.78		0.040	0.024
Chrysene	1.80		0.040	0.024
Benzo[b]fluoranthene	0.798		0.040	0.024
Benzo[k]fluoranthene	0.839		0.040	0.024
Benzo[a]pyrene	1.50		0.040	0.024
Indeno[1,2,3-cd]pyrene	0.426		0.040	0.024
Dibenz[a,h]anthracene	0.157		0.040	0.024
Benzo[g,h,i]perylene	0.488		0.040	0.024

Total Target Compounds (17): 28.5

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0020

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-004
Client ID: B-475_(3
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5145.D

GC/MS Column: DB-5
Sample wt/vol: 15.17g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.2

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.030
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	ND		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	ND		0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0021

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-005
Client ID: B-475_(8
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5146.D

GC/MS Column: DB-5
Sample wt/vol: 15.22g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 20.3

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.041	0.025
2-Methylnaphthalene	ND		0.041	0.030
Acenaphthylene	ND		0.041	0.025
Acenaphthene	ND		0.041	0.038
Fluorene	ND		0.041	0.025
Phenanthrene	ND		0.041	0.025
Anthracene	ND		0.041	0.025
Fluoranthene	ND		0.041	0.025
Pyrene	ND		0.041	0.025
Benzo[a]anthracene	ND		0.041	0.025
Chrysene	ND		0.041	0.025
Benzo[b]fluoranthene	ND		0.041	0.025
Benzo[k]fluoranthene	ND		0.041	0.025
Benzo[a]pyrene	ND		0.041	0.025
Indeno[1,2,3-cd]pyrene	ND		0.041	0.025
Dibenz[a,h]anthracene	ND		0.041	0.025
Benzo[g,h,i]perylene	ND		0.041	0.025

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0022

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-006
Client ID: B-475_(9
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5147.D

GC/MS Column: DB-5
Sample wt/vol: 15.38g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 17.4

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.024
2-Methylnaphthalene	ND		0.039	0.029
Acenaphthylene	ND		0.039	0.024
Acenaphthene	ND		0.039	0.036
Fluorene	ND		0.039	0.024
Phenanthrene	ND		0.039	0.024
Anthracene	ND		0.039	0.024
Fluoranthene	ND		0.039	0.024
Pyrene	ND		0.039	0.024
Benzo[a]anthracene	ND		0.039	0.024
Chrysene	ND		0.039	0.024
Benzo[b]fluoranthene	ND		0.039	0.024
Benzo[k]fluoranthene	ND		0.039	0.024
Benzo[a]pyrene	ND		0.039	0.024
Indeno[1,2,3-cd]pyrene	ND		0.039	0.024
Dibenz[a,h]anthracene	ND		0.039	0.024
Benzo[g,h,i]perylene	ND		0.039	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0023

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-008
Client ID: B-478_(3
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5148.D

GC/MS Column: DB-5
Sample wt/vol: 15.23g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.1

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.030
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	ND		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	ND		0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0024

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-009
Client ID: B-478_(8
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5149.D

GC/MS Column: DB-5
Sample wt/vol: 15.12g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 20.6

Compound	Concentration	Q	RL	MDL
Naphthalene	0.083		0.042	0.025
2-Methylnaphthalene	ND		0.042	0.031
Acenaphthylene	ND		0.042	0.025
Acenaphthene	0.043		0.042	0.038
Fluorene	ND		0.042	0.025
Phenanthrene	0.064		0.042	0.025
Anthracene	ND		0.042	0.025
Fluoranthene	0.031	J	0.042	0.025
Pyrene	0.048		0.042	0.025
Benzo[a]anthracene	ND		0.042	0.025
Chrysene	ND		0.042	0.025
Benzo[b]fluoranthene	ND		0.042	0.025
Benzo[k]fluoranthene	ND		0.042	0.025
Benzo[a]pyrene	ND		0.042	0.025
Indeno[1,2,3-cd]pyrene	ND		0.042	0.025
Dibenz[a,h]anthracene	ND		0.042	0.025
Benzo[g,h,i]perylene	ND		0.042	0.025
Total Target Compounds (17):	0.269	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0025

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-013
Client ID: B-479_(3
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5150.D

GC/MS Column: DB-5
Sample wt/vol: 15.01g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 14.0

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.023
2-Methylnaphthalene	ND		0.039	0.029
Acenaphthylene	ND		0.039	0.023
Acenaphthene	ND		0.039	0.036
Fluorene	ND		0.039	0.023
Phenanthrene	ND		0.039	0.023
Anthracene	ND		0.039	0.023
Fluoranthene	ND		0.039	0.023
Pyrene	ND		0.039	0.023
Benzo[a]anthracene	ND		0.039	0.023
Chrysene	ND		0.039	0.023
Benzo[b]fluoranthene	ND		0.039	0.023
Benzo[k]fluoranthene	ND		0.039	0.023
Benzo[a]pyrene	ND		0.039	0.023
Indeno[1,2,3-cd]pyrene	ND		0.039	0.023
Dibenz[a,h]anthracene	ND		0.039	0.023
Benzo[g,h,i]perylene	ND		0.039	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0026

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-014
Client ID: B-479_(8
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5151.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 20.8

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.042	0.025
2-Methylnaphthalene	ND		0.042	0.031
Acenaphthylene	ND		0.042	0.025
Acenaphthene	ND		0.042	0.039
Fluorene	ND		0.042	0.025
Phenanthrene	ND		0.042	0.025
Anthracene	ND		0.042	0.025
Fluoranthene	ND		0.042	0.025
Pyrene	ND		0.042	0.025
Benzo[a]anthracene	ND		0.042	0.025
Chrysene	ND		0.042	0.025
Benzo[b]fluoranthene	ND		0.042	0.025
Benzo[k]fluoranthene	ND		0.042	0.025
Benzo[a]pyrene	ND		0.042	0.025
Indeno[1,2,3-cd]pyrene	ND		0.042	0.025
Dibenz[a,h]anthracene	ND		0.042	0.025
Benzo[g,h,i]perylene	ND		0.042	0.025

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0027

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-015
Client ID: B-480_(4
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5152.D

GC/MS Column: DB-5
Sample wt/vol: 15.12g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 16.8

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.029
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	ND		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	ND		0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0028

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-016
Client ID: B-480_(6
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5153.D

GC/MS Column: DB-5
Sample wt/vol: 15.13g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 21.8

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.042	0.025
2-Methylnaphthalene	ND		0.042	0.031
Acenaphthylene	ND		0.042	0.025
Acenaphthene	ND		0.042	0.039
Fluorene	ND		0.042	0.025
Phenanthrene	ND		0.042	0.025
Anthracene	ND		0.042	0.025
Fluoranthene	ND		0.042	0.025
Pyrene	ND		0.042	0.025
Benzo[a]anthracene	ND		0.042	0.025
Chrysene	ND		0.042	0.025
Benzo[b]fluoranthene	ND		0.042	0.025
Benzo[k]fluoranthene	ND		0.042	0.025
Benzo[a]pyrene	ND		0.042	0.025
Indeno[1,2,3-cd]pyrene	ND		0.042	0.025
Dibenz[a,h]anthracene	ND		0.042	0.025
Benzo[g,h,i]perylene	ND		0.042	0.025

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0029

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-017
Client ID: B-480_(8
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5154.D

GC/MS Column: DB-5
Sample wt/vol: 15.12g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 35.4

Compound	Concentration	Q	RL	MDL
Naphthalene	0.053		0.051	0.031
2-Methylnaphthalene	ND		0.051	0.038
Acenaphthylene	0.366		0.051	0.031
Acenaphthene	0.138		0.051	0.047
Fluorene	0.098		0.051	0.031
Phenanthrene	0.541		0.051	0.031
Anthracene	0.400		0.051	0.031
Fluoranthene	0.818		0.051	0.031
Pyrene	1.50		0.051	0.031
Benzo[a]anthracene	1.79		0.051	0.031
Chrysene	2.11		0.051	0.031
Benzo[b]fluoranthene	0.996		0.051	0.031
Benzo[k]fluoranthene	1.21		0.051	0.031
Benzo[a]pyrene	2.17		0.051	0.031
Indeno[1,2,3-cd]pyrene	0.645		0.051	0.031
Dibenz[a,h]anthracene	0.218		0.051	0.031
Benzo[g,h,i]perylene	0.727		0.051	0.031

Total Target Compounds (17): 13.8

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0030

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-019
Client ID: B-481_(3
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5155.D

GC/MS Column: DB-5
Sample wt/vol: 15.09g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 30.0

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.047	0.028
2-Methylnaphthalene	ND		0.047	0.035
Acenaphthylene	ND		0.047	0.028
Acenaphthene	ND		0.047	0.044
Fluorene	ND		0.047	0.028
Phenanthrene	0.073		0.047	0.028
Anthracene	ND		0.047	0.028
Fluoranthene	0.058		0.047	0.028
Pyrene	0.066		0.047	0.028
Benzo[a]anthracene	0.070		0.047	0.028
Chrysene	0.124		0.047	0.028
Benzo[b]fluoranthene	0.035	J	0.047	0.028
Benzo[k]fluoranthene	0.036	J	0.047	0.028
Benzo[a]pyrene	0.037	J	0.047	0.028
Indeno[1,2,3-cd]pyrene	ND		0.047	0.028
Dibenz[a,h]anthracene	ND		0.047	0.029
Benzo[g,h,i]perylene	ND		0.047	0.028
Total Target Compounds (17):	0.499	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0031

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-020
Client ID: B-481_(8
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5156.D

GC/MS Column: DB-5
Sample wt/vol: 15.22g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 28.9

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.046	0.028
2-Methylnaphthalene	ND		0.046	0.034
Acenaphthylene	ND		0.046	0.028
Acenaphthene	ND		0.046	0.042
Fluorene	ND		0.046	0.028
Phenanthrene	ND		0.046	0.028
Anthracene	ND		0.046	0.028
Fluoranthene	ND		0.046	0.028
Pyrene	ND		0.046	0.028
Benzo[a]anthracene	ND		0.046	0.028
Chrysene	ND		0.046	0.028
Benzo[b]fluoranthene	ND		0.046	0.028
Benzo[k]fluoranthene	ND		0.046	0.028
Benzo[a]pyrene	ND		0.046	0.028
Indeno[1,2,3-cd]pyrene	ND		0.046	0.028
Dibenz[a,h]anthracene	ND		0.046	0.028
Benzo[g,h,i]perylene	ND		0.046	0.028

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0032

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-023
Client ID: B-482_(3
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5131.D

GC/MS Column: DB-5
Sample wt/vol: 15.16g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.1

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.030
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	ND		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	ND		0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0033

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-024
Client ID: B-482_(8
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5132.D

GC/MS Column: DB-5
Sample wt/vol: 15.01g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 23.5

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.044	0.026
2-Methylnaphthalene	ND		0.044	0.032
Acenaphthylene	ND		0.044	0.026
Acenaphthene	ND		0.044	0.040
Fluorene	ND		0.044	0.026
Phenanthrene	ND		0.044	0.026
Anthracene	ND		0.044	0.026
Fluoranthene	ND		0.044	0.026
Pyrene	ND		0.044	0.026
Benzo[a]anthracene	ND		0.044	0.026
Chrysene	ND		0.044	0.026
Benzo[b]fluoranthene	ND		0.044	0.026
Benzo[k]fluoranthene	ND		0.044	0.026
Benzo[a]pyrene	ND		0.044	0.026
Indeno[1,2,3-cd]pyrene	ND		0.044	0.026
Dibenz[a,h]anthracene	ND		0.044	0.026
Benzo[g,h,i]perylene	ND		0.044	0.026

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0034

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-026
Client ID: B-483_(6
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5134.D

GC/MS Column: DB-5
Sample wt/vol: 15.13g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 34.2

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.050	0.030
2-Methylnaphthalene	ND		0.050	0.037
Acenaphthylene	ND		0.050	0.030
Acenaphthene	ND		0.050	0.046
Fluorene	ND		0.050	0.030
Phenanthrene	ND		0.050	0.030
Anthracene	ND		0.050	0.030
Fluoranthene	ND		0.050	0.030
Pyrene	ND		0.050	0.030
Benzo[a]anthracene	ND		0.050	0.030
Chrysene	ND		0.050	0.030
Benzo[b]fluoranthene	ND		0.050	0.030
Benzo[k]fluoranthene	ND		0.050	0.030
Benzo[a]pyrene	ND		0.050	0.030
Indeno[1,2,3-cd]pyrene	ND		0.050	0.030
Dibenz[a,h]anthracene	ND		0.050	0.030
Benzo[g,h,i]perylene	ND		0.050	0.030

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0035

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-027
Client ID: B-483_(8
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5135.D

GC/MS Column: DB-5
Sample wt/vol: 15.41g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 46.1

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.060	0.036
2-Methylnaphthalene	ND		0.060	0.044
Acenaphthylene	ND		0.060	0.036
Acenaphthene	ND		0.060	0.055
Fluorene	ND		0.060	0.036
Phenanthrene	ND		0.060	0.036
Anthracene	ND		0.060	0.036
Fluoranthene	ND		0.060	0.036
Pyrene	ND		0.060	0.036
Benzo[a]anthracene	ND		0.060	0.036
Chrysene	ND		0.060	0.036
Benzo[b]fluoranthene	ND		0.060	0.036
Benzo[k]fluoranthene	ND		0.060	0.036
Benzo[a]pyrene	ND		0.060	0.036
Indeno[1,2,3-cd]pyrene	ND		0.060	0.036
Dibenz[a,h]anthracene	ND		0.060	0.036
Benzo[g,h,i]perylene	ND		0.060	0.036

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0036

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-028
Client ID: B-483_(1
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5136.D

GC/MS Column: DB-5
Sample wt/vol: 15.09g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 20.2

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.042	0.025
2-Methylnaphthalene	ND		0.042	0.031
Acenaphthylene	0.042		0.042	0.025
Acenaphthene	ND		0.042	0.038
Fluorene	ND		0.042	0.025
Phenanthrene	0.118		0.042	0.025
Anthracene	0.073		0.042	0.025
Fluoranthene	0.288		0.042	0.025
Pyrene	0.435		0.042	0.025
Benzo[a]anthracene	0.199		0.042	0.025
Chrysene	0.259		0.042	0.025
Benzo[b]fluoranthene	0.144		0.042	0.025
Benzo[k]fluoranthene	0.169		0.042	0.025
Benzo[a]pyrene	0.242		0.042	0.025
Indeno[1,2,3-cd]pyrene	0.096		0.042	0.025
Dibenz[a,h]anthracene	ND		0.042	0.025
Benzo[g,h,i]perylene	0.092		0.042	0.025

Total Target Compounds (17): 2.16

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0037

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-029
Client ID: B-484_(6
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5137.D

GC/MS Column: DB-5
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.9

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0038

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-030
Client ID: B-484_(9
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5138.D

GC/MS Column: DB-5
Sample wt/vol: 15.21g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 13.6

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0039

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-031
Client ID: B-484_(1
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5139.D

GC/MS Column: DB-5
Sample wt/vol: 15.12g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 17.6

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.030
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	ND		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	ND		0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0040

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-032
Client ID: B-485_(4
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5140.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.3

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.041	0.025
2-Methylnaphthalene	ND		0.041	0.030
Acenaphthylene	ND		0.041	0.025
Acenaphthene	ND		0.041	0.038
Fluorene	ND		0.041	0.025
Phenanthrene	ND		0.041	0.025
Anthracene	ND		0.041	0.025
Fluoranthene	ND		0.041	0.025
Pyrene	ND		0.041	0.025
Benzo[a]anthracene	ND		0.041	0.025
Chrysene	ND		0.041	0.025
Benzo[b]fluoranthene	ND		0.041	0.025
Benzo[k]fluoranthene	ND		0.041	0.025
Benzo[a]pyrene	ND		0.041	0.025
Indeno[1,2,3-cd]pyrene	ND		0.041	0.025
Dibenz[a,h]anthracene	ND		0.041	0.025
Benzo[g,h,i]perylene	ND		0.041	0.025

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0041

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-033
Client ID: B-485_(5
Date Received: 03/28/2014
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0663.D

GC/MS Column: DB-5
Sample wt/vol: 15.32g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 14.1

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.028
Acenaphthylene	ND		0.038	0.023
Acenaphthene	ND		0.038	0.035
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.023
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-034
Client ID: B-485_(1
Date Received: 03/28/2014
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0664.D

GC/MS Column: DB-5
Sample wt/vol: 15.11g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 34.6

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.051	0.030
2-Methylnaphthalene	ND		0.051	0.037
Acenaphthylene	ND		0.051	0.030
Acenaphthene	ND		0.051	0.047
Fluorene	ND		0.051	0.030
Phenanthrene	ND		0.051	0.030
Anthracene	ND		0.051	0.030
Fluoranthene	ND		0.051	0.030
Pyrene	ND		0.051	0.030
Benzo[a]anthracene	ND		0.051	0.030
Chrysene	ND		0.051	0.030
Benzo[b]fluoranthene	ND		0.051	0.030
Benzo[k]fluoranthene	ND		0.051	0.030
Benzo[a]pyrene	ND		0.051	0.030
Indeno[1,2,3-cd]pyrene	ND		0.051	0.030
Dibenz[a,h]anthracene	ND		0.051	0.031
Benzo[g,h,i]perylene	ND		0.051	0.030

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0043

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02636-035
Client ID: FIELD_BL
Date Received: 03/28/2014
Date Extracted: 04/01/2014
Date Analyzed: 04/03/2014
Data file: B7841.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-mg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.001	0.000273
2-Methylnaphthalene	ND		0.001	0.000433
Acenaphthylene	ND		0.001	0.000316
Acenaphthene	ND		0.001	0.000261
Fluorene	ND		0.001	0.000447
Phenanthrene	ND		0.001	0.000372
Anthracene	ND		0.001	0.000322
Fluoranthene	ND		0.001	0.000362
Pyrene	ND		0.001	0.000308
Benzo[a]anthracene	ND		0.001	0.000243
Chrysene	ND		0.001	0.000243
Benzo[b]fluoranthene	ND		0.001	0.000716
Benzo[k]fluoranthene	ND		0.001	0.000683
Benzo[a]pyrene	ND		0.001	0.000381
Indeno[1,2,3-cd]pyrene	ND		0.001	0.000509
Dibenz[a,h]anthracene	ND		0.001	0.000514
Benzo[g,h,i]perylene	ND		0.001	0.000468

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E14-02636 0044

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS QC SUMMARY

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/01/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
CCV040BNA2		C5116.D	N/A	N/A	N/A	N/A	N/A	N/A
BLKS140331-06	SOIL	C5117.D	70	80	62	86	87	90
LCSS140331-06	SOIL	C5118.D	55	58	51	62	60	62
E14-02666-001MS	SOIL	C5119.D	35	49	60	83	87	97
E14-02666-001MSD	SOIL	C5120.D	35	48	76	84	88	95
E14-02666-001	SOIL	C5121.D	N/A	N/A	81	70	N/A	87
E14-02666-002	SOIL	C5122.D	N/A	N/A	71	75	N/A	95
E14-02666-003	SOIL	C5123.D	N/A	N/A	40	70	N/A	50
E14-02666-004	SOIL	C5124.D	N/A	N/A	51	86	N/A	79
E14-02666-005	SOIL	C5125.D	N/A	N/A	40	60	N/A	50
E14-02666-006	SOIL	C5126.D	N/A	N/A	49	75	N/A	78
E14-02666-013	SOIL	C5127.D	N/A	N/A	63	89	N/A	74
E14-02666-014	SOIL	C5128.D	N/A	N/A	55	82	N/A	79
E14-02636-021	SOIL	C5129.D	N/A	N/A	66	87	N/A	82
E14-02636-022	SOIL	C5130.D	N/A	N/A	52	86	N/A	85
E14-02636-023	SOIL	C5131.D	N/A	N/A	58	90	N/A	86
E14-02636-024	SOIL	C5132.D	N/A	N/A	56	91	N/A	84
E14-02636-025	SOIL	C5133.D	N/A	N/A	58	80	N/A	88
E14-02636-026	SOIL	C5134.D	N/A	N/A	52	85	N/A	82
E14-02636-027	SOIL	C5135.D	N/A	N/A	62	90	N/A	90
E14-02636-028	SOIL	C5136.D	N/A	N/A	53	90	N/A	92
E14-02636-029	SOIL	C5137.D	N/A	N/A	55	87	N/A	90

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	45-104	25-100
S2 (PHL) = Phenol-d5	52-106	25-108
S3 (NBZ) = Nitrobenzene-d5	57-107	24-91
S4 (FBP) = 2-Fluorobiphenyl	57-126	33-91
S5 (TBP) = 2,4,6-Tribromophenol	30-147	37-115
S6 (TPH) = Terphenyl-d14	68-133	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/01/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
E14-02636-030	SOIL	C5138.D	N/A	N/A	59	86	N/A	90
E14-02636-031	SOIL	C5139.D	N/A	N/A	54	90	N/A	81
E14-02636-032	SOIL	C5140.D	N/A	N/A	57	89	N/A	82
BLKS140331-05	SOIL	C5141.D	90	96	68	87	101	100
LCSS140331-05	SOIL	C5142.D	90	87	78	75	102	102
E14-02636-001	SOIL	C5143.D	N/A	N/A	56	88	N/A	91
E14-02636-002	SOIL	C5144.D	N/A	N/A	70	85	N/A	75
E14-02636-004	SOIL	C5145.D	N/A	N/A	62	91	N/A	88
E14-02636-005	SOIL	C5146.D	N/A	N/A	58	89	N/A	85
E14-02636-006	SOIL	C5147.D	N/A	N/A	61	89	N/A	85
E14-02636-008	SOIL	C5148.D	N/A	N/A	61	90	N/A	87
E14-02636-009	SOIL	C5149.D	N/A	N/A	55	91	N/A	86
E14-02636-013	SOIL	C5150.D	N/A	N/A	58	89	N/A	92
E14-02636-014	SOIL	C5151.D	N/A	N/A	67	91	N/A	91
E14-02636-015	SOIL	C5152.D	N/A	N/A	59	87	N/A	83
E14-02636-016	SOIL	C5153.D	N/A	N/A	59	89	N/A	81
E14-02636-017	SOIL	C5154.D	N/A	N/A	58	89	N/A	89
E14-02636-019	SOIL	C5155.D	N/A	N/A	62	88	N/A	82
E14-02636-020	SOIL	C5156.D	N/A	N/A	61	89	N/A	85
E14-02636-001MS	SOIL	C5157.D	80	92	71	81	90	86
E14-02636-001MSD	SOIL	C5158.D	75	81	76	77	90	87
E14-02636-003	SOIL	C5159.D	N/A	N/A	69	91	N/A	82

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	45-104	25-100
S2 (PHL) = Phenol-d5	52-106	25-108
S3 (NBZ) = Nitrobenzene-d5	57-107	24-91
S4 (FBP) = 2-Fluorobiphenyl	57-126	33-91
S5 (TBP) = 2,4,6-Tribromophenol	30-147	37-115
S6 (TPH) = Terphenyl-d14	68-133	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/01/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
E14-02636-007	SOIL	C5160.D	N/A	N/A	58	89	N/A	83

	Aqueous	Soil
S1 (2FP) = 2-Fluorophenol	45-104	25-100
S2 (PHL) = Phenol-d5	52-106	25-108
S3 (NBZ) = Nitrobenzene-d5	57-107	24-91
S4 (FBP) = 2-Fluorobiphenyl	57-126	33-91
S5 (TBP) = 2,4,6-Tribromophenol	30-147	37-115
S6 (TPH) = Terphenyl-d14	68-133	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/02/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
CCV040BNA2		A0652.D	N/A	N/A	N/A	N/A	N/A	N/A
BLKS140401-03	SOIL	A0653.D	44	47	57	63	42	75
E14-02713-001	SOIL	A0654.D	N/A	N/A	44	53	N/A	70
LCSS140401-03	SOIL	A0655.D	44	44	64	65	41	83
E14-02679-001MS	SOIL	A0656.D	45	51	52	55	51	81
E14-02679-001MSD	SOIL	A0657.D	46	52	55	58	53	80
E14-02679-001	SOIL	A0658.D	52	58	46	50	52	82
E14-02173-001	SOIL	A0659.D	N/A	N/A	45	52	N/A	60
E14-02173-011	SOIL	A0660.D	N/A	N/A	52	64	N/A	56
E14-02280-002	SOIL	A0661.D	N/A	N/A	61	61	N/A	69
E14-02619-001	SOIL	A0662.D	N/A	N/A	38	47	N/A	79
E14-02636-033	SOIL	A0663.D	N/A	N/A	74	62	N/A	94
E14-02636-034	SOIL	A0664.D	N/A	N/A	48	58	N/A	88
E14-02293-003	SOIL	A0665.D	N/A	N/A	67	61	N/A	64

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	10.-83	25-100
S2 (PHL) = Phenol-d5	10.-91	25-108
S3 (NBZ) = Nitrobenzene-d5	25-94	24-91
S4 (FBP) = 2-Fluorobiphenyl	23-102	33-91
S5 (TBP) = 2,4,6-Tribromophenol	27-110	37-115
S6 (TPH) = Terphenyl-d14	33-113	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/02/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
CCV040BNA2	AQUEOUS	B7805.D	N/A	N/A	N/A	N/A	N/A	N/A
BLKA140401-02	AQUEOUS	B7821.D	58	61	75	95	78	96
LCSA140401-02	AQUEOUS	B7822.D	55	55	71	86	73	97
E14-02616-001MS	AQUEOUS	B7823.D	33	20	93	97	95	102
E14-02616-001MSD	AQUEOUS	B7824.D	33	20	92	98	91	104
E14-02645-001	AQUEOUS	B7825.D	N/A	N/A	76	101	N/A	113
E14-02616-001	AQUEOUS	B7826.D	N/A	N/A	79	94	N/A	113
E14-02629-001	AQUEOUS	B7827.D	N/A	N/A	90	100	N/A	117
E14-02631-001	AQUEOUS	B7828.D	N/A	N/A	83	98	N/A	119
E14-02637-022	AQUEOUS	B7829.D	36	24	87	100	105	124
E14-02637-023	AQUEOUS	B7830.D	33	23	86	93	99	121
E14-02637-024	AQUEOUS	B7831.D	30	21	87	98	85	113
E14-02637-026	AQUEOUS	B7832.D	33	22	90	99	96	122
E14-02637-028	AQUEOUS	B7833.D	36	24	89	98	102	112
E14-02637-030	AQUEOUS	B7834.D	34	23	89	99	96	121
E14-02648-003	AQUEOUS	B7835.D	31	21	76	95	93	121
E14-02605-001	AQUEOUS	B7836.D	N/A	N/A	87	93	N/A	119
E14-02695-001	AQUEOUS	B7837.D	N/A	N/A	94	118	N/A	121
E14-02634-001	AQUEOUS	B7838.D	N/A	N/A	82	96	N/A	117
E14-02634-004	AQUEOUS	B7839.D	N/A	N/A	74	95	N/A	121
E14-02634-005	AQUEOUS	B7840.D	N/A	N/A	83	96	N/A	123
E14-02636-035	AQUEOUS	B7841.D	N/A	N/A	87	98	N/A	118

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	10-100	28-108
S2 (PHL) = Phenol-d5	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	22-115	35-126
S6 (TPH) = Terphenyl-d14	23-124	32-135

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/02/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
E14-02619-002	AQUEOUS	B7842.D	N/A	N/A	88	96	N/A	114
E14-02619-003	AQUEOUS	B7843.D	N/A	N/A	85	93	N/A	117
E14-02635-011	AQUEOUS	B7844.D	N/A	N/A	76	95	N/A	119

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	10-100	28-108
S2 (PHL) = Phenol-d5	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	22-115	35-126
S6 (TPH) = Terphenyl-d14	23-124	32-135

* Column to be used to flag recovery values

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140331-05
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5142.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
N-Nitrosodimethylamine	50.0	38.0	76		40 - 140
Pyridine	50.0	21.9	44		20 - 120
Benzaldehyde	50.0	5.6	11		10 - 110
Phenol	50.0	34.5	69		30 - 140
Aniline	50.0	33.1	66		40 - 140
Bis(2-chloroethyl) ether	50.0	33.9	68		40 - 140
2-Chlorophenol	50.0	37.0	74		30 - 140
1,3-Dichlorobenzene	50.0	36.9	74		40 - 140
1,4-Dichlorobenzene	50.0	39.8	80		40 - 140
Benzyl alcohol	50.0	35.4	71		40 - 140
1,2-Dichlorobenzene	50.0	37.0	74		40 - 140
2-Methylphenol	50.0	39.4	79		30 - 140
Bis(2-chloroisopropyl) ether	50.0	37.4	75		40 - 140
4-Methylphenol	50.0	41.1	82		30 - 140
N-Nitrosodi-n-propylamine	50.0	36.1	72		40 - 140
Acetophenone	50.0	41.9	84		40 - 140
3-Methylphenol	50.0	41.1	82		30 - 140
Hexachloroethane	50.0	30.5	61		40 - 140
Nitrobenzene	50.0	36.0	72		40 - 140
Isophorone	50.0	31.3	63		40 - 140
2-Nitrophenol	50.0	47.2	94		30 - 140
2,4-Dimethylphenol	50.0	29.2	58		30 - 140
Bis(2-chloroethoxy) methane	50.0	29.7	59		40 - 140
Benzoic acid	50.0	47.3	95		30 - 140
2,4-Dimethylaniline	50.0	20.9	42		40 - 140
2,4-Dichlorophenol	50.0	32.2	64		30 - 140
1,2,4-Trichlorobenzene	50.0	28.4	57		40 - 140
Naphthalene	50.0	36.2	72		40 - 140
4-Chloroaniline	50.0	29.9	60		40 - 140
Hexachlorobutadiene	50.0	28.5	57		40 - 140
Caprolactam	50.0	36.7	73		40 - 140
4-Chloro-3-methylphenol	50.0	31.1	62		30 - 140
2-Methylnaphthalene	50.0	31.6	63		40 - 140
Hexachlorocyclopentadiene	50.0	4.9	10		5 - 105
2,4,6-Trichlorophenol	50.0	43.8	88		30 - 140
2,4,5-Trichlorophenol	50.0	48.1	96		30 - 140
1,1'-Biphenyl	50.0	43.0	86		40 - 140
2-Chloronaphthalene	50.0	43.5	87		40 - 140
2-Nitroaniline	50.0	50.0	100		40 - 140
Dimethyl phthalate	50.0	48.8	98		40 - 140
2,6-Dinitrotoluene	50.0	50.0	100		40 - 140
Acenaphthylene	50.0	41.4	83		40 - 140
3-Nitroaniline	50.0	62.7	125		40 - 140
Acenaphthene	50.0	44.0	88		40 - 140
2,4-Dinitrophenol	50.0	12.3	25		5 - 105

E14-02636 0053

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140331-05
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5142.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
4-Nitrophenol	50.0	40.5	81		30 - 140
2,4-Dinitrotoluene	50.0	70.2	140		40 - 140
Dibenzofuran	50.0	42.9	86		40 - 140
Diethyl phthalate	50.0	48.8	98		40 - 140
Fluorene	50.0	44.4	89		40 - 140
4-Chlorophenyl phenyl ether	50.0	43.5	87		40 - 140
4-Nitroaniline	50.0	56.3	113		40 - 140
1,2,4,5-Tetrachlorobenzene	50.0	33.7	67		40 - 140
2,3,4,6-Tetrachlorophenol	50.0	45.5	91		40 - 140
4,6-Dinitro-2-methylphenol	50.0	16.2	32		10 - 110
N-Nitrosodiphenylamine	50.0	46.6	93		40 - 140
1,2-Diphenylhydrazine	50.0	36.2	72		40 - 140
4-Bromophenyl phenyl ether	50.0	40.6	81		40 - 140
Hexachlorobenzene	50.0	40.5	81		40 - 140
Atrazine	50.0	37.6	75		20 - 120
Pentachlorophenol	50.0	47.4	95		30 - 140
Phenanthrene	50.0	45.4	91		40 - 140
Anthracene	50.0	49.7	99		40 - 140
Carbazole	50.0	43.1	86		40 - 140
Di-n-butyl phthalate	50.0	48.2	96		40 - 140
Fluoranthene	50.0	43.3	87		40 - 140
Benzidine	50.0	7.4	15		5 - 105
Pyrene	50.0	53.3	107		40 - 140
3,3'-Dimethylbenzidine	50.0	21.9	44		5 - 105
Butyl benzyl phthalate	50.0	55.6	111		40 - 140
3,3'-Dichlorobenzidine	50.0	67.5	135		40 - 140
Benzo[a]anthracene	50.0	60.4	121		40 - 140
Chrysene	50.0	65.5	131		40 - 140
Bis(2-ethylhexyl) phthalate	50.0	57.8	116		40 - 140
Di-n-octyl phthalate	50.0	60.4	121		40 - 140
Benzo[b]fluoranthene	50.0	56.6	113		40 - 140
Benzo[k]fluoranthene	50.0	63.8	128		40 - 140
Benzo[a]pyrene	50.0	64.3	129		40 - 140
Indeno[1,2,3-cd]pyrene	50.0	56.9	114		40 - 140
Dibenz[a,h]anthracene	50.0	60.8	122		40 - 140
Benzo[g,h,i]perylene	50.0	49.3	99		40 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

E14-02636 0054

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140331-06
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5118.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
N-Nitrosodimethylamine	50.0	39.1	78		40 - 140
Pyridine	50.0	25.2	50		20 - 120
Benzaldehyde	50.0	6.8	14		10 - 110
Phenol	50.0	41.1	82		30 - 140
Aniline	50.0	40.4	81		40 - 140
Bis(2-chloroethyl) ether	50.0	41.0	82		40 - 140
2-Chlorophenol	50.0	44.8	90		30 - 140
1,3-Dichlorobenzene	50.0	46.1	92		40 - 140
1,4-Dichlorobenzene	50.0	43.3	87		40 - 140
Benzyl alcohol	50.0	43.1	86		40 - 140
1,2-Dichlorobenzene	50.0	42.6	85		40 - 140
2-Methylphenol	50.0	47.3	95		30 - 140
Bis(2-chloroisopropyl) ether	50.0	43.5	87		40 - 140
4-Methylphenol	50.0	48.3	97		30 - 140
N-Nitrosodi-n-propylamine	50.0	40.9	82		40 - 140
Acetophenone	50.0	47.2	94		40 - 140
3-Methylphenol	50.0	48.3	97		30 - 140
Hexachloroethane	50.0	39.0	78		40 - 140
Nitrobenzene	50.0	52.2	104		40 - 140
Isophorone	50.0	44.0	88		40 - 140
2-Nitrophenol	50.0	66.7	133		30 - 140
2,4-Dimethylphenol	50.0	44.1	88		30 - 140
Bis(2-chloroethoxy) methane	50.0	46.0	92		40 - 140
Benzoic acid	50.0	61.7	123		30 - 140
2,4-Dimethylaniline	50.0	31.2	62		40 - 140
2,4-Dichlorophenol	50.0	47.1	94		30 - 140
1,2,4-Trichlorobenzene	50.0	40.0	80		40 - 140
Naphthalene	50.0	49.6	99		40 - 140
4-Chloroaniline	50.0	45.0	90		40 - 140
Hexachlorobutadiene	50.0	41.9	84		40 - 140
Caprolactam	50.0	54.5	109		40 - 140
4-Chloro-3-methylphenol	50.0	45.9	92		30 - 140
2-Methylnaphthalene	50.0	46.6	93		40 - 140
Hexachlorocyclopentadiene	50.0	26.0	52		5 - 105
2,4,6-Trichlorophenol	50.0	54.8	110		30 - 140
2,4,5-Trichlorophenol	50.0	60.1	120		30 - 140
1,1'-Biphenyl	50.0	49.3	99		40 - 140
2-Chloronaphthalene	50.0	52.5	105		40 - 140
2-Nitroaniline	50.0	62.9	126		40 - 140
Dimethyl phthalate	50.0	56.4	113		40 - 140
2,6-Dinitrotoluene	50.0	66.4	133		40 - 140
Acenaphthylene	50.0	46.4	93		40 - 140
3-Nitroaniline	50.0	69.1	138		40 - 140
Acenaphthene	50.0	53.8	108		40 - 140
2,4-Dinitrophenol	50.0	52.7	105		5 - 105

E14-02636 0055

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140331-06
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5118.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
4-Nitrophenol	50.0	51.4	103		30 - 140
2,4-Dinitrotoluene	50.0	65.4	131		40 - 140
Dibenzofuran	50.0	45.2	90		40 - 140
Diethyl phthalate	50.0	56.4	113		40 - 140
Fluorene	50.0	58.1	116		40 - 140
4-Chlorophenyl phenyl ether	50.0	54.6	109		40 - 140
4-Nitroaniline	50.0	66.0	132		40 - 140
1,2,4,5-Tetrachlorobenzene	50.0	41.1	82		40 - 140
2,3,4,6-Tetrachlorophenol	50.0	60.8	122		40 - 140
4,6-Dinitro-2-methylphenol	50.0	51.0	102		10 - 110
N-Nitrosodiphenylamine	50.0	52.8	106		40 - 140
1,2-Diphenylhydrazine	50.0	40.2	80		40 - 140
4-Bromophenyl phenyl ether	50.0	45.9	92		40 - 140
Hexachlorobenzene	50.0	48.0	96		40 - 140
Atrazine	50.0	42.1	84		20 - 120
Pentachlorophenol	50.0	55.5	111		30 - 140
Phenanthrene	50.0	53.2	106		40 - 140
Anthracene	50.0	51.4	103		40 - 140
Carbazole	50.0	51.8	104		40 - 140
Di-n-butyl phthalate	50.0	46.9	94		40 - 140
Fluoranthene	50.0	49.0	98		40 - 140
Benzidine	50.0	5.0	10		5 - 105
Pyrene	50.0	64.6	129		40 - 140
3,3'-Dimethylbenzidine	50.0	20.8	42		5 - 105
Butyl benzyl phthalate	50.0	64.8	130		40 - 140
3,3'-Dichlorobenzidine	50.0	61.5	123		40 - 140
Benzo[a]anthracene	50.0	58.2	116		40 - 140
Chrysene	50.0	63.4	127		40 - 140
Bis(2-ethylhexyl) phthalate	50.0	64.4	129		40 - 140
Di-n-octyl phthalate	50.0	69.2	138		40 - 140
Benzo[b]fluoranthene	50.0	61.7	123		40 - 140
Benzo[k]fluoranthene	50.0	66.8	134		40 - 140
Benzo[a]pyrene	50.0	68.6	137		40 - 140
Indeno[1,2,3-cd]pyrene	50.0	68.4	137		40 - 140
Dibenz[a,h]anthracene	50.0	68.9	138		40 - 140
Benzo[g,h,i]perylene	50.0	68.2	136		40 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

E14-02636 0056

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140401-03
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0655.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
N-Nitrosodimethylamine	50.0	38.1	76		40 - 140
Pyridine	50.0	25.1	50		20 - 120
Benzaldehyde	50.0	37.6	75		10 - 110
Phenol	50.0	40.5	81		30 - 140
Aniline	50.0	36.6	73		40 - 140
Bis(2-chloroethyl) ether	50.0	37.9	76		40 - 140
2-Chlorophenol	50.0	35.0	70		30 - 140
1,3-Dichlorobenzene	50.0	37.1	74		40 - 140
1,4-Dichlorobenzene	50.0	37.6	75		40 - 140
Benzyl alcohol	50.0	40.7	81		40 - 140
1,2-Dichlorobenzene	50.0	38.5	77		40 - 140
2-Methylphenol	50.0	40.8	82		30 - 140
Bis(2-chloroisopropyl) ether	50.0	40.9	82		40 - 140
4-Methylphenol	50.0	42.3	85		30 - 140
N-Nitrosodi-n-propylamine	50.0	36.5	73		40 - 140
Acetophenone	50.0	44.0	88		40 - 140
3-Methylphenol	50.0	42.3	85		30 - 140
Hexachloroethane	50.0	35.9	72		40 - 140
Nitrobenzene	50.0	37.7	75		40 - 140
Isophorone	50.0	35.9	72		40 - 140
2-Nitrophenol	50.0	35.4	71		30 - 140
2,4-Dimethylphenol	50.0	39.3	79		30 - 140
Bis(2-chloroethoxy) methane	50.0	40.8	82		40 - 140
Benzoic acid	50.0	39.9	80		30 - 140
2,4-Dimethylaniline	50.0	26.0	52		40 - 140
2,4-Dichlorophenol	50.0	38.5	77		30 - 140
1,2,4-Trichlorobenzene	50.0	36.4	73		40 - 140
Naphthalene	50.0	36.6	73		40 - 140
4-Chloroaniline	50.0	36.9	74		40 - 140
Hexachlorobutadiene	50.0	35.8	72		40 - 140
Caprolactam	50.0	41.0	82		40 - 140
4-Chloro-3-methylphenol	50.0	37.7	75		30 - 140
2-Methylnaphthalene	50.0	38.5	77		40 - 140
Hexachlorocyclopentadiene	50.0	40.9	82		5 - 105
2,4,6-Trichlorophenol	50.0	35.7	71		30 - 140
2,4,5-Trichlorophenol	50.0	37.4	75		30 - 140
1,1'-Biphenyl	50.0	39.8	80		40 - 140
2-Chloronaphthalene	50.0	38.7	77		40 - 140
2-Nitroaniline	50.0	37.6	75		40 - 140
Dimethyl phthalate	50.0	38.6	77		40 - 140
2,6-Dinitrotoluene	50.0	36.9	74		40 - 140
Acenaphthylene	50.0	36.7	73		40 - 140
3-Nitroaniline	50.0	38.7	77		40 - 140
Acenaphthene	50.0	37.7	75		40 - 140
2,4-Dinitrophenol	50.0	46.1	92		5 - 105

E14-02636 0057

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140401-03
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0655.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
4-Nitrophenol	50.0	33.7	67		30 - 140
2,4-Dinitrotoluene	50.0	38.1	76		40 - 140
Dibenzofuran	50.0	38.1	76		40 - 140
Diethyl phthalate	50.0	36.0	72		40 - 140
Fluorene	50.0	37.5	75		40 - 140
4-Chlorophenyl phenyl ether	50.0	38.1	76		40 - 140
4-Nitroaniline	50.0	36.1	72		40 - 140
1,2,4,5-Tetrachlorobenzene	50.0	32.1	64		40 - 140
2,3,4,6-Tetrachlorophenol	50.0	36.5	73		40 - 140
4,6-Dinitro-2-methylphenol	50.0	42.1	84		10 - 110
N-Nitrosodiphenylamine	50.0	37.5	75		40 - 140
1,2-Diphenylhydrazine	50.0	32.5	65		40 - 140
4-Bromophenyl phenyl ether	50.0	38.1	76		40 - 140
Hexachlorobenzene	50.0	37.3	75		40 - 140
Atrazine	50.0	27.2	54		20 - 120
Pentachlorophenol	50.0	34.0	68		30 - 140
Phenanthrene	50.0	35.5	71		40 - 140
Anthracene	50.0	37.0	74		40 - 140
Carbazole	50.0	37.1	74		40 - 140
Di-n-butyl phthalate	50.0	37.9	76		40 - 140
Fluoranthene	50.0	35.4	71		40 - 140
Benzidine	50.0	15.5	31		5 - 105
Pyrene	50.0	49.3	99		40 - 140
3,3'-Dimethylbenzidine	50.0	15.6	31		5 - 105
Butyl benzyl phthalate	50.0	51.8	104		40 - 140
3,3'-Dichlorobenzidine	50.0	40.2	80		40 - 140
Benzo[a]anthracene	50.0	48.1	96		40 - 140
Chrysene	50.0	51.7	103		40 - 140
Bis(2-ethylhexyl) phthalate	50.0	51.8	104		40 - 140
Di-n-octyl phthalate	50.0	56.6	113		40 - 140
Benzo[b]fluoranthene	50.0	55.0	110		40 - 140
Benzo[k]fluoranthene	50.0	44.0	88		40 - 140
Benzo[a]pyrene	50.0	50.8	102		40 - 140
Indeno[1,2,3-cd]pyrene	50.0	45.8	92		40 - 140
Dibenz[a,h]anthracene	50.0	47.6	95		40 - 140
Benzo[g,h,i]perylene	50.0	45.1	90		40 - 140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
NC Not calculable

E14-02636 0058

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140401-03
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0655.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
4-Nitrophenol	50.0	33.7	67		30 - 140
2,4-Dinitrotoluene	50.0	38.1	76		40 - 140
Dibenzofuran	50.0	38.1	76		40 - 140
Diethyl phthalate	50.0	36.0	72		40 - 140
Fluorene	50.0	37.5	75		40 - 140
4-Chlorophenyl phenyl ether	50.0	38.1	76		40 - 140
4-Nitroaniline	50.0	36.1	72		40 - 140
1,2,4,5-Tetrachlorobenzene	50.0	32.1	64		40 - 140
2,3,4,6-Tetrachlorophenol	50.0	36.5	73		40 - 140
4,6-Dinitro-2-methylphenol	50.0	42.1	84		10 - 110
N-Nitrosodiphenylamine	50.0	37.5	75		40 - 140
1,2-Diphenylhydrazine	50.0	32.5	65		40 - 140
4-Bromophenyl phenyl ether	50.0	38.1	76		40 - 140
Hexachlorobenzene	50.0	37.3	75		40 - 140
Atrazine	50.0	27.2	54		20 - 120
Pentachlorophenol	50.0	34.0	68		30 - 140
Phenanthrene	50.0	35.5	71		40 - 140
Anthracene	50.0	37.0	74		40 - 140
Carbazole	50.0	37.1	74		40 - 140
Di-n-butyl phthalate	50.0	37.9	76		40 - 140
Fluoranthene	50.0	35.4	71		40 - 140
Benzidine	50.0	15.5	31		5 - 105
Pyrene	50.0	49.3	99		40 - 140
3,3'-Dimethylbenzidine	50.0	15.6	31		5 - 105
Butyl benzyl phthalate	50.0	51.8	104		40 - 140
3,3'-Dichlorobenzidine	50.0	40.2	80		40 - 140
Benzo[a]anthracene	50.0	48.1	96		40 - 140
Chrysene	50.0	51.7	103		40 - 140
Bis(2-ethylhexyl) phthalate	50.0	51.8	104		40 - 140
Di-n-octyl phthalate	50.0	56.6	113		40 - 140
Benzo[b]fluoranthene	50.0	55.0	110		40 - 140
Benzo[k]fluoranthene	50.0	44.0	88		40 - 140
Benzo[a]pyrene	50.0	50.8	102		40 - 140
Indeno[1,2,3-cd]pyrene	50.0	45.8	92		40 - 140
Dibenz[a,h]anthracene	50.0	47.6	95		40 - 140
Benzo[g,h,i]perylene	50.0	45.1	90		40 - 140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
NC Not calculable

E14-02636 0059

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA140401-02
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: B7822.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
N-Nitrosodimethylamine	30.0	26.0	87		40 - 140
Pyridine	30.0	17.2	57		20 - 120
Benzaldehyde	30.0	29.6	99		10 - 110
Phenol	30.0	22.7	76		30 - 140
Aniline	30.0	21.1	70		40 - 140
Bis(2-chloroethyl) ether	30.0	21.9	73		40 - 140
2-Chlorophenol	30.0	23.0	77		30 - 140
1,3-Dichlorobenzene	30.0	25.3	84		40 - 140
1,4-Dichlorobenzene	30.0	20.9	70		40 - 140
Benzyl alcohol	30.0	25.5	85		40 - 140
1,2-Dichlorobenzene	30.0	25.5	85		40 - 140
2-Methylphenol	30.0	21.1	70		30 - 140
Bis(2-chloroisopropyl) ether	30.0	20.4	68		40 - 140
4-Methylphenol	30.0	22.4	75		30 - 140
N-Nitrosodi-n-propylamine	30.0	19.0	63		40 - 140
Acetophenone	30.0	21.8	73		40 - 140
3-Methylphenol	30.0	22.4	75		30 - 140
Hexachloroethane	30.0	24.6	82		40 - 140
Nitrobenzene	30.0	23.1	77		40 - 140
Isophorone	30.0	24.4	81		40 - 140
2-Nitrophenol	30.0	29.0	97		30 - 140
2,4-Dimethylphenol	30.0	27.4	91		30 - 140
Bis(2-chloroethoxy) methane	30.0	27.2	91		40 - 140
Benzoic acid	30.0	23.4	78		30 - 140
2,4-Dimethylaniline	30.0	17.5	58		40 - 140
2,4-Dichlorophenol	30.0	29.5	98		30 - 140
1,2,4-Trichlorobenzene	30.0	29.5	98		40 - 140
Naphthalene	30.0	20.7	69		40 - 140
4-Chloroaniline	30.0	22.0	73		40 - 140
Hexachlorobutadiene	30.0	29.8	99		40 - 140
Caprolactam	30.0	26.8	89		40 - 140
4-Chloro-3-methylphenol	30.0	24.1	80		30 - 140
2-Methylnaphthalene	30.0	24.0	80		40 - 140
Hexachlorocyclopentadiene	30.0	24.7	82		5 - 105
2,4,6-Trichlorophenol	30.0	32.2	107		30 - 140
2,4,5-Trichlorophenol	30.0	32.6	109		30 - 140
1,1'-Biphenyl	30.0	27.7	92		40 - 140
2-Chloronaphthalene	30.0	28.2	94		40 - 140
2-Nitroaniline	30.0	32.6	109		40 - 140
Dimethyl phthalate	30.0	30.7	102		40 - 140
2,6-Dinitrotoluene	30.0	37.0	123		40 - 140
Acenaphthylene	30.0	27.1	90		40 - 140
3-Nitroaniline	30.0	35.5	118		40 - 140
Acenaphthene	30.0	22.3	74		40 - 140
2,4-Dinitrophenol	30.0	29.8	99		5 - 105

E14-02636 0060

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA140401-02
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: B7822.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
4-Nitrophenol	30.0	24.9	83		30 - 140
2,4-Dinitrotoluene	30.0	41.5	138		40 - 140
Dibenzofuran	30.0	26.1	87		40 - 140
Diethyl phthalate	30.0	30.5	102		40 - 140
Fluorene	30.0	22.8	76		40 - 140
4-Chlorophenyl phenyl ether	30.0	32.9	110		40 - 140
4-Nitroaniline	30.0	29.8	99		40 - 140
1,2,4,5-Tetrachlorobenzene	30.0	33.9	113		40 - 140
2,3,4,6-Tetrachlorophenol	30.0	36.0	120		40 - 140
4,6-Dinitro-2-methylphenol	30.0	22.1	74		10 - 110
N-Nitrosodiphenylamine	30.0	27.6	92		40 - 140
1,2-Diphenylhydrazine	30.0	22.1	74		40 - 140
4-Bromophenyl phenyl ether	30.0	31.5	105		40 - 140
Hexachlorobenzene	30.0	31.4	105		40 - 140
Atrazine	30.0	23.0	77		20 - 120
Pentachlorophenol	30.0	33.5	112		30 - 140
Phenanthrene	30.0	24.4	81		40 - 140
Anthracene	30.0	27.3	91		40 - 140
Carbazole	30.0	26.1	87		40 - 140
Di-n-butyl phthalate	30.0	27.5	92		40 - 140
Fluoranthene	30.0	26.2	87		40 - 140
Benzidine	30.0	17.2	57		5 - 105
Pyrene	30.0	33.4	111		40 - 140
3,3'-Dimethylbenzidine	30.0	14.8	49		5 - 105
Butyl benzyl phthalate	30.0	20.6	69		40 - 140
3,3'-Dichlorobenzidine	30.0	27.3	91		40 - 140
Benzo[a]anthracene	30.0	30.7	102		40 - 140
Chrysene	30.0	33.7	112		40 - 140
Bis(2-ethylhexyl) phthalate	30.0	23.5	78		40 - 140
Di-n-octyl phthalate	30.0	31.4	105		40 - 140
Benzo[b]fluoranthene	30.0	33.1	110		40 - 140
Benzo[k]fluoranthene	30.0	32.5	108		40 - 140
Benzo[a]pyrene	30.0	30.4	101		40 - 140
Indeno[1,2,3-cd]pyrene	30.0	24.6	82		40 - 140
Dibenz[a,h]anthracene	30.0	29.2	97		40 - 140
Benzo[g,h,i]perylene	30.0	31.9	106		40 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

E14-02636 0061

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02666-001
Date Received: 03/31/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
MS Data file: C5119.D
MSD Data file: C5120.D

GC/MS Column: DB-5
Sample wt/vol: 15.17g
Matrix-Units: Soil-mg/Kg
% Moisture: 21.9
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
N-Nitrosodimethylamine	50.0	0.0	27.2	54		25.5	51		6		40-140/30
Pyridine	50.0	0.0	15.8	32		15.2	30		4		20-120/30
Benzaldehyde	50.0	0.0	10.9	22		10.6	21		3		10-110/30
Phenol	50.0	0.0	24.1	48		23.6	47		2		30-140/30
Aniline	50.0	0.0	21.1	42		20.6	41		2		40-140/30
Bis(2-chloroethyl) ether	50.0	0.0	27.8	56		27.6	55		1		40-140/30
2-Chlorophenol	50.0	0.0	26.1	52		26.1	52		0		30-140/30
1,3-Dichlorobenzene	50.0	0.0	31.6	63		29.1	58		8		40-140/30
1,4-Dichlorobenzene	50.0	0.0	29.7	59		30.7	61		3		40-140/30
Benzyl alcohol	50.0	0.0	28.4	57		28.3	57		0		40-140/30
1,2-Dichlorobenzene	50.0	0.0	29.8	60		29.5	59		1		40-140/30
2-Methylphenol	50.0	0.0	15.3	31		16.0	32		4		30-140/30
Bis(2-chloroisopropyl) ether	50.0	0.0	32.3	65		31.4	63		3		40-140/30
4-Methylphenol	50.0	0.0	15.2	30		14.9	30		2		30-140/30
N-Nitrosodi-n-propylamine	50.0	0.0	32.4	65		30.9	62		5		40-140/30
Acetophenone	50.0	0.0	39.1	78		38.2	76		2		40-140/30
3-Methylphenol	50.0	0.0	15.2	30		14.9	30		2		30-140/30
Hexachloroethane	50.0	0.0	29.0	58		27.9	56		4		40-140/30
Nitrobenzene	50.0	0.0	34.8	70		42.5	85		20		40-140/30
Isophorone	50.0	0.0	30.2	60		36.7	73		19		40-140/30
2-Nitrophenol	50.0	0.0	48.8	98		58.6	117		18		30-140/30
2,4-Dimethylphenol	50.0	0.0	15.8	32		15.4	31		3		30-140/30
Bis(2-chloroethoxy) methane	50.0	0.0	30.1	60		37.2	74		21		40-140/30
Benzoic acid	50.0	0.0	26.7	53		23.0	46		15		30-140/30
2,4-Dimethylaniline	50.0	0.0	21.0	42		21.3	43		1		40-140/30
2,4-Dichlorophenol	50.0	0.0	27.2	54		34.3	69		23		30-140/30
1,2,4-Trichlorobenzene	50.0	0.0	27.0	54		32.8	66		19		40-140/30
Naphthalene	50.0	13.3	34.0	41		44.5	62		27		40-140/30
4-Chloroaniline	50.0	0.0	27.2	54		34.7	69		24		40-140/30
Hexachlorobutadiene	50.0	0.0	26.7	53		33.6	67		23		40-140/30
Caprolactam	50.0	0.0	41.8	84		50.3	101		18		40-140/30
4-Chloro-3-methylphenol	50.0	0.0	23.9	48		29.1	58		20		30-140/30
2-Methylnaphthalene	50.0	17.4	39.2	44		44.5	54		13		40-140/30
Hexachlorocyclopentadiene	50.0	0.0	22.6	45		21.1	42		7		5-105/30
2,4,6-Trichlorophenol	50.0	0.0	34.5	69		34.5	69		0		30-140/30
2,4,5-Trichlorophenol	50.0	0.0	39.9	80		40.8	82		2		30-140/30
1,1'-Biphenyl	50.0	0.0	35.0	70		34.1	68		3		40-140/30
2-Chloronaphthalene	50.0	0.0	40.4	81		40.3	81		0		40-140/30
2-Nitroaniline	50.0	0.0	50.6	101		50.2	100		1		40-140/30
Dimethyl phthalate	50.0	0.0	45.1	90		45.9	92		2		40-140/30
2,6-Dinitrotoluene	50.0	0.0	53.2	106		56.7	113		6		40-140/30
Acenaphthylene	50.0	0.0	35.4	71		39.8	80		12		40-140/30
3-Nitroaniline	50.0	0.0	57.9	116		62.2	124		7		40-140/30
Acenaphthene	50.0	0.0	42.7	85		42.3	85		1		40-140/30
2,4-Dinitrophenol	50.0	0.0	3.3	7		2.9	6		13		5-105/30

E14-02636 0062

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02666-001
Date Received: 03/31/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
MS Data file: C5119.D
MSD Data file: C5120.D

GC/MS Column: DB-5
Sample wt/vol: 15.17g
Matrix-Units: Soil-mg/Kg
% Moisture: 21.9
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
4-Nitrophenol	50.0	0.0	17.8	36		17.6	35		1		30-140/30
2,4-Dinitrotoluene	50.0	0.0	61.3	123		66.9	134		9		40-140/30
Dibenzofuran	50.0	0.0	39.9	80		42.0	84		5		40-140/30
Diethyl phthalate	50.0	0.0	43.4	87		43.5	87		0		40-140/30
Fluorene	50.0	0.0	44.7	89		43.1	86		4		40-140/30
4-Chlorophenyl phenyl ether	50.0	0.0	41.7	83		41.1	82		1		40-140/30
4-Nitroaniline	50.0	0.0	24.4	49		23.5	47		4		40-140/30
1,2,4,5-Tetrachlorobenzene	50.0	0.0	32.0	64		31.9	64		0		40-140/30
2,3,4,6-Tetrachlorophenol	50.0	0.0	32.9	66		31.9	64		3		40-140/30
4,6-Dinitro-2-methylphenol	50.0	0.0	20.3	41		19.9	40		2		10-110/30
N-Nitrosodiphenylamine	50.0	0.0	42.2	84		43.5	87		3		40-140/30
1,2-Diphenylhydrazine	50.0	0.0	32.0	64		33.8	68		5		40-140/30
4-Bromophenyl phenyl ether	50.0	0.0	37.9	76		38.9	78		3		40-140/30
Hexachlorobenzene	50.0	0.0	37.6	75		39.3	79		4		40-140/30
Atrazine	50.0	0.0	32.8	66		33.2	66		1		20-120/30
Pentachlorophenol	50.0	0.0	20.3	41		20.5	41		1		30-140/30
Phenanthrene	50.0	2.1	45.1	86		45.5	87		1		40-140/30
Anthracene	50.0	1.0	49.8	98		46.9	92		6		40-140/30
Carbazole	50.0	0.0	39.4	79		41.4	83		5		40-140/30
Di-n-butyl phthalate	50.0	0.0	43.0	86		38.9	78		10		40-140/30
Fluoranthene	50.0	2.9	41.2	77		42.5	79		3		40-140/30
Benzidine	50.0	0.0	3.1	6		3.5	7		12		5-105/30
Pyrene	50.0	4.2	61.4	114		63.5	119		3		40-140/30
3,3'-Dimethylbenzidine	50.0	0.0	5.5	11		4.9	10		12		5-105/30
Butyl benzyl phthalate	50.0	0.0	58.2	116		61.5	123		6		40-140/30
3,3'-Dichlorobenzidine	50.0	0.0	53.6	107		53.3	107		1		40-140/30
Benzo[a]anthracene	50.0	2.5	56.9	109		57.4	110		1		40-140/30
Chrysene	50.0	3.5	62.2	117		62.1	117		0		40-140/30
Bis(2-ethylhexyl) phthalate	50.0	0.0	61.1	122		61.0	122		0		40-140/30
Di-n-octyl phthalate	50.0	0.0	56.7	113		58.5	117		3		40-140/30
Benzo[b]fluoranthene	50.0	4.8	58.6	108		57.4	105		2		40-140/30
Benzo[k]fluoranthene	50.0	2.8	52.2	99		57.8	110		10		40-140/30
Benzo[a]pyrene	50.0	2.5	60.0	115		59.8	115		0		40-140/30
Indeno[1,2,3-cd]pyrene	50.0	3.2	59.1	112		63.1	120		7		40-140/30
Dibenz[a,h]anthracene	50.0	1.3	60.0	117		64.3	126		7		40-140/30
Benzo[g,h,i]perylene	50.0	3.2	58.6	111		62.3	118		6		40-140/30

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

E14-02636 0063

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02636-001
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
MS Data file: C5157.D
MSD Data file: C5158.D

GC/MS Column: DB-5
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
% Moisture: 18.8
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
N-Nitrosodimethylamine	50.0	0.0	33.3	67		31.7	63		5		40-140/30
Pyridine	50.0	0.0	19.5	39		20.2	40		4		20-120/30
Benzaldehyde	50.0	0.0	5.4	11		5.2	10		4		10-110/30
Phenol	50.0	0.0	31.8	64		30.9	62		3		30-140/30
Aniline	50.0	0.0	30.5	61		29.0	58		5		40-140/30
Bis(2-chloroethyl) ether	50.0	0.0	30.6	61		30.1	60		2		40-140/30
2-Chlorophenol	50.0	0.0	32.6	65		31.9	64		2		30-140/30
1,3-Dichlorobenzene	50.0	0.0	32.3	65		32.3	65		0		40-140/30
1,4-Dichlorobenzene	50.0	0.0	34.0	68		33.4	67		2		40-140/30
Benzyl alcohol	50.0	0.0	33.4	67		32.6	65		2		40-140/30
1,2-Dichlorobenzene	50.0	0.0	32.7	65		32.4	65		1		40-140/30
2-Methylphenol	50.0	0.0	36.7	73		35.4	71		4		30-140/30
Bis(2-chloroisopropyl) ether	50.0	0.0	35.9	72		33.9	68		6		40-140/30
4-Methylphenol	50.0	0.0	38.8	78		37.8	76		3		30-140/30
N-Nitrosodi-n-propylamine	50.0	0.0	35.2	70		33.8	68		4		40-140/30
Acetophenone	50.0	0.0	39.7	79		38.1	76		4		40-140/30
3-Methylphenol	50.0	0.0	38.8	78		37.8	76		3		30-140/30
Hexachloroethane	50.0	0.0	26.0	52		26.3	53		1		40-140/30
Nitrobenzene	50.0	0.0	34.3	69		34.6	69		1		40-140/30
Isophorone	50.0	0.0	31.0	62		31.1	62		0		40-140/30
2-Nitrophenol	50.0	0.0	43.5	87		46.9	94		8		30-140/30
2,4-Dimethylphenol	50.0	0.0	28.8	58		29.6	59		3		30-140/30
Bis(2-chloroethoxy) methane	50.0	0.0	29.9	60		29.8	60		0		40-140/30
Benzoic acid	50.0	0.0	17.8	36		20.8	42		16		30-140/30
2,4-Dimethylaniline	50.0	0.0	20.5	41		20.2	40		1		40-140/30
2,4-Dichlorophenol	50.0	0.0	30.5	61		30.6	61		0		30-140/30
1,2,4-Trichlorobenzene	50.0	0.0	26.3	53		27.1	54		3		40-140/30
Naphthalene	50.0	0.0	38.7	77		32.1	64		19		40-140/30
4-Chloroaniline	50.0	0.0	28.9	58		28.9	58		0		40-140/30
Hexachlorobutadiene	50.0	0.0	26.1	52		27.6	55		6		40-140/30
Caprolactam	50.0	0.0	35.3	71		32.5	65		8		40-140/30
4-Chloro-3-methylphenol	50.0	0.0	30.5	61		29.8	60		2		30-140/30
2-Methylnaphthalene	50.0	0.0	31.0	62		31.7	63		2		40-140/30
Hexachlorocyclopentadiene	50.0	0.0	2.3	5		2.8	6		20		5-105/30
2,4,6-Trichlorophenol	50.0	0.0	39.2	78		40.8	82		4		30-140/30
2,4,5-Trichlorophenol	50.0	0.0	43.5	87		44.6	89		2		30-140/30
1,1'-Biphenyl	50.0	0.0	38.2	76		39.1	78		2		40-140/30
2-Chloronaphthalene	50.0	0.0	39.7	79		41.9	84		5		40-140/30
2-Nitroaniline	50.0	0.0	47.1	94		47.3	95		0		40-140/30
Dimethyl phthalate	50.0	0.0	44.1	88		45.4	91		3		40-140/30
2,6-Dinitrotoluene	50.0	0.0	45.7	91		50.1	100		9		40-140/30
Acenaphthylene	50.0	0.0	37.9	76		38.8	78		2		40-140/30
3-Nitroaniline	50.0	0.0	59.5	119		59.3	119		0		40-140/30
Acenaphthene	50.0	0.0	40.4	81		39.8	80		1		40-140/30
2,4-Dinitrophenol	50.0	0.0	3.0	6		2.8	6		7		5-105/30

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INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02636-001
Date Received: 03/28/2014
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
MS Data file: C5157.D
MSD Data file: C5158.D

GC/MS Column: DB-5
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
% Moisture: 18.8
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
4-Nitrophenol	50.0	0.0	37.8	76		34.7	69		9		30-140/30
2,4-Dinitrotoluene	50.0	0.0	63.7	127		66.5	133		4		40-140/30
Dibenzofuran	50.0	0.0	39.1	78		39.4	79		1		40-140/30
Diethyl phthalate	50.0	0.0	42.2	84		42.8	86		1		40-140/30
Fluorene	50.0	0.0	42.0	84		40.4	81		4		40-140/30
4-Chlorophenyl phenyl ether	50.0	0.0	39.0	78		38.6	77		1		40-140/30
4-Nitroaniline	50.0	0.0	49.7	99		47.5	95		5		40-140/30
1,2,4,5-Tetrachlorobenzene	50.0	0.0	29.7	59		31.6	63		6		40-140/30
2,3,4,6-Tetrachlorophenol	50.0	0.0	41.7	83		40.4	81		3		40-140/30
4,6-Dinitro-2-methylphenol	50.0	0.0	11.8	24		12.1	24		3		10-110/30
N-Nitrosodiphenylamine	50.0	0.0	40.1	80		41.4	83		3		40-140/30
1,2-Diphenylhydrazine	50.0	0.0	32.4	65		33.4	67		3		40-140/30
4-Bromophenyl phenyl ether	50.0	0.0	34.5	69		37.3	75		8		40-140/30
Hexachlorobenzene	50.0	0.0	35.5	71		36.4	73		3		40-140/30
Atrazine	50.0	0.0	32.1	64		33.1	66		3		20-120/30
Pentachlorophenol	50.0	0.0	37.4	75		37.7	75		1		30-140/30
Phenanthrene	50.0	0.0	39.4	79		40.7	81		3		40-140/30
Anthracene	50.0	0.0	43.8	88		45.1	90		3		40-140/30
Carbazole	50.0	0.0	37.3	75		37.4	75		0		40-140/30
Di-n-butyl phthalate	50.0	0.0	40.6	81		42.4	85		4		40-140/30
Fluoranthene	50.0	0.0	38.2	76		37.4	75		2		40-140/30
Benzidine	50.0	0.0	6.2	12		6.9	14		11		5-105/30
Pyrene	50.0	0.0	47.4	95		46.9	94		1		40-140/30
3,3'-Dimethylbenzidine	50.0	0.0	22.6	45		22.2	44		2		5-105/30
Butyl benzyl phthalate	50.0	0.0	50.6	101		49.6	99		2		40-140/30
3,3'-Dichlorobenzidine	50.0	0.0	58.8	118		58.9	118		0		40-140/30
Benzo[a]anthracene	50.0	0.0	51.8	104		52.4	105		1		40-140/30
Chrysene	50.0	0.0	56.4	113		57.9	116		3		40-140/30
Bis(2-ethylhexyl) phthalate	50.0	0.0	52.8	106		50.0	100		5		40-140/30
Di-n-octyl phthalate	50.0	0.0	51.4	103		51.3	103		0		40-140/30
Benzo[b]fluoranthene	50.0	0.0	45.5	91		49.6	99		9		40-140/30
Benzo[k]fluoranthene	50.0	0.0	54.9	110		52.4	105		5		40-140/30
Benzo[a]pyrene	50.0	0.0	52.4	105		55.3	111		5		40-140/30
Indeno[1,2,3-cd]pyrene	50.0	0.0	47.6	95		47.2	94		1		40-140/30
Dibenz[a,h]anthracene	50.0	0.0	50.8	102		50.4	101		1		40-140/30
Benzo[g,h,i]perylene	50.0	0.0	40.6	81		39.8	80		2		40-140/30

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

E14-02636 0065

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02679-001
Date Received: 03/31/2014
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
MS Data file: A0656.D
MSD Data file: A0657.D

GC/MS Column: DB-5
Sample wt/vol: 15.15g
Matrix-Units: Soil-mg/Kg
% Moisture: 19.2
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
N-Nitrosodimethylamine	50.0	0.0	28.4	57		29.2	58		3		40-140/30
Pyridine	50.0	0.0	12.7	25		14.2	28		11		20-120/30
Benzaldehyde	50.0	0.0	24.2	48		25.5	51		5		10-110/30
Phenol	50.0	0.0	31.0	62		32.0	64		3		30-140/30
Aniline	50.0	0.0	28.0	56		29.4	59		5		40-140/30
Bis(2-chloroethyl) ether	50.0	0.0	32.5	65		29.4	59		10		40-140/30
2-Chlorophenol	50.0	0.0	25.5	51		27.1	54		6		30-140/30
1,3-Dichlorobenzene	50.0	0.0	26.0	52		27.9	56		7		40-140/30
1,4-Dichlorobenzene	50.0	0.0	27.0	54		28.8	58		6		40-140/30
Benzyl alcohol	50.0	0.0	31.3	63		34.1	68		9		40-140/30
1,2-Dichlorobenzene	50.0	0.0	27.1	54		28.7	57		6		40-140/30
2-Methylphenol	50.0	0.0	29.1	58		31.4	63		8		30-140/30
Bis(2-chloroisopropyl) ether	50.0	0.0	30.0	60		31.9	64		6		40-140/30
4-Methylphenol	50.0	0.0	30.5	61		32.5	65		6		30-140/30
N-Nitrosodi-n-propylamine	50.0	0.0	29.5	59		30.7	61		4		40-140/30
Acetophenone	50.0	0.0	32.9	66		36.2	72		10		40-140/30
3-Methylphenol	50.0	0.0	30.5	61		32.5	65		6		30-140/30
Hexachloroethane	50.0	0.0	24.9	50		26.6	53		7		40-140/30
Nitrobenzene	50.0	0.0	29.6	59		30.6	61		3		40-140/30
Isophorone	50.0	0.0	30.1	60		30.8	62		2		40-140/30
2-Nitrophenol	50.0	0.0	27.8	56		29.0	58		4		30-140/30
2,4-Dimethylphenol	50.0	0.0	24.8	50		25.9	52		4		30-140/30
Bis(2-chloroethoxy) methane	50.0	0.0	31.5	63		34.1	68		8		40-140/30
Benzoic acid	50.0	0.0	32.2	64		31.0	62		4		30-140/30
2,4-Dimethylaniline	50.0	0.0	20.0	40		21.0	42		5		40-140/30
2,4-Dichlorophenol	50.0	0.0	31.4	63		33.1	66		5		30-140/30
1,2,4-Trichlorobenzene	50.0	0.0	27.7	55		29.7	59		7		40-140/30
Naphthalene	50.0	0.0	28.4	57		30.1	60		6		40-140/30
4-Chloroaniline	50.0	0.0	31.1	62		32.9	66		6		40-140/30
Hexachlorobutadiene	50.0	0.0	27.3	55		27.8	56		2		40-140/30
Caprolactam	50.0	0.0	35.6	71		38.0	76		7		40-140/30
4-Chloro-3-methylphenol	50.0	0.0	32.9	66		34.3	69		4		30-140/30
2-Methylnaphthalene	50.0	0.0	31.8	64		32.9	66		3		40-140/30
Hexachlorocyclopentadiene	50.0	0.0	31.1	62		33.2	66		7		5-105/30
2,4,6-Trichlorophenol	50.0	0.0	30.0	60		33.6	67		11		30-140/30
2,4,5-Trichlorophenol	50.0	0.0	31.3	63		35.0	70		11		30-140/30
1,1'-Biphenyl	50.0	0.0	31.3	63		34.4	69		9		40-140/30
2-Chloronaphthalene	50.0	0.0	30.2	60		33.2	66		9		40-140/30
2-Nitroaniline	50.0	0.0	31.2	62		34.7	69		11		40-140/30
Dimethyl phthalate	50.0	0.0	32.5	65		36.2	72		11		40-140/30
2,6-Dinitrotoluene	50.0	0.0	31.9	64		34.3	69		7		40-140/30
Acenaphthylene	50.0	0.0	30.7	61		32.8	66		7		40-140/30
3-Nitroaniline	50.0	0.0	32.8	66		36.0	72		9		40-140/30
Acenaphthene	50.0	0.0	31.0	62		33.4	67		7		40-140/30
2,4-Dinitrophenol	50.0	0.0	52.3	105		50.3	101		4		5-105/30

E14-02636 0066

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02679-001
Date Received: 03/31/2014
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
MS Data file: A0656.D
MSD Data file: A0657.D

GC/MS Column: DB-5
Sample wt/vol: 15.15g
Matrix-Units: Soil-mg/Kg
% Moisture: 19.2
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
4-Nitrophenol	50.0	0.0	29.1	58		32.2	64		10		30-140/30
2,4-Dinitrotoluene	50.0	0.0	33.8	68		38.1	76		12		40-140/30
Dibenzofuran	50.0	0.0	31.1	62		34.5	69		10		40-140/30
Diethyl phthalate	50.0	0.0	32.3	65		34.7	69		7		40-140/30
Fluorene	50.0	0.0	32.9	66		35.0	70		6		40-140/30
4-Chlorophenyl phenyl ether	50.0	0.0	32.8	66		35.7	71		8		40-140/30
4-Nitroaniline	50.0	0.0	27.2	54		29.2	58		7		40-140/30
1,2,4,5-Tetrachlorobenzene	50.0	0.0	25.6	51		26.7	53		4		40-140/30
2,3,4,6-Tetrachlorophenol	50.0	0.0	31.3	63		34.5	69		10		40-140/30
4,6-Dinitro-2-methylphenol	50.0	0.0	37.1	74		40.1	80		8		10-110/30
N-Nitrosodiphenylamine	50.0	0.0	32.5	65		34.3	69		5		40-140/30
1,2-Diphenylhydrazine	50.0	0.0	27.1	54		28.8	58		6		40-140/30
4-Bromophenyl phenyl ether	50.0	0.0	32.3	65		34.0	68		5		40-140/30
Hexachlorobenzene	50.0	0.0	33.2	66		34.2	68		3		40-140/30
Atrazine	50.0	0.0	25.9	52		27.5	55		6		20-120/30
Pentachlorophenol	50.0	0.0	27.0	54		29.8	60		10		30-140/30
Phenanthrene	50.0	0.0	31.6	63		33.3	67		5		40-140/30
Anthracene	50.0	0.0	32.7	65		35.0	70		7		40-140/30
Carbazole	50.0	0.0	32.6	65		35.7	71		9		40-140/30
Di-n-butyl phthalate	50.0	0.0	33.9	68		36.3	73		7		40-140/30
Fluoranthene	50.0	0.0	31.4	63		35.5	71		12		40-140/30
Benzidine	50.0	0.0	3.6	7		3.7	7		3		5-105/30
Pyrene	50.0	0.0	43.7	87		45.0	90		3		40-140/30
3,3'-Dimethylbenzidine	50.0	0.0	3.8	8		4.3	9		12		5-105/30
Butyl benzyl phthalate	50.0	1.4	45.4	88		48.1	93		6		40-140/30
3,3'-Dichlorobenzidine	50.0	0.0	35.2	70		36.7	73		4		40-140/30
Benzo[a]anthracene	50.0	0.0	42.2	84		44.3	89		5		40-140/30
Chrysene	50.0	0.0	45.6	91		48.1	96		5		40-140/30
Bis(2-ethylhexyl) phthalate	50.0	0.0	45.9	92		47.9	96		4		40-140/30
Di-n-octyl phthalate	50.0	0.0	49.6	99		52.5	105		6		40-140/30
Benzo[b]fluoranthene	50.0	0.0	43.2	86		46.3	93		7		40-140/30
Benzo[k]fluoranthene	50.0	0.0	44.6	89		47.7	95		7		40-140/30
Benzo[a]pyrene	50.0	0.0	45.1	90		47.6	95		5		40-140/30
Indeno[1,2,3-cd]pyrene	50.0	0.0	40.5	81		43.7	87		8		40-140/30
Dibenz[a,h]anthracene	50.0	0.0	41.8	84		46.0	92		10		40-140/30
Benzo[g,h,i]perylene	50.0	0.0	40.9	82		42.7	85		4		40-140/30

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
NC Not calculable

E14-02636 0067

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02616-001
Date Received: 03/28/2014
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
MS Data file: B7823.D
MSD Data file: B7824.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
N-Nitrosodimethylamine	40.0	0.0	35.3	88		34.4	86		3		40-140/20
Pyridine	40.0	0.0	20.4	51		19.9	50		2		20-120/20
Benzaldehyde	40.0	0.0	22.4	56		21.2	53		6		10-110/20
Phenol	40.0	0.0	36.8	92		36.6	92		1		30-140/20
Aniline	40.0	0.0	27.3	68		26.7	67		2		40-140/20
Bis(2-chloroethyl) ether	40.0	0.0	29.6	74		29.3	73		1		40-140/20
2-Chlorophenol	40.0	0.0	31.1	78		30.5	76		2		30-140/20
1,3-Dichlorobenzene	40.0	0.0	33.3	83		32.6	82		2		40-140/20
1,4-Dichlorobenzene	40.0	0.0	26.8	67		26.1	65		3		40-140/20
Benzyl alcohol	40.0	0.0	35.1	88		34.4	86		2		40-140/20
1,2-Dichlorobenzene	40.0	0.0	32.8	82		33.1	83		1		40-140/20
2-Methylphenol	40.0	0.0	33.3	83		32.8	82		2		30-140/20
Bis(2-chloroisopropyl) ether	40.0	0.0	32.7	82		31.9	80		2		40-140/20
4-Methylphenol	40.0	0.0	38.6	97		38.3	96		1		30-140/20
N-Nitrosodi-n-propylamine	40.0	0.0	29.2	73		29.1	73		0		40-140/20
Acetophenone	40.0	0.0	32.6	82		32.5	81		0		40-140/20
3-Methylphenol	40.0	0.0	38.6	97		38.3	96		1		30-140/20
Hexachloroethane	40.0	0.0	35.6	89		35.0	88		2		40-140/20
Nitrobenzene	40.0	0.0	33.2	83		32.9	82		1		40-140/20
Isophorone	40.0	0.0	34.3	86		33.7	84		2		40-140/20
2-Nitrophenol	40.0	0.0	37.1	93		36.9	92		1		30-140/20
2,4-Dimethylphenol	40.0	0.0	36.8	92		35.9	90		2		30-140/20
Bis(2-chloroethoxy) methane	40.0	0.0	34.2	86		33.9	85		1		40-140/20
Benzoic acid	40.0	0.0	47.0	118		45.6	114		3		30-140/20
2,4-Dimethylaniline	40.0	0.0	24.8	62		24.2	61		2		40-140/20
2,4-Dichlorophenol	40.0	0.0	40.2	101		39.6	99		2		30-140/20
1,2,4-Trichlorobenzene	40.0	0.0	40.0	100		39.3	98		2		40-140/20
Naphthalene	40.0	0.0	27.8	70		27.5	69		1		40-140/20
4-Chloroaniline	40.0	0.0	30.7	77		30.3	76		1		40-140/20
Hexachlorobutadiene	40.0	0.0	40.3	101		39.1	98		3		40-140/20
Caprolactam	40.0	0.0	42.5	106		43.6	109		3		40-140/20
4-Chloro-3-methylphenol	40.0	0.0	36.6	92		35.9	90		2		30-140/20
2-Methylnaphthalene	40.0	0.0	33.0	83		32.7	82		1		40-140/20
Hexachlorocyclopentadiene	40.0	0.0	39.6	99		34.6	87		13		5-105/20
2,4,6-Trichlorophenol	40.0	0.0	51.0	128		49.2	123		4		30-140/20
2,4,5-Trichlorophenol	40.0	0.0	48.8	122		48.4	121		1		30-140/20
1,1'-Biphenyl	40.0	0.0	38.7	97		36.9	92		5		40-140/20
2-Chloronaphthalene	40.0	0.0	39.2	98		38.0	95		3		40-140/20
2-Nitroaniline	40.0	0.0	54.6	137		55.4	139		1		40-140/20
Dimethyl phthalate	40.0	0.0	46.6	117		45.9	115		2		40-140/20
2,6-Dinitrotoluene	40.0	0.0	50.7	127		52.0	130		3		40-140/20
Acenaphthylene	40.0	0.0	38.2	96		37.8	95		1		40-140/20
3-Nitroaniline	40.0	0.0	53.6	134		53.1	133		1		40-140/20
Acenaphthene	40.0	0.0	27.5	69		27.4	69		0		40-140/20
2,4-Dinitrophenol	40.0	0.0	36.5	91		36.8	92		1		5-105/20

E14-02636 0068

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02616-001
Date Received: 03/28/2014
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
MS Data file: B7823.D
MSD Data file: B7824.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
4-Nitrophenol	40.0	0.0	42.6	107		43.0	108		1		30-140/20
2,4-Dinitrotoluene	40.0	0.0	48.9	122		42.7	107		14		40-140/20
Dibenzofuran	40.0	0.0	34.3	86		33.7	84		2		40-140/20
Diethyl phthalate	40.0	0.0	44.7	112		44.0	110		2		40-140/20
Fluorene	40.0	0.0	30.0	75		30.7	77		2		40-140/20
4-Chlorophenyl phenyl ether	40.0	0.0	44.7	112		43.8	110		2		40-140/20
4-Nitroaniline	40.0	0.0	36.7	92		37.1	93		1		40-140/20
1,2,4,5-Tetrachlorobenzene	40.0	0.0	48.6	122		47.1	118		3		40-140/20
2,3,4,6-Tetrachlorophenol	40.0	0.0	53.4	134		51.4	129		4		40-140/20
4,6-Dinitro-2-methylphenol	40.0	0.0	36.9	92		37.4	94		1		10-110/20
N-Nitrosodiphenylamine	40.0	0.0	37.1	93		35.7	89		4		40-140/20
1,2-Diphenylhydrazine	40.0	0.0	32.1	80		30.8	77		4		40-140/20
4-Bromophenyl phenyl ether	40.0	0.0	46.3	116		45.0	113		3		40-140/20
Hexachlorobenzene	40.0	0.0	49.0	123		48.0	120		2		40-140/20
Atrazine	40.0	0.0	36.1	90		34.8	87		4		20-120/20
Pentachlorophenol	40.0	0.0	48.5	121		47.1	118		3		30-140/20
Phenanthrene	40.0	0.0	35.7	89		34.8	87		3		40-140/20
Anthracene	40.0	0.0	40.1	100		39.5	99		2		40-140/20
Carbazole	40.0	0.0	38.1	95		37.3	93		2		40-140/20
Di-n-butyl phthalate	40.0	0.0	40.3	101		40.4	101		0		40-140/20
Fluoranthene	40.0	0.0	39.2	98		38.8	97		1		40-140/20
Benzidine	40.0	0.0	15.4	39		16.4	41		6		5-105/20
Pyrene	40.0	0.0	53.6	134		52.2	131		3		40-140/20
3,3'-Dimethylbenzidine	40.0	0.0	10.6	27		11.6	29		9		5-105/20
Butyl benzyl phthalate	40.0	0.0	48.6	122		51.3	128		5		40-140/20
3,3'-Dichlorobenzidine	40.0	0.0	44.8	112		45.3	113		1		40-140/20
Benzo[a]anthracene	40.0	0.0	56.0	140		49.6	124		12		40-140/20
Chrysene	40.0	0.0	50.7	127		52.7	132		4		40-140/20
Bis(2-ethylhexyl) phthalate	40.0	0.0	48.9	122		41.1	103		17		40-140/20
Di-n-octyl phthalate	40.0	0.0	46.8	117		45.5	114		3		40-140/20
Benzo[b]fluoranthene	40.0	0.0	47.6	119		48.5	121		2		40-140/20
Benzo[k]fluoranthene	40.0	0.0	45.1	113		47.1	118		4		40-140/20
Benzo[a]pyrene	40.0	0.0	48.6	122		47.9	120		1		40-140/20
Indeno[1,2,3-cd]pyrene	40.0	0.0	42.8	107		45.3	113		6		40-140/20
Dibenz[a,h]anthracene	40.0	0.0	43.0	108		45.4	114		5		40-140/20
Benzo[g,h,i]perylene	40.0	0.0	51.3	128		51.3	128		0		40-140/20

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

E14-02636 0069

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C5117.D

Instrument ID: MSDC

Date Extracted: 03/31/14

Matrix: SOIL

Date Analyzed: 04/01/2014

Time Analyzed: 12:23

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSS140331-06	04/01/2014	12:38
.	E14-02666-001MS	04/01/2014	12:54
.	E14-02666-001MSD	04/01/2014	13:09
GP-H-O-0	E14-02666-001	04/01/2014	13:25
GP-H-O-0	E14-02666-002	04/01/2014	13:40
GP-H-O-0	E14-02666-003	04/01/2014	13:56
GP-H-O-0	E14-02666-004	04/01/2014	14:11
GP-H-O-0	E14-02666-005	04/01/2014	14:27
GP-H-O-0	E14-02666-006	04/01/2014	14:42
GP-H-R-1	E14-02666-013	04/01/2014	14:58
GP-H-R-1	E14-02666-014	04/01/2014	15:14
B-481_(1	E14-02636-021	04/01/2014	15:29
B-482_(2	E14-02636-022	04/01/2014	15:45
B-482_(3	E14-02636-023	04/01/2014	16:00
B-482_(8	E14-02636-024	04/01/2014	16:16
B-482_(1	E14-02636-025	04/01/2014	16:32
B-483_(6	E14-02636-026	04/01/2014	16:47
B-483_(8	E14-02636-027	04/01/2014	17:03
B-483_(1	E14-02636-028	04/01/2014	17:18
B-484_(6	E14-02636-029	04/01/2014	17:34
B-484_(9	E14-02636-030	04/01/2014	17:49
B-484_(1	E14-02636-031	04/01/2014	18:05
B-485_(4	E14-02636-032	04/01/2014	18:20

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C5141.D

Instrument ID: MSDC

Date Extracted: 03/31/14

Matrix: SOIL

Date Analyzed: 04/01/2014

Time Analyzed: 18:36

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSS140331-05	04/01/2014	18:51
B-476_(2	E14-02636-001	04/01/2014	19:07
B-476_(1	E14-02636-002	04/01/2014	19:22
B-475_(3	E14-02636-004	04/01/2014	19:38
B-475_(8	E14-02636-005	04/01/2014	19:53
B-475_(9	E14-02636-006	04/01/2014	20:09
B-478_(3	E14-02636-008	04/01/2014	20:24
B-478_(8	E14-02636-009	04/01/2014	20:39
B-479_(3	E14-02636-013	04/01/2014	20:55
B-479_(8	E14-02636-014	04/01/2014	21:10
B-480_(4	E14-02636-015	04/01/2014	21:26
B-480_(6	E14-02636-016	04/01/2014	21:41
B-480_(8	E14-02636-017	04/01/2014	21:56
B-481_(3	E14-02636-019	04/01/2014	22:12
B-481_(8	E14-02636-020	04/01/2014	22:27
.	E14-02636-001MS	04/01/2014	22:42
.	E14-02636-001MSD	04/01/2014	22:57
B-476_(1	E14-02636-003	04/01/2014	23:13
B-477_(1	E14-02636-007	04/01/2014	23:28
B-478_(9	E14-02636-010	04/02/2014	12:24
B-478_(1	E14-02636-011	04/02/2014	12:39
B-478_(2	E14-02636-012	04/02/2014	12:55
B-481_2	E14-02636-018	04/02/2014	13:10

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: A0653.D

Instrument ID: MSDA

Date Extracted: 04/01/14

Matrix: SOIL

Date Analyzed: 04/02/2014

Time Analyzed: 09:25

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
PXB-J5_(	E14-02713-001	04/02/2014	09:41
.	LCSS140401-03	04/02/2014	09:57
.	E14-02679-001MS	04/02/2014	10:14
.	E14-02679-001MSD	04/02/2014	10:30
14-038-C	E14-02679-001	04/02/2014	10:47
S-1	E14-02173-001	04/02/2014	11:03
S-8	E14-02173-011	04/02/2014	11:19
SS-2/6-6	E14-02280-002	04/02/2014	11:36
38DD_SOI	E14-02619-001	04/02/2014	11:53
B-485_(5	E14-02636-033	04/02/2014	12:09
B-485_(1	E14-02636-034	04/02/2014	12:25
PE-3(HOU	E14-02293-003	04/02/2014	12:42

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B7821.D

Instrument ID: MSDB

Date Extracted: 04/01/14

Matrix: AQUEOUS

Date Analyzed: 04/02/2014

Time Analyzed: 22:20

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSA140401-02	04/02/2014	22:37
.	E14-02616-001MS	04/02/2014	22:54
.	E14-02616-001MSD	04/02/2014	23:10
TEMP-2	E14-02645-001	04/02/2014	23:27
TR-MW1R	E14-02616-001	04/02/2014	23:44
MW-1/6.9	E14-02629-001	04/03/2014	00:01
MW-19	E14-02631-001	04/03/2014	00:18
MW-21DA	E14-02637-022	04/03/2014	00:34
MW-21DB	E14-02637-023	04/03/2014	00:51
MW-21DC	E14-02637-024	04/03/2014	01:08
MW-21	E14-02637-026	04/03/2014	01:25
REP03281	E14-02637-028	04/03/2014	01:42
FB032814	E14-02637-030	04/03/2014	01:59
GW-1	E14-02648-003	04/03/2014	02:15
MS-1	E14-02605-001	04/03/2014	02:32
MW-1	E14-02695-001	04/03/2014	02:49
TWP-1	E14-02634-001	04/03/2014	03:06
TWP-8	E14-02634-004	04/03/2014	03:23
FB-4	E14-02634-005	04/03/2014	03:39
FIELD_BL	E14-02636-035	04/03/2014	03:56
38DD_WW	E14-02619-002	04/03/2014	04:13
DECON-1	E14-02619-003	04/03/2014	04:30
FB-03281	E14-02635-011	04/03/2014	04:47

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C4753.D

DFTPP Injection Date : 03/24/2014

Inst ID: MSDC

DFTPP Injection Time: 05:58

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	41.7	
70	Less than 2.0% of mass 69	0.5	(1.1)1
127	40.0 - 60.0% of mass 198	51.5	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	25.0	
365	Greater than 1.0% of mass 198	3.0	
441	Present, but less than mass 443	14.09	(84.7)3
442	40.0 - 100.0% of mass 198	90.9	
443	17.0 - 23.0% of mass 442	16.6	(18.3)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN015-14	ICC001BNA1	C4754.D	03/24/2014	09:18
ABN016-14	ICC010BNA1	C4755.D	03/24/2014	09:33
ABN017-14	ICC020BNA1	C4756.D	03/24/2014	09:48
ABN018-14	ICC040BNA1	C4757.D	03/24/2014	10:19
ABN019-14	ICC080BNA1	C4758.D	03/24/2014	10:34
ABN020-14	ICC120BNA1	C4759.D	03/24/2014	10:50
ABN027-14	ICV040BNA1	C4760.D	03/24/2014	11:05
ABN026-14	ICC120BNA2	C4761.D	03/24/2014	11:21
ABN025-14	ICC080BNA2	C4762.D	03/24/2014	11:36
ABN024-14	ICC040BNA2	C4763.D	03/24/2014	11:51
ABN023-14	ICC020BNA2	C4764.D	03/24/2014	12:07
ABN022-14	ICC010BNA2	C4765.D	03/24/2014	12:22
ABN021-14	ICC001BNA2	C4766.D	03/24/2014	12:37
ABN028-14	ICV040BNA2	C4767.D	03/24/2014	12:53

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5114.D

DFTPP Injection Date : 04/01/2014

Inst ID: MSDC

DFTPP Injection Time: 11:41

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.8	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	40.0 - 60.0% of mass 198	50.3	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.5	
275	10.0 - 30.0% of mass 198	25.8	
365	Greater than 1.0% of mass 198	2.8	
441	Present, but less than mass 443	15.36	(83.5)3
442	40.0 - 100.0% of mass 198	97.3	
443	17.0 - 23.0% of mass 442	18.4	(18.9)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN027-14	CCV040BNA1	C5115.D	04/01/2014	11:52
ABN028-14	CCV040BNA2	C5116.D	04/01/2014	12:07
.	BLKS140331-06	C5117.D	04/01/2014	12:23
.	LCSS140331-06	C5118.D	04/01/2014	12:38
.	E14-02666-001MS	C5119.D	04/01/2014	12:54
.	E14-02666-001MSD	C5120.D	04/01/2014	13:09
GP-H-O-0	E14-02666-001	C5121.D	04/01/2014	13:25
GP-H-O-0	E14-02666-002	C5122.D	04/01/2014	13:40
GP-H-O-0	E14-02666-003	C5123.D	04/01/2014	13:56
GP-H-O-0	E14-02666-004	C5124.D	04/01/2014	14:11
GP-H-O-0	E14-02666-005	C5125.D	04/01/2014	14:27
GP-H-O-0	E14-02666-006	C5126.D	04/01/2014	14:42
GP-H-R-1	E14-02666-013	C5127.D	04/01/2014	14:58
GP-H-R-1	E14-02666-014	C5128.D	04/01/2014	15:14
B-481_(1	E14-02636-021	C5129.D	04/01/2014	15:29
B-482_(2	E14-02636-022	C5130.D	04/01/2014	15:45
B-482_(3	E14-02636-023	C5131.D	04/01/2014	16:00
B-482_(8	E14-02636-024	C5132.D	04/01/2014	16:16
B-482_(1	E14-02636-025	C5133.D	04/01/2014	16:32
B-483_(6	E14-02636-026	C5134.D	04/01/2014	16:47
B-483_(8	E14-02636-027	C5135.D	04/01/2014	17:03
B-483_(1	E14-02636-028	C5136.D	04/01/2014	17:18
B-484_(6	E14-02636-029	C5137.D	04/01/2014	17:34

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5114.D

DFTPP Injection Date : 04/01/2014

Inst ID: MSDC

DFTPP Injection Time: 11:41

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.8	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	40.0 - 60.0% of mass 198	50.3	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.5	
275	10.0 - 30.0% of mass 198	25.8	
365	Greater than 1.0% of mass 198	2.8	
441	Present, but less than mass 443	15.36	(83.5)3
442	40.0 - 100.0% of mass 198	97.3	
443	17.0 - 23.0% of mass 442	18.4	(18.9)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
B-484_(9	E14-02636-030	C5138.D	04/01/2014	17:49
B-484_(1	E14-02636-031	C5139.D	04/01/2014	18:05
B-485_(4	E14-02636-032	C5140.D	04/01/2014	18:20
.	BLKS140331-05	C5141.D	04/01/2014	18:36
.	LCSS140331-05	C5142.D	04/01/2014	18:51
B-476_(2	E14-02636-001	C5143.D	04/01/2014	19:07
B-476_(1	E14-02636-002	C5144.D	04/01/2014	19:22
B-475_(3	E14-02636-004	C5145.D	04/01/2014	19:38
B-475_(8	E14-02636-005	C5146.D	04/01/2014	19:53
B-475_(9	E14-02636-006	C5147.D	04/01/2014	20:09
B-478_(3	E14-02636-008	C5148.D	04/01/2014	20:24
B-478_(8	E14-02636-009	C5149.D	04/01/2014	20:39
B-479_(3	E14-02636-013	C5150.D	04/01/2014	20:55
B-479_(8	E14-02636-014	C5151.D	04/01/2014	21:10
B-480_(4	E14-02636-015	C5152.D	04/01/2014	21:26
B-480_(6	E14-02636-016	C5153.D	04/01/2014	21:41
B-480_(8	E14-02636-017	C5154.D	04/01/2014	21:56
B-481_(3	E14-02636-019	C5155.D	04/01/2014	22:12
B-481_(8	E14-02636-020	C5156.D	04/01/2014	22:27
.	E14-02636-001MS	C5157.D	04/01/2014	22:42
.	E14-02636-001MSD	C5158.D	04/01/2014	22:57
B-476_(1	E14-02636-003	C5159.D	04/01/2014	23:13

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5114.D

DFTPP Injection Date : 04/01/2014

Inst ID: MSDC

DFTPP Injection Time: 11:41

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.8	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	40.0 - 60.0% of mass 198	50.3	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.5	
275	10.0 - 30.0% of mass 198	25.8	
365	Greater than 1.0% of mass 198	2.8	
441	Present, but less than mass 443	15.36	(83.5)3
442	40.0 - 100.0% of mass 198	97.3	
443	17.0 - 23.0% of mass 442	18.4	(18.9)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
B-477_(1	E14-02636-007	C5160.D	04/01/2014	23:28

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A0580.D

DFTPP Injection Date : 03/31/2014

Inst ID: MSDA

DFTPP Injection Time: 06:50

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	58.7	
68	Less than 2.0% of mass 69	0.7	(1.5)1
69	Mass 69 relative abundance	49.0	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	40.0 - 60.0% of mass 198	58.7	
197	Less than 1.0% of mass 198	0.4	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.1	
275	10.0 - 30.0% of mass 198	22.3	
365	Greater than 1.0% of mass 198	2.8	
441	Present, but less than mass 443	11.47	(70.9)3
442	40.0 - 100.0% of mass 198	77.8	
443	17.0 - 23.0% of mass 442	16.2	(20.8)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN015-14	ICC001BNA1	A0581.D	03/31/2014	07:01
ABN016-14	ICC010BNA1	A0582.D	03/31/2014	07:17
ABN017-14	ICC020BNA1	A0583.D	03/31/2014	07:33
ABN018-14	ICC040BNA1	A0584.D	03/31/2014	07:49
ABN019-14	ICC080BNA1	A0585.D	03/31/2014	08:04
ABN020-14	ICC120BNA1	A0586.D	03/31/2014	08:19
ABN026-14	ICC120BNA2	A0587.D	03/31/2014	08:35
ABN025-14	ICC080BNA2	A0588.D	03/31/2014	08:48
ABN024-14	ICC040BNA2	A0589.D	03/31/2014	09:02
ABN023-14	ICC020BNA2	A0590.D	03/31/2014	09:16
ABN022-14	ICC010BNA2	A0591.D	03/31/2014	09:30
ABN021-14	ICC001BNA2	A0592.D	03/31/2014	09:43
ABN027-14	ICV040BNA1	A0593.D	03/31/2014	11:07
ABN028-14	ICV040BNA2	A0594.D	03/31/2014	11:23

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A0650.D

DFTPP Injection Date : 04/02/2014

Inst ID: MSDA

DFTPP Injection Time: 08:43

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.4	
68	Less than 2.0% of mass 69	0.7	(1.9)1
69	Mass 69 relative abundance	34.9	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	40.0 - 60.0% of mass 198	47.2	
197	Less than 1.0% of mass 198	0.7	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.5	
275	10.0 - 30.0% of mass 198	24.0	
365	Greater than 1.0% of mass 198	2.8	
441	Present, but less than mass 443	11.93	(77.1)3
442	40.0 - 100.0% of mass 198	74.4	
443	17.0 - 23.0% of mass 442	15.5	(20.8)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN027-14	CCV040BNA1	A0651.D	04/02/2014	08:52
ABN028-14	CCV040BNA2	A0652.D	04/02/2014	09:08
.	BLKS140401-03	A0653.D	04/02/2014	09:25
PXB-J5_(	E14-02713-001	A0654.D	04/02/2014	09:41
.	LCSS140401-03	A0655.D	04/02/2014	09:57
.	E14-02679-001MS	A0656.D	04/02/2014	10:14
.	E14-02679-001MSD	A0657.D	04/02/2014	10:30
14-038-C	E14-02679-001	A0658.D	04/02/2014	10:47
S-1	E14-02173-001	A0659.D	04/02/2014	11:03
S-8	E14-02173-011	A0660.D	04/02/2014	11:19
SS-2/6-6	E14-02280-002	A0661.D	04/02/2014	11:36
38DD_SOI	E14-02619-001	A0662.D	04/02/2014	11:53
B-485_(5	E14-02636-033	A0663.D	04/02/2014	12:09
B-485_(1	E14-02636-034	A0664.D	04/02/2014	12:25
PE-3(HOU	E14-02293-003	A0665.D	04/02/2014	12:42

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B7685.D DFTPP Injection Date : 04/01/2014

Inst ID: MSDB DFTPP Injection Time: 07:54

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	53.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	52.0	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	40.0 - 60.0% of mass 198	56.5	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	26.4	
365	Greater than 1.0% of mass 198	3.8	
441	Present, but less than mass 443	10.58	(77.5)3
442	40.0 - 100.0% of mass 198	73.4	
443	17.0 - 23.0% of mass 442	13.7	(18.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN061-13	ICC040BNA1	B7686.D	04/01/2014	08:04
ABN058-13	ICC001BNA1	B7687.D	04/01/2014	08:21
ABN059-13	ICC010BNA1	B7688.D	04/01/2014	08:39
ABN060-13	ICC020BNA1	B7689.D	04/01/2014	08:56
ABN062-13	ICC080BNA1	B7690.D	04/01/2014	10:25
ABN063-13	ICC120BNA1	B7691.D	04/01/2014	10:42
ABN069-13	ICC120BNA2	B7692.D	04/01/2014	10:59
ABN068-13	ICC080BNA2	B7693.D	04/01/2014	11:16
ABN067-13	ICC040BNA2	B7694.D	04/01/2014	11:33
ABN066-13	ICC020BNA2	B7695.D	04/01/2014	11:50
ABN065-13	ICC010BNA2	B7696.D	04/01/2014	12:07
ABN064-13	ICC001BNA2	B7697.D	04/01/2014	12:24
ABN070-13	ICV040BNA1	B7703.D	04/01/2014	14:00
ABN071-13	ICV040BNA2	B7704.D	04/01/2014	14:18

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B7803.D

DFTPP Injection Date : 04/02/2014

Inst ID: MSDB

DFTPP Injection Time: 17:39

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	54.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	54.5	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	40.0 - 60.0% of mass 198	56.6	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.4	
275	10.0 - 30.0% of mass 198	28.0	
365	Greater than 1.0% of mass 198	4.8	
441	Present, but less than mass 443	14.34	(69.6)3
442	40.0 - 100.0% of mass 198	99.5	
443	17.0 - 23.0% of mass 442	20.6	(20.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN070-13	CCV040BNA1	B7804.D	04/02/2014	17:50
ABN071-13	CCV040BNA2	B7805.D	04/02/2014	18:07
.	BLKA140401-02	B7821.D	04/02/2014	22:20
.	LCSA140401-02	B7822.D	04/02/2014	22:37
.	E14-02616-001MS	B7823.D	04/02/2014	22:54
.	E14-02616-001MSD	B7824.D	04/02/2014	23:10
TEMP-2	E14-02645-001	B7825.D	04/02/2014	23:27
TR-MW1R	E14-02616-001	B7826.D	04/02/2014	23:44
MW-1/6.9	E14-02629-001	B7827.D	04/03/2014	00:01
MW-19	E14-02631-001	B7828.D	04/03/2014	00:18
MW-21DA	E14-02637-022	B7829.D	04/03/2014	00:34
MW-21DB	E14-02637-023	B7830.D	04/03/2014	00:51
MW-21DC	E14-02637-024	B7831.D	04/03/2014	01:08
MW-21	E14-02637-026	B7832.D	04/03/2014	01:25
REP03281	E14-02637-028	B7833.D	04/03/2014	01:42
FB032814	E14-02637-030	B7834.D	04/03/2014	01:59
GW-1	E14-02648-003	B7835.D	04/03/2014	02:15
MS-1	E14-02605-001	B7836.D	04/03/2014	02:32
MW-1	E14-02695-001	B7837.D	04/03/2014	02:49
TWP-1	E14-02634-001	B7838.D	04/03/2014	03:06
TWP-8	E14-02634-004	B7839.D	04/03/2014	03:23
FB-4	E14-02634-005	B7840.D	04/03/2014	03:39
FIELD_BL	E14-02636-035	B7841.D	04/03/2014	03:56

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B7803.D

DFTPP Injection Date : 04/02/2014

Inst ID: MSDB

DFTPP Injection Time: 17:39

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	54.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	54.5	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	40.0 - 60.0% of mass 198	56.6	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.4	
275	10.0 - 30.0% of mass 198	28.0	
365	Greater than 1.0% of mass 198	4.8	
441	Present, but less than mass 443	14.34	(69.6)3
442	40.0 - 100.0% of mass 198	99.5	
443	17.0 - 23.0% of mass 442	20.6	(20.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
38DD_WW	E14-02619-002	B7842.D	04/03/2014	04:13
DECON-1	E14-02619-003	B7843.D	04/03/2014	04:30
FB-03281	E14-02635-011	B7844.D	04/03/2014	04:47

Response Factor Report MSD_C

Method Path : C:\MSDCHEM\1\METHODS\
Method File : CS0514.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Mar 27 12:25:08 2014
Response Via : Initial Calibration

Calibration Files
1 =C4754.D 10 =C4755.D 20 =C4756.D
40 =C4757.D 80 =C4758.D 120 =C4759.D =

		Compound	1	10	20	40	80	120	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD							
2)	T	N-Nitrosodimethyl	0.781	0.730	0.749	0.688	0.760	0.766	0.746	4.43
3)	T	Pyridine	1.268	1.544	1.460	1.112	1.057	0.973	1.236	18.53
4)	S	2-Fluorophenol	0.941	1.247	1.162	1.342	1.294	1.420	1.234	13.61
5)	T	Benzaldehyde	0.831	0.697	0.671	0.748	0.721	0.733	0.733	7.53
6)	S	Phenol-d5	1.236	1.442	1.456	1.545	1.656	1.792	1.521	12.61
7)	MC	Phenol	0.261	0.196	0.195	0.189	0.200	0.188	0.205	13.62
8)	T	Aniline	0.727	0.726	0.726	0.710	0.763	0.694	0.725	3.17
9)	T	Bis(2-chloroethyl	0.956	0.936	0.976	0.946	0.985	0.941	0.957	2.06
10)	M	2-Chlorophenol	1.401	1.262	1.286	1.348	1.237	1.158	1.282	6.66
11)	T	1,3-Dichlorobenze	1.495	1.378	1.409	1.400	1.286	1.304	1.379	5.52
12)	MC	1,4-Dichlorobenze	1.356	1.471	1.470	1.420	1.368	1.198	1.380	7.38
13)	T	Benzyl alcohol	0.855	0.842	0.907	0.871	1.009	0.933	0.903	6.85
14)	T	1,2-Dichlorobenze	1.371	1.355	1.345	1.304	1.382	1.317	1.346	2.25
15)	T	2-Methylphenol	1.138	1.109	1.161	1.135	1.247	0.934	1.121	9.18
16)	T	Bis(2-chloroisopr	1.742	1.644	1.662	1.687	1.328	1.195	1.543	14.56
17)	T	4-Methylphenol	1.170	1.208	1.167	1.283	1.307	1.029	1.194	8.32
18)	MP	N-Nitrosodi-n-pro	0.784	1.001	0.971	1.035	1.074	0.933	0.966	10.56
19)	T	Acetophenone	1.875	1.713	1.770	1.780	1.622	1.366	1.688	10.56
20)	T	3-Methylphenol	1.175	1.216	1.176	1.291	1.315	1.028	1.200	8.55
21)	T	Hexachloroethane	0.528	0.491	0.503	0.495	0.535	0.501	0.509	3.56
22)	T	2,6-Dimethylpheno							0.000	-1.00
23)	I	Naphthalene-d8	ISTD							
24)	S	Nitrobenzene-d5	0.358	0.316	0.321	0.335	0.396	0.399	0.354	10.37
25)	T	Nitrobenzene	0.265	0.313	0.311	0.342	0.341	0.314	0.314	8.93
26)	T	Isophorone	0.877	0.848	0.935	0.868	0.704	0.594	0.804	15.97
27)	TC	2-Nitrophenol	0.121	0.097	0.114	0.125	0.163	0.113	0.122	18.10
28)	T	2,4-Dimethylpheno	0.383	0.405	0.442	0.411	0.427	0.392	0.410	5.36
29)	T	Bis(2-chloroethox	0.516	0.487	0.533	0.508	0.504	0.399	0.491	9.65
30)	T	Benzoic acid	0.077	0.079	0.103	0.109	0.122	0.107	0.100	17.79
31)	T	2,4-Dimethylanili	0.606	0.736	0.786	0.599	0.542	0.451	0.620	19.90
32)	TC	2,4-Dichloropheno	0.296	0.295	0.306	0.315	0.310	0.297	0.303	2.81
33)	M	1,2,4-Trichlorobe	0.400	0.368	0.382	0.353	0.366	0.312	0.363	8.23
34)	T	Naphthalene	1.033	1.004	1.199	0.839	0.871	0.668	0.936	19.61
35)	T	4-Chloroaniline	0.746	0.729	0.766	0.731	0.574	0.543	0.681	14.21
36)	T	4-Aminotoluene	0.867	0.866	0.676	0.894	0.545	0.889	0.790	18.36
37)	TC	Hexachlorobutadie	0.188	0.182	0.188	0.171	0.174	0.160	0.177	6.13
38)	T	Caprolactam	0.153	0.161	0.170	0.168	0.159	0.154	0.161	4.43
39)	T	2-Aminotoluene	0.867	0.866	0.678	0.894	0.545	0.889	0.790	18.32
40)	MC	4-Chloro-3-methyl	0.324	0.319	0.353	0.366	0.359	0.341	0.344	5.53
41)	T	2-Methylnaphthale	0.916	0.861	0.922	0.842	0.582	0.795	0.820	15.36
42)	T	2,5-Dimethylpheno							0.000	-1.00
43)	I	Acenaphthene-d10	ISTD							
44)	TP	Hexachlorocyclope	0.150	0.163	0.171	0.176	0.199	0.185	0.174	9.85
45)	TC	2,4,6-Trichloroph	0.232	0.239	0.268	0.273	0.291	0.287	0.265	9.23
46)	T	2,4,5-Trichloroph	0.232	0.269	0.271	0.304	0.324	0.304	0.284	11.66
47)	S	2-Fluorobiphenyl	0.844	1.063	1.012	0.924	1.054	1.250	1.024	13.53
48)	T	1,1'-Biphenyl	1.441	1.486	1.437	1.113	1.683	1.402	1.427	12.87
49)	T	2-Chloronaphthale	0.994	1.070	1.057	1.027	0.843	0.634	0.938	18.98
50)	T	2-Nitroaniline	0.173	0.236	0.153	0.165	0.231	0.173	0.188	18.98
51)	T	Dimethyl phthalat	1.058	1.152	1.120	1.083	0.822	0.757	0.999	16.67

52)	T	2,6-Dinitrotoluen	0.148	0.138	0.100	0.130	0.172	0.173	0.143	19.14
53)	T	Acenaphthylene	1.550	1.705	1.757	1.503	1.348	1.654	1.586	9.47
54)	T	3-Nitroaniline	0.114	0.149	0.144	0.172	0.189	0.160	0.155	16.67
55)	MC	Acenaphthene	1.071	1.115	1.090	1.032	0.812	0.681	0.967	18.35
56)	TP	2,4-Dinitrophenol	0.062	0.053	0.053	0.054	0.051	0.056	0.055	7.16
57)	MP	4-Nitrophenol	0.160	0.125	0.112	0.131	0.156	0.180	0.144	17.80
58)	M	2,4-Dinitrotoluen	0.118	0.083	0.097	0.138	0.118	0.139	0.116	19.44
59)	T	Dibenzofuran	1.418	1.503	1.482	1.315	0.885	1.499	1.350	17.68
60)	T	Diethyl phthalate	1.099	1.162	1.120	1.104	0.851	0.723	1.010	17.67
61)	T	Fluorene	1.090	1.200	1.189	1.156	0.867	0.738	1.040	18.51
62)	T	4-Chlorophenyl ph	0.502	0.522	0.524	0.508	0.487	0.461	0.501	4.76
63)	T	4-Nitroaniline	0.142	0.139	0.158	0.183	0.228	0.194	0.174	19.72
64)		1,2,4,5-Tetrachlo	0.526	0.695	0.669	0.546	0.490	0.461	0.565	16.95
65)	T	2,3,4,6-Tetrachlo	0.176	0.164	0.169	0.184	0.193	0.202	0.181	7.99
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met	0.057	0.055	0.061	0.058	0.066	0.072	0.061	10.38
68)	TC	N-Nitrosodiphenyl	0.637	0.637	0.651	0.566	0.476	0.573	0.590	11.26
69)	T	1,2-Diphenylhydra	1.144	1.142	1.157	0.864	1.071	0.670	1.008	19.74
70)	S	2,4,6-Tribromophe	0.105	0.097	0.103	0.094	0.100	0.125	0.104	10.82
71)	T	4-Bromophenyl phe	0.239	0.211	0.217	0.185	0.201	0.248	0.217	10.90
72)	T	Hexachlorobenzene	0.237	0.221	0.222	0.191	0.200	0.247	0.220	9.73
73)	T	Atrazine	0.205	0.215	0.220	0.187	0.197	0.240	0.211	8.87
74)	MC	Pentachlorophenol	0.097	0.079	0.088	0.087	0.102	0.101	0.092	9.97
75)	T	Phenanthrene	1.114	1.198	1.031	0.883	0.654	1.109	0.998	19.94
76)	T	Anthracene	0.998	1.170	0.987	0.908	0.708	0.711	0.914	19.66
77)	T	Carbazole	1.138	1.130	1.146	0.980	0.680	0.908	0.997	18.43
78)	T	Di-n-butyl phthal	1.202	1.264	1.122	0.917	1.166	0.969	1.107	12.29
79)	TC	Fluoranthene	1.178	1.086	1.117	0.934	0.752	0.891	0.993	16.25
80)	T	Benzidine	0.406	0.363	0.379	0.426	0.369	0.533	0.413	15.37
81)		4-Aminoaniline							0.000	-1.00
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.208	1.135	1.172	1.143	0.927	0.752	1.056	16.90
84)	S	Terphenyl-d14	0.918	0.898	0.895	0.975	0.978	0.889	0.926	4.38
85)	T	3,3'-Dimethylbenz	0.433	0.496	0.531	0.694	0.546	0.499	0.533	16.50
86)	T	Butyl benzyl phth	0.459	0.457	0.486	0.488	0.558	0.518	0.494	7.75
87)	T	3,3'-Dichlorobenz	0.252	0.275	0.278	0.271	0.254	0.246	0.263	5.20
88)	T	Benzo[a]anthracen	0.963	0.862	0.867	0.838	0.894	0.784	0.868	6.84
89)	T	Chrysene	0.845	0.764	0.772	0.756	0.804	0.646	0.765	8.72
90)	T	Bis(2-ethylhexyl)	0.666	0.647	0.651	0.664	0.718	0.626	0.662	4.71
91)	T	3,3'-Dimethoxyben							0.000	-1.00
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	1.279	1.456	1.427	1.278	1.396	1.280	1.353	6.13
94)	T	Benzo[b]fluoranth	1.086	1.193	1.091	1.149	1.340	1.285	1.191	8.71
95)	T	Benzo[k]fluoranth	1.261	1.126	1.180	1.075	1.074	1.120	1.139	6.26
96)	TC	Benzo[a]pyrene	0.933	0.978	0.992	1.018	1.136	1.120	1.030	7.89
97)	T	Indeno[1,2,3-cd]p	0.843	1.031	1.160	1.229	1.379	1.346	1.165	17.36
98)	T	Dibenz[a,h]anthra	0.646	0.831	0.908	0.974	1.081	1.058	0.917	17.67
99)	T	Benzo[g,h,i]peryl	0.792	0.919	0.974	1.025	1.136	1.137	0.997	13.33

(#) = Out of Range

CS0514.M Thu Mar 27 15:17:11 2014 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\C_Mar-14\03-24-14\
Data File : C4760.D
Acq On : 24 Mar 2014 11:05
Operator : EDM
Sample : ABN027-14,ICV040BNA1
Misc : NA,03/24/14,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Mar 27 15:18:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 24 11:36:32 2014
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	105	0.00
2	T	N-Nitrosodimethylamine	0.746	0.699	6.3	107	0.00
3	T	Pyridine	1.236	1.129	8.7	107	0.00
4	S	2-Fluorophenol	1.234	1.325	-7.4	104	0.00
5	T	Benzaldehyde	0.733	0.636	13.2	100	0.00
6	S	Phenol-d5	1.521	1.478	2.8	101	0.00
7	MC	Phenol	0.205	0.189	7.8	106	0.00
8	T	Aniline	0.725	0.709	2.2	105	0.00
9	T	Bis(2-chloroethyl) ether	0.957	0.944	1.4	105	0.00
10	M	2-Chlorophenol	1.282	1.365	-6.5	107	0.00
11	T	1,3-Dichlorobenzene	1.379	1.394	-1.1	105	0.00
12	MC	1,4-Dichlorobenzene	1.380	1.390	-0.7	103	0.00
13	T	Benzyl alcohol	0.903	0.872	3.4	106	0.00
14	T	1,2-Dichlorobenzene	1.346	1.308	2.8	106	0.00
15	T	2-Methylphenol	1.121	1.153	-2.9	107	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.543	1.698	-10.0	106	0.00
17	T	4-Methylphenol	1.194	1.317	-10.3	108	0.00
18	MP	N-Nitrosodi-n-propylamine	0.966	1.034	-7.0	105	0.00
19	T	Acetophenone	1.688	1.778	-5.3	105	0.00
20	T	3-Methylphenol	1.200	1.315	-9.6	107	0.00
21	T	Hexachloroethane	0.509	0.495	2.8	105	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	103	0.00
24	S	Nitrobenzene-d5	0.354	0.386	-9.0	119	0.00
25	T	Nitrobenzene	0.314	0.395	-25.8	119	0.00
26	T	Isophorone	0.804	0.859	-6.8	102	0.00
27	TC	2-Nitrophenol	0.122	0.151	-23.8	124	0.00
28	T	2,4-Dimethylphenol	0.410	0.434	-5.9	109	0.00
29	T	Bis(2-chloroethoxy) methane	0.491	0.506	-3.1	102	0.00
30	T	Benzoic acid	0.100	0.107	-7.0	101	-0.02
31	T	2,4-Dimethylaniline	0.620	0.610	1.6	105	0.00
32	TC	2,4-Dichlorophenol	0.303	0.329	-8.6	107	0.00
33	M	1,2,4-Trichlorobenzene	0.363	0.367	-1.1	107	0.00
34	T	Naphthalene	0.936	0.830	11.3	102	0.00
35	T	4-Chloroaniline	0.681	0.737	-8.2	104	0.00
36	T	4-Aminotoluene	0.790	0.917	-16.1	105	0.00
37	TC	Hexachlorobutadiene	0.177	0.176	0.6	105	0.00
38	T	Caprolactam	0.161	0.167	-3.7	102	-0.01
39	T	2-Aminotoluene	0.790	0.917	-16.1	105	0.00
40	MC	4-Chloro-3-methylphenol	0.344	0.375	-9.0	105	0.00
41	T	2-Methylnaphthalene	0.820	0.891	-8.7	109	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	104	0.00
44	TP	Hexachlorocyclopentadiene	0.174	0.176	-1.1	104	0.00
45	TC	2,4,6-Trichlorophenol	0.265	0.281	-6.0	107	0.00

46	T	2,4,5-Trichlorophenol	0.284	0.309	-8.8	106	0.00
47	S	2-Fluorobiphenyl	1.024	0.945	7.7	107	0.00
48	T	1,1'-Biphenyl	1.427	1.172	17.9	110	0.00
49	T	2-Chloronaphthalene	0.938	1.042	-11.1	106	0.00
50	T	2-Nitroaniline	0.188	0.196	-4.3	124	0.00
51	T	Dimethyl phthalate	0.999	1.059	-6.0	102	0.00
52	T	2,6-Dinitrotoluene	0.143	0.160	-11.9	128	0.00
53	T	Acenaphthylene	1.586	1.385	12.7	96	0.00
54	T	3-Nitroaniline	0.155	0.198	-27.7	120	0.00
55	MC	Acenaphthene	0.967	0.987	-2.1	100	0.00
56	TP	2,4-Dinitrophenol	0.055	0.051	7.3	98	0.00
57	MP	4-Nitrophenol	0.144	0.147	-2.1	117	0.00
58	M	2,4-Dinitrotoluene	0.116	0.113	2.6	85	0.00
59	T	Dibenzofuran	1.350	1.151	14.7	91	0.00
60	T	Diethyl phthalate	1.010	1.099	-8.8	104	0.01
61	T	Fluorene	1.040	1.096	-5.4	99	0.00
62	T	4-Chlorophenyl phenyl ether	0.501	0.489	2.4	100	0.00
63	T	4-Nitroaniline	0.174	0.208	-19.5	118	0.00
64		1,2,4,5-Tetrachlorobenzene	0.565	0.549	2.8	105	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.181	0.193	-6.6	109	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	98	0.01
67	T	4,6-Dinitro-2-methylphenol	0.061	0.066	-8.2	113	0.00
68	TC	N-Nitrosodiphenylamine	0.590	0.611	-3.6	106	0.00
69	T	1,2-Diphenylhydrazine	1.008	0.930	7.7	106	0.01
70	S	2,4,6-Tribromophenol	0.104	0.101	2.9	105	0.00
71	T	4-Bromophenyl phenyl ether	0.217	0.191	12.0	101	0.00
72	T	Hexachlorobenzene	0.220	0.201	8.6	103	0.01
73	T	Atrazine	0.211	0.195	7.6	102	0.00
74	MC	Pentachlorophenol	0.092	0.096	-4.3	108	0.00
75	T	Phenanthrene	0.998	1.072	-7.4	119	0.01
76	T	Anthracene	0.914	0.909	0.5	98	0.01
77	T	Carbazole	0.997	1.016	-1.9	102	0.01
78	T	Di-n-butyl phthalate	1.107	0.960	13.3	103	0.02
79	TC	Fluoranthene	0.993	0.994	-0.1	104	0.02
80	T	Benzidine	0.413	0.296	28.3	74	-0.04
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	101	0.00
83	M	Pyrene	1.056	1.158	-9.7	102	0.02
84	S	Terphenyl-d14	0.926	0.960	-3.7	99	0.02
85	T	3,3'-Dimethylbenzidine	0.533	0.432	18.9	81	-0.07
86	T	Butyl benzyl phthalate	0.494	0.502	-1.6	104	0.01
87	T	3,3'-Dichlorobenzidine	0.263	0.278	-5.7	104	0.00
88	T	Benzo[a]anthracene	0.868	0.852	1.8	103	0.00
89	T	Chrysene	0.765	0.770	-0.7	103	0.00
90	T	Bis(2-ethylhexyl) phthalate	0.662	0.684	-3.3	104	-0.04
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	101	0.04
93	TC	Di-n-octyl phthalate	1.353	1.351	0.1	107	0.02
94	T	Benzo[b]fluoranthene	1.191	1.075	9.7	94	0.02
95	T	Benzo[k]fluoranthene	1.139	1.163	-2.1	109	0.03
96	TC	Benzo[a]pyrene	1.030	1.026	0.4	102	0.03
97	T	Indeno[1,2,3-cd]pyrene	1.165	1.214	-4.2	100	0.05
98	T	Dibenz[a,h]anthracene	0.917	0.968	-5.6	100	0.05
99	T	Benzo[g,h,i]perylene	0.997	1.023	-2.6	101	0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS0514.M Thu Mar 27 15:18:45 2014 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5115.D
Acq On : 1 Apr 2014 11:52
Operator : EDM
Sample : ABN027-14,CCV040BNA1
Misc : NA,04/01/14,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Apr 01 12:06:02 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.01
2	T	N-Nitrosodimethylamine	0.746	0.693	7.1	95	0.00
3	T	Pyridine	1.236	1.073	13.2	91	0.00
4	S	2-Fluorophenol	1.234	1.306	-5.8	92	0.00
5	T	Benzaldehyde	0.733	0.596	18.7	83	0.00
6	S	Phenol-d5	1.521	1.411	7.2	86	0.01
7	MC	Phenol	0.205	0.181	11.7	90	0.00
8	T	Aniline	0.725	0.630	13.1	83	0.00
9	T	Bis(2-chloroethyl) ether	0.957	0.818	14.5	81	0.00
10	M	2-Chlorophenol	1.282	1.346	-5.0	94	0.01
11	T	1,3-Dichlorobenzene	1.379	1.378	0.1	93	0.00
12	MC	1,4-Dichlorobenzene	1.380	1.470	-6.5	97	0.01
13	T	Benzyl alcohol	0.903	0.834	7.6	90	0.00
14	T	1,2-Dichlorobenzene	1.346	1.338	0.6	96	0.01
15	T	2-Methylphenol	1.121	1.100	1.9	91	0.01
16	T	Bis(2-chloroisopropyl) ethe	1.543	1.461	5.3	81	0.00
17	T	4-Methylphenol	1.194	1.213	-1.6	89	0.00
18	MP	N-Nitrosodi-n-propylamine	0.966	0.858	11.2	78	0.00
19	T	Acetophenone	1.688	1.683	0.3	89	0.00
20	T	3-Methylphenol	1.200	1.211	-0.9	88	0.00
21	T	Hexachloroethane	0.509	0.453	11.0	86	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	95	0.01
24	S	Nitrobenzene-d5	0.354	0.409	-15.5	117	0.00
25	T	Nitrobenzene	0.314	0.369	-17.5	103	0.01
26	T	Isophorone	0.804	0.785	2.4	86	0.00
27	TC	2-Nitrophenol	0.122	0.144	-18.0	110	0.00
28	T	2,4-Dimethylphenol	0.410	0.408	0.5	95	0.01
29	T	Bis(2-chloroethoxy) methane	0.491	0.463	5.7	87	0.01
30	T	Benzoic acid	0.100	0.112	-12.0	97	0.00
31	T	2,4-Dimethylaniline	0.620	0.545	12.1	87	0.00
32	TC	2,4-Dichlorophenol	0.303	0.316	-4.3	96	0.01
33	M	1,2,4-Trichlorobenzene	0.363	0.359	1.1	97	0.01
34	T	Naphthalene	0.936	0.889	5.0	101	0.01
35	T	4-Chloroaniline	0.681	0.682	-0.1	89	0.01
36	T	4-Aminotoluene	0.790	0.825	-4.4	88	0.00
37	TC	Hexachlorobutadiene	0.177	0.181	-2.3	101	0.01
38	T	Caprolactam	0.161	0.135	16.1	77	0.00
39	T	2-Aminotoluene	0.790	0.825	-4.4	88	0.00
40	MC	4-Chloro-3-methylphenol	0.344	0.347	-0.9	91	0.02
41	T	2-Methylnaphthalene	0.820	0.843	-2.8	96	0.02
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	94	0.02
44	TP	Hexachlorocyclopentadiene	0.174	0.132	24.1	70	0.01
45	TC	2,4,6-Trichlorophenol	0.265	0.301	-13.6	103	0.02

46	T	2,4,5-Trichlorophenol	0.284	0.346	-21.8	107	0.02
47	S	2-Fluorobiphenyl	1.024	1.142	-11.5	116	0.02
48	T	1,1'-Biphenyl	1.427	1.232	13.7	104	0.02
49	T	2-Chloronaphthalene	0.938	0.998	-6.4	91	0.02
50	T	2-Nitroaniline	0.188	0.214	-13.8	122	0.02
51	T	Dimethyl phthalate	0.999	1.083	-8.4	94	0.01
52	T	2,6-Dinitrotoluene	0.143	0.172	-20.3	124	0.01
53	T	Acenaphthylene	1.586	1.416	10.7	88	0.02
54	T	3-Nitroaniline	0.155	0.197	-27.1	107	0.01
55	MC	Acenaphthene	0.967	1.024	-5.9	93	0.02
56	TP	2,4-Dinitrophenol	0.055	0.057	-3.6	99	0.03
57	MP	4-Nitrophenol	0.144	0.137	4.9	98	0.02
58	M	2,4-Dinitrotoluene	0.116	0.134	-15.5	91	0.02
59	T	Dibenzofuran	1.350	1.391	-3.0	99	0.02
60	T	Diethyl phthalate	1.010	1.061	-5.0	90	0.02
61	T	Fluorene	1.040	1.145	-10.1	93	0.02
62	T	4-Chlorophenyl phenyl ether	0.501	0.502	-0.2	93	0.02
63	T	4-Nitroaniline	0.174	0.194	-11.5	99	0.01
64		1,2,4,5-Tetrachlorobenzene	0.565	0.578	-2.3	99	0.02
65	T	2,3,4,6-Tetrachlorophenol	0.181	0.217	-19.9	111	0.02
66	I	Phenanthrene-d10	1.000	1.000	0.0	98	0.03
67	T	4,6-Dinitro-2-methylphenol	0.061	0.054	11.5	92	0.02
68	TC	N-Nitrosodiphenylamine	0.590	0.539	8.6	94	0.02
69	T	1,2-Diphenylhydrazine	1.008	0.786	22.0	89	0.02
70	S	2,4,6-Tribromophenol	0.104	0.109	-4.8	114	0.02
71	T	4-Bromophenyl phenyl ether	0.217	0.186	14.3	99	0.02
72	T	Hexachlorobenzene	0.220	0.194	11.8	100	0.03
73	T	Atrazine	0.211	0.166	21.3	87	0.02
74	MC	Pentachlorophenol	0.092	0.104	-13.0	117	0.03
75	T	Phenanthrene	0.998	0.925	7.3	103	0.03
76	T	Anthracene	0.914	0.903	1.2	98	0.03
77	T	Carbazole	0.997	0.952	4.5	95	0.03
78	T	Di-n-butyl phthalate	1.107	1.052	5.0	113	0.03
79	TC	Fluoranthene	0.993	0.952	4.1	100	0.03
80	T	Benzidine	0.413	0.400	3.1	115	0.05
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	96	0.03
83	M	Pyrene	1.056	1.193	-13.0	100	0.03
84	S	Terphenyl-d14	0.926	0.996	-7.6	98	0.04
85	T	3,3'-Dimethylbenzidine	0.533	0.511	4.1	100	0.05
86	T	Butyl benzyl phthalate	0.494	0.484	2.0	95	0.03
87	T	3,3'-Dichlorobenzidine	0.263	0.298	-13.3	106	0.02
88	T	Benzo[a]anthracene	0.868	0.873	-0.6	100	0.03
89	T	Chrysene	0.765	0.756	1.2	96	0.03
90	T	Bis(2-ethylhexyl) phthalate	0.662	0.655	1.1	95	-0.02
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	104	0.10
93	TC	Di-n-octyl phthalate	1.353	1.378	-1.8	112	0.03
94	T	Benzo[b]fluoranthene	1.191	1.236	-3.8	112	0.07
95	T	Benzo[k]fluoranthene	1.139	0.992	12.9	96	0.07
96	TC	Benzo[a]pyrene	1.030	1.072	-4.1	109	0.09
97	T	Indeno[1,2,3-cd]pyrene	1.165	1.323	-13.6	112	0.17
98	T	Dibenz[a,h]anthracene	0.917	1.071	-16.8	114	0.15
99	T	Benzo[g,h,i]perylene	0.997	1.128	-13.1	114	0.19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS0514.M Tue Apr 01 12:55:28 2014 RPT1

Response Factor Report MSD_A

Method Path : C:\MSDCHEM\1\METHODS\
Method File : AS0414.M
Title : BNA CALIBRATION METHOD
Last Update : Mon Mar 31 11:38:57 2014
Response Via : Initial Calibration

Calibration Files
1 =A0581.D 10 =A0582.D 20 =A0583.D 40 =A0584.D 80 =A0585.D
120 =A0586.D

		Compound	1	10	20	40	80	120	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------							
2)	T	N-Nitrosodimet...	0.722	0.768	0.783	0.793	0.794	0.761	0.770	3.52
3)	T	Pyridine	2.862	2.323	2.375	1.769	1.837	1.983	2.191	18.80
4)	S	2-Fluorophenol	1.416	1.425	1.402	1.397	1.474	1.421	1.423	1.94
5)	T	Benzaldehyde	0.615	0.487	0.482	0.587	0.516	0.429	0.519	13.45
6)	S	Phenol-d5	1.911	1.854	1.859	1.854	1.993	1.907	1.896	2.86
7)	MC	Phenol	1.826	1.663	1.604	1.768	1.803	1.621	1.714	5.64
8)	T	Aniline	0.941	0.917	0.897	0.874	0.861	0.739	0.871	8.16
9)	T	Bis(2-chloroet...	1.133	1.116	1.141	1.155	1.043	1.203	1.132	4.64
10)	M	2-Chlorophenol	1.620	1.481	1.480	1.522	1.517	1.422	1.507	4.36
11)	T	1,3-Dichlorobe...	1.537	1.480	1.522	1.515	1.523	1.432	1.501	2.59
12)	MC	1,4-Dichlorobe...	1.389	1.498	1.536	1.540	1.486	1.367	1.469	5.02
13)	T	Benzyl alcohol	0.923	0.947	0.957	0.983	0.975	0.909	0.949	3.04
14)	T	1,2-Dichlorobe...	1.389	1.418	1.405	1.473	1.430	1.342	1.410	3.10
15)	T	2-Methylphenol	1.223	1.263	1.198	1.258	1.274	1.168	1.231	3.40
16)	T	Bis(2-chlorois...	2.896	2.841	2.903	2.983	2.952	2.730	2.884	3.12
17)	T	4-Methylphenol	1.402	1.321	1.360	1.337	1.414	1.266	1.350	4.05
18)	MP	N-Nitrosodi-n-...	1.504	1.161	1.096	1.170	1.181	1.065	1.196	13.18
19)	T	Acetophenone	1.765	1.870	1.952	1.957	1.942	1.788	1.879	4.55
20)	T	3-Methylphenol	1.402	1.321	1.360	1.334	1.413	1.266	1.349	4.05
21)	T	Hexachloroethane	0.684	0.600	0.568	0.621	0.597	0.577	0.608	6.84
23)	I	Naphthalene-d8	----------ISTD----------							
24)	S	Nitrobenzene-d5	0.390	0.391	0.412	0.405	0.451	0.465	0.419	7.53
25)	T	Nitrobenzene	0.424	0.389	0.375	0.381	0.376	0.361	0.384	5.52
26)	T	Isophorone	0.843	0.740	0.740	0.764	0.744	0.698	0.755	6.37
27)	TC	2-Nitrophenol	0.193	0.191	0.189	0.194	0.184	0.182	0.189	2.55
28)	T	2,4-Dimethylph...	0.347	0.351	0.357	0.366	0.369	0.333	0.354	3.72
29)	T	Bis(2-chloroet...	0.382	0.394	0.401	0.415	0.397	0.383	0.395	3.12
30)	T	Benzoic acid	0.214	0.262	0.264	0.288	0.242	0.223	0.249	11.11
31)	T	2,4-Dimethylan...	0.626	0.574	0.546	0.451	0.483	0.350	0.505	19.49
32)	TC	2,4-Dichloroph...	0.221	0.263	0.258	0.263	0.263	0.233	0.250	7.39
33)	M	1,2,4-Trichlor...	0.279	0.277	0.283	0.284	0.287	0.259	0.278	3.59
34)	T	Naphthalene	1.104	1.045	1.042	1.059	0.993	0.964	1.035	4.80
35)	T	4-Chloroaniline	0.551	0.549	0.553	0.570	0.548	0.492	0.544	4.86
36)	T	4-Aminotoluene	0.721	0.806	0.787	0.566	0.558	0.541	0.663	18.38
37)	TC	Hexachlorobuta...	0.151	0.142	0.150	0.151	0.141	0.133	0.145	4.95
38)	T	Caprolactam	0.285	0.236	0.227	0.236	0.231	0.217	0.239	9.83
39)	T	2-Aminotoluene	0.721	0.806	0.787	0.566	0.558	0.542	0.663	18.37
40)	MC	4-Chloro-3-met...	0.299	0.332	0.338	0.349	0.338	0.315	0.329	5.57
41)	T	2-Methylnaphth...	0.707	0.698	0.709	0.711	0.677	0.644	0.691	3.77
43)	I	Acenaphthene-d10	----------ISTD----------							
44)	TP	Hexachlorocycl...	0.186	0.146	0.166	0.183	0.197	0.188	0.178	10.55
45)	TC	2,4,6-Trichlor...	0.310	0.306	0.317	0.326	0.328	0.308	0.316	3.00
46)	T	2,4,5-Trichlor...	0.379	0.350	0.344	0.365	0.357	0.344	0.356	3.78
47)	S	2-Fluorobiphenyl	1.205	1.199	1.185	1.164	1.252	1.232	1.206	2.63
48)	T	1,1'-Biphenyl	1.566	1.444	1.368	1.392	1.379	1.268	1.403	7.01
49)	T	2-Chloronaphth...	0.987	1.019	0.998	1.055	1.013	0.951	1.004	3.45
50)	T	2-Nitroaniline	0.402	0.407	0.417	0.416	0.444	0.415	0.417	3.54
51)	T	Dimethyl phtha...	1.181	1.167	1.144	1.196	1.181	1.086	1.159	
52)	T	2,6-Dinitrotol...	0.253	0.283	0.282	0.293	0.290	0.275	0.279	5.22
53)	T	Acenaphthylene	1.759	1.754	1.730	1.765	1.742	1.583	1.722	4.03

54)	T	3-Nitroaniline	0.393	0.397	0.409	0.421	0.421	0.397	0.406	3.07
55)	MC	Acenaphthene	1.065	1.081	1.008	1.045	1.021	0.954	1.029	4.44
56)	TP	2,4-Dinitrophenol	0.059	0.075	0.098	0.099	0.095	0.090	0.086	18.49
57)	MP	4-Nitrophenol	0.351	0.299	0.283	0.298	0.318	0.290	0.307	8.10
58)	M	2,4-Dinitrotol...	0.322	0.371	0.354	0.386	0.375	0.353	0.360	6.28
59)	T	Dibenzofuran	1.474	1.524	1.434	1.484	1.409	1.330	1.442	4.73
60)	T	Diethyl phthalate	1.461	1.235	1.219	1.233	1.201	1.128	1.246	9.02
61)	T	Fluorene	1.258	1.226	1.171	1.238	1.171	1.101	1.194	4.87
62)	T	4-Chlorophenyl...	0.525	0.538	0.544	0.553	0.526	0.500	0.531	3.50
63)	T	4-Nitroaniline	0.439	0.395	0.371	0.400	0.379	0.350	0.389	7.79
64)	T	1,2,4,5-Tetrac...	0.513	0.652	0.598	0.455	0.457	0.401	0.513	18.63
65)	T	2,3,4,6-Tetrac...	0.285	0.261	0.248	0.249	0.250	0.242	0.256	6.10
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-...	0.088	0.105	0.127	0.145	0.141	0.138	0.124	18.22
68)	TC	N-Nitrosodiphe...	0.547	0.539	0.526	0.562	0.531	0.500	0.534	3.91
69)	T	1,2-Diphenylhy...	0.989	1.003	1.001	1.058	1.019	0.984	1.009	2.68
70)	S	2,4,6-Tribromo...	0.113	0.112	0.110	0.108	0.113	0.110	0.111	1.95
71)	T	4-Bromophenyl ...	0.174	0.179	0.182	0.188	0.182	0.168	0.179	3.94
72)	T	Hexachlorobenzene	0.213	0.196	0.189	0.205	0.194	0.187	0.197	5.05
73)	T	Atrazine	0.211	0.202	0.204	0.205	0.193	0.182	0.199	5.18
74)	MC	Pentachlorophenol	0.127	0.131	0.134	0.148	0.143	0.136	0.137	5.72
75)	T	Phenanthrene	1.181	1.121	1.060	1.114	1.043	0.962	1.080	7.03
76)	T	Anthracene	1.010	1.106	1.090	1.119	1.038	0.951	1.052	6.16
77)	T	Carbazole	1.057	1.029	1.005	1.015	0.931	0.880	0.986	6.76
78)	T	Di-n-butyl pht...	1.438	1.252	1.237	1.239	1.168	1.110	1.241	8.93
79)	TC	Fluoranthene	1.015	1.015	0.976	1.036	0.901	0.879	0.970	6.75
80)	T	Benzidine	0.491	0.541	0.442	0.386	0.352	0.341	0.426	18.83
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.226	1.116	1.135	1.193	1.225	1.142	1.173	4.10
84)	S	Terphenyl-d14	0.787	0.759	0.785	0.779	0.862	0.858	0.805	5.45
85)	T	3,3'-Dimethylb...	0.587	0.415	0.555	0.529	0.498	0.443	0.504	13.13
86)	T	Butyl benzyl p...	0.642	0.562	0.570	0.602	0.603	0.558	0.589	5.44
87)	T	3,3'-Dichlorob...	0.316	0.363	0.346	0.316	0.276	0.259	0.313	12.68
88)	T	Benzo[a]anthra...	1.097	0.943	0.927	0.972	0.941	0.877	0.959	7.75
89)	T	Chrysene	0.891	0.840	0.832	0.865	0.817	0.757	0.834	5.51
90)	T	Bis(2-ethylhex...	0.830	0.733	0.739	0.770	0.758	0.706	0.756	5.60
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl pht...	1.987	1.833	1.846	1.965	1.992	1.805	1.905	4.48
94)	T	Benzo[b]fluora...	1.368	1.247	1.247	1.250	1.291	1.217	1.270	4.22
95)	T	Benzo[k]fluora...	1.180	1.261	1.250	1.380	1.252	1.088	1.235	7.84
96)	TC	Benzo[a]pyrene	1.007	1.099	1.122	1.158	1.153	1.073	1.102	5.15
97)	T	Indeno[1,2,3-c...	0.993	1.018	0.982	1.166	1.305	1.224	1.114	12.22
98)	T	Dibenz[a,h]ant...	0.806	0.809	0.801	0.966	1.088	1.011	0.913	13.67
99)	T	Benzo[g,h,i]pe...	0.911	0.806	0.817	1.017	1.134	1.041	0.954	13.79

(#) = Out of Range

AW0414.M Mon Mar 31 12:22:12 2014 MSD_A

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\03-31-14\
Data File : A0593.D
Acq On : 31 Mar 2014 11:07
Operator : JC
Sample : ABN027-14,ICV040BNA1
Misc : N/A,03/31/14,N/A,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Mar 31 11:54:18 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:38:57 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	123	0.00
2	T	N-Nitrosodimethylamine	0.770	0.795	-3.2	123	0.00
3	T	Pyridine	2.191	1.769	19.3	123	0.00
4	S	2-Fluorophenol	1.423	1.336	6.1	118	0.00
5	T	Benzaldehyde	0.519	0.619	-19.3	128	0.00
6	S	Phenol-d5	1.896	1.834	3.3	122	0.00
7	MC	Phenol	1.714	1.733	-1.1	121	0.00
8	T	Aniline	0.871	0.851	2.3	120	0.00
9	T	Bis(2-chloroethyl) ether	1.132	1.278	-12.9	136	0.00
10	M	2-Chlorophenol	1.507	1.504	0.2	122	0.00
11	T	1,3-Dichlorobenzene	1.501	1.539	-2.5	125	0.00
12	MC	1,4-Dichlorobenzene	1.469	1.579	-7.5	126	0.00
13	T	Benzyl alcohol	0.949	0.944	0.5	118	0.00
14	T	1,2-Dichlorobenzene	1.410	1.466	-4.0	122	0.00
15	T	2-Methylphenol	1.231	1.242	-0.9	122	0.00
16	T	Bis(2-chloroisopropyl) ethe	2.884	2.972	-3.1	123	0.00
17	T	4-Methylphenol	1.350	1.382	-2.4	127	-0.01
18	MP	N-Nitrosodi-n-propylamine	1.196	1.120	6.4	118	0.00
19	T	Acetophenone	1.879	1.906	-1.4	120	0.00
20	T	3-Methylphenol	1.349	1.382	-2.4	127	-0.01
21	T	Hexachloroethane	0.608	0.598	1.6	119	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	122	0.00
24	S	Nitrobenzene-d5	0.419	0.393	6.2	119	0.00
25	T	Nitrobenzene	0.384	0.383	0.3	123	0.00
26	T	Isophorone	0.755	0.749	0.8	120	0.00
27	TC	2-Nitrophenol	0.189	0.192	-1.6	121	0.00
28	T	2,4-Dimethylphenol	0.354	0.352	0.6	118	0.00
29	T	Bis(2-chloroethoxy) methane	0.395	0.414	-4.8	122	0.00
30	T	Benzoic acid	0.249	0.278	-11.6	118	-0.02
31	T	2,4-Dimethylaniline	0.505	0.475	5.9	129	0.00
32	TC	2,4-Dichlorophenol	0.250	0.261	-4.4	122	0.00
33	M	1,2,4-Trichlorobenzene	0.278	0.284	-2.2	122	0.00
34	T	Naphthalene	1.035	1.055	-1.9	122	0.00
35	T	4-Chloroaniline	0.544	0.550	-1.1	118	0.00
36	T	4-Aminotoluene	0.663	0.545	17.8	118	0.00
37	TC	Hexachlorobutadiene	0.145	0.148	-2.1	120	0.00
38	T	Caprolactam	0.239	0.218	8.8	113	-0.02
39	T	2-Aminotoluene	0.663	0.545	17.8	118	0.00
40	MC	4-Chloro-3-methylphenol	0.329	0.340	-3.3	119	0.00
41	T	2-Methylnaphthalene	0.691	0.682	1.3	117	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	117	0.00
44	TP	Hexachlorocyclopentadiene	0.178	0.181	-1.7	115	0.00
45	TC	2,4,6-Trichlorophenol	0.316	0.330	-4.4	118	0.00
46	T	2,4,5-Trichlorophenol	0.356	0.371	-4.2	119	0.00

47	S	2-Fluorobiphenyl	1.206	1.178	2.3	118	0.00
48	T	1,1'-Biphenyl	1.403	1.451	-3.4	122	0.00
49	T	2-Chloronaphthalene	1.004	1.084	-8.0	120	0.00
50	T	2-Nitroaniline	0.417	0.419	-0.5	118	0.00
51	T	Dimethyl phthalate	1.159	1.202	-3.7	117	0.00
52	T	2,6-Dinitrotoluene	0.279	0.284	-1.8	113	0.00
53	T	Acenaphthylene	1.722	1.777	-3.2	117	0.00
54	T	3-Nitroaniline	0.406	0.429	-5.7	119	0.00
55	MC	Acenaphthene	1.029	1.078	-4.8	120	0.00
56	TP	2,4-Dinitrophenol	0.086	0.101	-17.4	118	0.00
57	MP	4-Nitrophenol	0.307	0.295	3.9	115	-0.01
58	M	2,4-Dinitrotoluene	0.360	0.367	-1.9	111	0.00
59	T	Dibenzofuran	1.442	1.478	-2.5	116	0.00
60	T	Diethyl phthalate	1.246	1.259	-1.0	119	0.00
61	T	Fluorene	1.194	1.243	-4.1	117	0.00
62	T	4-Chlorophenyl phenyl ether	0.531	0.541	-1.9	114	0.00
63	T	4-Nitroaniline	0.389	0.376	3.3	110	-0.01
64	T	1,2,4,5-Tetrachlorobenzene	0.513	0.465	9.4	119	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.256	0.238	7.0	112	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	114	0.00
67	T	4,6-Dinitro-2-methylphenol	0.124	0.135	-8.9	106	-0.01
68	TC	N-Nitrosodiphenylamine	0.534	0.575	-7.7	117	0.00
69	T	1,2-Diphenylhydrazine	1.009	1.081	-7.1	117	0.00
70	S	2,4,6-Tribromophenol	0.111	0.108	2.7	114	0.00
71	T	4-Bromophenyl phenyl ether	0.179	0.194	-8.4	118	0.00
72	T	Hexachlorobenzene	0.197	0.207	-5.1	115	0.00
73	T	Atrazine	0.199	0.196	1.5	109	0.00
74	MC	Pentachlorophenol	0.137	0.140	-2.2	108	0.00
75	T	Phenanthrene	1.080	1.086	-0.6	111	0.00
76	T	Anthracene	1.052	1.090	-3.6	111	0.00
77	T	Carbazole	0.986	1.004	-1.8	113	0.00
78	T	Di-n-butyl phthalate	1.241	1.238	0.2	114	0.00
79	TC	Fluoranthene	0.970	0.975	-0.5	108	-0.01
80	T	Benzidine	0.426	0.386	9.4	131	0.00
82	I	Chrysene-d12	1.000	1.000	0.0	104	-0.02
83	M	Pyrene	1.173	1.216	-3.7	106	-0.01
84	S	Terphenyl-d14	0.805	0.796	1.1	107	-0.01
85	T	3,3'-Dimethylbenzidine	0.504	0.523	-3.8	120	-0.02
86	T	Butyl benzyl phthalate	0.589	0.615	-4.4	107	-0.02
87	T	3,3'-Dichlorobenzidine	0.313	0.305	2.6	101	-0.03
88	T	Benzo[a]anthracene	0.959	0.984	-2.6	106	-0.03
89	T	Chrysene	0.834	0.880	-5.5	106	-0.03
90	T	Bis(2-ethylhexyl) phthalate	0.756	0.770	-1.9	104	-0.03
92	I	Perylene-d12	1.000	1.000	0.0	98	-0.03
93	TC	Di-n-octyl phthalate	1.905	2.103	-10.4	105	-0.03
94	T	Benzo[b]fluoranthene	1.270	1.350	-6.3	106	-0.03
95	T	Benzo[k]fluoranthene	1.235	1.376	-11.4	98	-0.04
96	TC	Benzo[a]pyrene	1.102	1.165	-5.7	99	-0.03
97	T	Indeno[1,2,3-cd]pyrene	1.114	1.164	-4.5	98	-0.05
98	T	Dibenz[a,h]anthracene	0.913	0.947	-3.7	96	-0.05
99	T	Benzo[g,h,i]perylene	0.954	0.981	-2.8	95	-0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

AW0414.M Mon Mar 31 12:16:44 2014 MSD_A

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0651.D
Acq On : 2 Apr 2014 8:52
Operator : JC
Sample : ABN027-14,CCV040BNA1,
Misc : NA,NA,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Apr 02 12:47:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:42:00 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	142	0.00
2	T	N-Nitrosodimethylamine	0.770	0.727	5.6	130	-0.02
3	T	Pyridine	2.191	1.809	17.4	145	-0.02
4	S	2-Fluorophenol	1.423	1.319	7.3	134	0.00
5	T	Benzaldehyde	0.519	0.618	-19.1	92	0.00
6	S	Phenol-d5	1.896	1.818	4.1	139	0.00
7	MC	Phenol	1.714	1.736	-1.3	139	0.00
8	T	Aniline	0.871	0.851	2.3	138	0.00
9	T	Bis(2-chloroethyl) ether	1.132	1.156	-2.1	142	0.00
10	M	2-Chlorophenol	1.507	1.487	1.3	139	0.00
11	T	1,3-Dichlorobenzene	1.501	1.484	1.1	139	0.00
12	MC	1,4-Dichlorobenzene	1.469	1.543	-5.0	142	0.00
13	T	Benzyl alcohol	0.949	1.003	-5.7	145	0.00
14	T	1,2-Dichlorobenzene	1.410	1.454	-3.1	140	0.00
15	T	2-Methylphenol	1.231	1.234	-0.2	139	0.00
16	T	Bis(2-chloroisopropyl) ethe	2.884	3.068	-6.4	146	0.00
17	T	4-Methylphenol	1.350	1.356	-0.4	144	0.00
18	MP	N-Nitrosodi-n-propylamine	1.196	1.141	4.6	139	0.00
19	T	Acetophenone	1.879	1.925	-2.4	140	0.00
20	T	3-Methylphenol	1.349	1.355	-0.4	144	0.00
21	T	Hexachloroethane	0.608	0.590	3.0	135	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	138	0.00
24	S	Nitrobenzene-d5	0.419	0.410	2.1	140	0.00
25	T	Nitrobenzene	0.384	0.388	-1.0	141	0.00
26	T	Isophorone	0.755	0.764	-1.2	138	0.00
27	TC	2-Nitrophenol	0.189	0.195	-3.2	139	0.00
28	T	2,4-Dimethylphenol	0.354	0.369	-4.2	140	0.00
29	T	Bis(2-chloroethoxy) methane	0.395	0.437	-10.6	146	0.00
30	T	Benzoic acid	0.249	0.281	-12.9	135	-0.01
31	T	2,4-Dimethylaniline	0.505	0.413	18.2	127	0.00
32	TC	2,4-Dichlorophenol	0.250	0.267	-6.8	140	0.00
33	M	1,2,4-Trichlorobenzene	0.278	0.293	-5.4	142	0.00
34	T	Naphthalene	1.035	1.069	-3.3	139	0.00
35	T	4-Chloroaniline	0.544	0.575	-5.7	139	0.00
36	T	4-Aminotoluene	0.663	0.565	14.8	138	0.00
37	TC	Hexachlorobutadiene	0.145	0.157	-8.3	144	0.00
38	T	Caprolactam	0.239	0.231	3.3	135	-0.02
39	T	2-Aminotoluene	0.663	0.565	14.8	138	0.00
40	MC	4-Chloro-3-methylphenol	0.329	0.353	-7.3	140	0.00
41	T	2-Methylnaphthalene	0.691	0.717	-3.8	139	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	139	0.00
44	TP	Hexachlorocyclopentadiene	0.178	0.192	-7.9	146	0.00
45	TC	2,4,6-Trichlorophenol	0.316	0.328	-3.8	140	0.00
46	T	2,4,5-Trichlorophenol	0.356	0.360	-1.1	137	0.00

47	S	2-Fluorobiphenyl	1.206	1.227	-1.7	146	0.00
48	T	1,1'-Biphenyl	1.403	1.460	-4.1	145	0.00
49	T	2-Chloronaphthalene	1.004	1.063	-5.9	140	0.00
50	T	2-Nitroaniline	0.417	0.427	-2.4	142	0.00
51	T	Dimethyl phthalate	1.159	1.217	-5.0	141	0.00
52	T	2,6-Dinitrotoluene	0.279	0.296	-6.1	140	0.00
53	T	Acenaphthylene	1.722	1.792	-4.1	141	0.00
54	T	3-Nitroaniline	0.406	0.425	-4.7	140	0.00
55	MC	Acenaphthene	1.029	1.072	-4.2	142	0.00
56	TP	2,4-Dinitrophenol	0.086	0.096	-11.6	133	0.00
57	MP	4-Nitrophenol	0.307	0.278	9.4	129	0.00
58	M	2,4-Dinitrotoluene	0.360	0.381	-5.8	137	0.00
59	T	Dibenzofuran	1.442	1.488	-3.2	139	0.00
60	T	Diethyl phthalate	1.246	1.241	0.4	140	0.00
61	T	Fluorene	1.194	1.231	-3.1	138	0.00
62	T	4-Chlorophenyl phenyl ether	0.531	0.529	0.4	132	0.00
63	T	4-Nitroaniline	0.389	0.343	11.8	119	-0.01
64	T	1,2,4,5-Tetrachlorobenzene	0.513	0.458	10.7	139	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.256	0.233	9.0	129	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	129	0.00
67	T	4,6-Dinitro-2-methylphenol	0.124	0.130	-4.8	116	0.00
68	TC	N-Nitrosodiphenylamine	0.534	0.584	-9.4	134	0.00
69	T	1,2-Diphenylhydrazine	1.009	1.125	-11.5	137	0.00
70	S	2,4,6-Tribromophenol	0.111	0.105	5.4	125	0.00
71	T	4-Bromophenyl phenyl ether	0.179	0.202	-12.8	139	0.00
72	T	Hexachlorobenzene	0.197	0.207	-5.1	130	0.00
73	T	Atrazine	0.199	0.201	-1.0	127	0.00
74	MC	Pentachlorophenol	0.137	0.128	6.6	112	0.00
75	T	Phenanthrene	1.080	1.091	-1.0	127	0.00
76	T	Anthracene	1.052	1.093	-3.9	126	0.00
77	T	Carbazole	0.986	0.941	4.6	120	0.00
78	T	Di-n-butyl phthalate	1.241	1.250	-0.7	130	0.00
79	TC	Fluoranthene	0.970	0.877	9.6	109	0.00
80	T	Benzidine	0.426	0.420	1.4	117	-0.01
82	I	Chrysene-d12	1.000	1.000	0.0	93	-0.01
83	M	Pyrene	1.173	1.363	-16.2	107	0.00
84	S	Terphenyl-d14	0.805	0.882	-9.6	106	0.00
85	T	3,3'-Dimethylbenzidine	0.504	0.517	-2.6	109	-0.02
86	T	Butyl benzyl phthalate	0.589	0.657	-11.5	102	-0.01
87	T	3,3'-Dichlorobenzidine	0.313	0.288	8.0	85	-0.02
88	T	Benzo[a]anthracene	0.959	0.860	10.3	83	-0.01
89	T	Chrysene	0.834	0.728	12.7	79	-0.02
90	T	Bis(2-ethylhexyl) phthalate	0.756	0.783	-3.6	95	-0.01
92	I	Perylene-d12	1.000	1.000	0.0	97	-0.02
93	TC	Di-n-octyl phthalate	1.905	1.860	2.4	91	-0.02
94	T	Benzo[b]fluoranthene	1.270	1.395	-9.8	108	-0.02
95	T	Benzo[k]fluoranthene	1.235	1.023	17.2	72	-0.02
96	TC	Benzo[a]pyrene	1.102	1.143	-3.7	95	-0.02
97	T	Indeno[1,2,3-cd]pyrene	1.114	1.301	-16.8	108	-0.03
98	T	Dibenz[a,h]anthracene	0.913	1.085	-18.8	108	-0.03
99	T	Benzo[g,h,i]perylene	0.954	1.141	-19.6	108	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

AS0414.M Wed Apr 02 12:47:20 2014 MSD_A

Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BW0514.M
Title : BNA CALIBRATION METHOD
Last Update : Tue Apr 01 12:39:44 2014
Response Via : Initial Calibration

Calibration Files
1 =B7687.D 10 =B7688.D 20 =B7689.D
40 =B7686.D 80 =B7690.D 120 =B7691.D =

		Compound	1	10	20	40	80	120	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)	T	N-Nitrosodimethyl	1.023	1.019	0.983	0.993	0.881	0.839	0.956	8.06
3)	T	Pyridine	1.811	2.402	2.250	1.593	1.766	1.667	1.915	17.28
4)	S	2-Fluorophenol	1.101	1.067	1.086	1.095	1.058	1.151	1.093	3.02
5)	T	Benzaldehyde	0.524	0.551	0.412	0.499	0.398	0.351	0.456	17.50
6)	S	Phenol-d5	1.506	1.439	1.433	1.426	1.404	1.459	1.444	2.44
7)	MC	Phenol	1.613	1.651	1.584	1.436	1.334	1.295	1.485	10.22
8)	T	Aniline	1.106	1.049	1.032	0.958	0.932	1.069	1.024	6.51
9)	T	Bis(2-chloroethyl	1.487	1.519	1.437	1.329	1.598	1.379	1.458	6.66
10)	M	2-Chlorophenol	1.662	1.593	1.532	1.406	1.658	1.476	1.555	6.59
11)	T	1,3-Dichlorobenze	1.745	1.757	1.645	1.500	1.623	1.407	1.613	8.53
12)	MC	1,4-Dichlorobenze	1.896	1.716	1.643	1.459	1.675	1.528	1.653	9.26
13)	T	Benzyl alcohol	1.074	1.027	1.014	0.939	0.957	0.913	0.987	6.16
14)	T	1,2-Dichlorobenze	1.734	1.584	1.497	1.317	1.338	1.252	1.454	12.69
15)	T	2-Methylphenol	1.369	1.296	1.219	1.092	1.080	1.020	1.179	11.64
16)	T	Bis(2-chloroisopr	3.141	3.041	2.920	2.726	2.640	2.384	2.809	9.97
17)	T	4-Methylphenol	1.383	1.423	1.377	1.284	1.253	1.160	1.314	7.52
18)	MP	N-Nitrosodi-n-pro	1.344	1.280	1.228	1.100	1.152	1.202	1.218	7.20
19)	T	Acetophenone	2.294	1.992	1.904	1.699	1.895	1.882	1.944	10.09
20)	T	3-Methylphenol	1.383	1.423	1.377	1.283	1.156	1.156	1.296	9.10
21)	T	Hexachloroethane	0.770	0.644	0.641	0.643	0.584	0.657	0.656	9.30
23)	I	Naphthalene-d8	----------ISTD----------							
24)	S	Nitrobenzene-d5	0.415	0.431	0.436	0.439	0.469	0.476	0.444	5.32
25)	T	Nitrobenzene	0.565	0.475	0.450	0.421	0.509	0.437	0.476	11.17
26)	T	Isophorone	0.927	0.887	0.842	0.763	0.764	0.805	0.831	8.03
27)	TC	2-Nitrophenol	0.160	0.174	0.161	0.150	0.117	0.105	0.145	18.88
28)	T	2,4-Dimethylpheno	0.365	0.401	0.388	0.339	0.311	0.309	0.352	11.02
29)	T	Bis(2-chloroethox	0.472	0.496	0.450	0.407	0.377	0.372	0.429	11.94
30)	T	Benzoic acid	0.205	0.177	0.187	0.220	0.225	0.222	0.206	9.66
31)	T	2,4-Dimethylanili	0.609	0.646	0.555	0.390	0.476	0.532	0.535	17.28
32)	TC	2,4-Dichloropheno	0.273	0.315	0.302	0.273	0.257	0.211	0.272	13.48
33)	M	1,2,4-Trichlorobe	0.356	0.356	0.342	0.315	0.294	0.257	0.320	12.27
34)	T	Naphthalene	1.407	1.234	1.139	1.022	0.992	1.061	1.142	13.68
35)	T	4-Chloroaniline	0.698	0.676	0.635	0.569	0.675	0.575	0.638	8.61
36)	T	4-Aminotoluene	0.649	0.626	0.882	0.622	0.864	0.707	0.725	16.38
37)	TC	Hexachlorobutadie	0.226	0.227	0.212	0.193	0.182	0.203	0.207	8.70
38)	T	Caprolactam	0.187	0.198	0.197	0.192	0.182	0.199	0.193	3.51
39)	T	2-Aminotoluene	0.649	0.626	0.882	0.622	0.846	0.675	0.717	16.22
40)	MC	4-Chloro-3-methyl	0.309	0.355	0.321	0.294	0.350	0.304	0.322	7.81
41)	T	2-Methylnaphthale	0.779	0.777	0.723	0.615	0.686	0.657	0.706	9.33
43)	I	Acenaphthene-d10	----------ISTD----------							
44)	TP	Hexachlorocyclope	0.213	0.259	0.251	0.250	0.217	0.196	0.231	11.13
45)	TC	2,4,6-Trichloroph	0.290	0.348	0.327	0.302	0.326	0.230	0.304	13.69
46)	T	2,4,5-Trichloroph	0.333	0.358	0.359	0.337	0.301	0.280	0.328	9.66
47)	S	2-Fluorobiphenyl	1.035	1.063	1.076	1.054	1.020	0.980	1.038	3.35
48)	T	1,1'-Biphenyl	1.556	1.536	1.388	1.227	1.467	1.157	1.388	11.87
49)	T	2-Chloronaphthale	1.122	1.136	1.063	0.940	0.989	0.934	1.031	8.65
50)	T	2-Nitroaniline	0.265	0.312	0.319	0.324	0.318	0.276	0.302	8.34
51)	T	Dimethyl phthalat	1.133	1.204	1.133	1.006	1.013	0.915	1.101	9.66
52)	T	2,6-Dinitrotoluen	0.135	0.202	0.213	0.204	0.194	0.160	0.185	16.44
53)	T	Acenaphthylene	1.813	1.918	1.813	1.599	1.494	1.472	1.685	11.16

54)	T	3-Nitroaniline	0.217	0.286	0.293	0.274	0.260	0.240	0.261	11.03
55)	MC	Acenaphthene	1.260	1.281	1.196	1.029	1.173	0.974	1.152	10.81
56)	TP	2,4-Dinitrophenol	0.051	0.051	0.049	0.047	0.052	0.057	0.051	6.66
57)	MP	4-Nitrophenol	0.265	0.241	0.251	0.250	0.254	0.200	0.243	9.29
58)	M	2,4-Dinitrotoluen	0.186	0.238	0.289	0.283	0.281	0.222	0.250	16.57
59)	T	Dibenzofuran	1.703	1.768	1.683	1.455	1.630	1.344	1.597	10.21
60)	T	Diethyl phthalate	1.193	1.304	1.229	1.115	1.016	0.880	1.123	13.74
61)	T	Fluorene	1.310	1.316	1.194	0.935	1.146	0.912	1.136	15.58
62)	T	4-Chlorophenyl ph	0.607	0.636	0.604	0.509	0.473	0.369	0.533	19.17
63)	T	4-Nitroaniline	0.198	0.275	0.273	0.233	0.204	0.215	0.233	14.59
64)		1,2,4,5-Tetrachlo	0.531	0.579	0.568	0.476	0.417	0.334	0.484	19.65
65)	T	2,3,4,6-Tetrachlo	0.290	0.296	0.303	0.269	0.254	0.233	0.274	9.89
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met	0.090	0.077	0.069	0.085	0.118	0.102	0.090	19.50
68)	TC	N-Nitrosodiphenyl	0.627	0.710	0.662	0.616	0.605	0.549	0.628	8.64
69)	T	1,2-Diphenylhydra	1.287	1.374	1.304	1.180	1.230	1.234	1.268	5.38
70)	S	2,4,6-Tribromophe	0.142	0.145	0.148	0.149	0.160	0.155	0.150	4.37
71)	T	4-Bromophenyl phe	0.255	0.272	0.254	0.227	0.183	0.166	0.226	18.97
72)	T	Hexachlorobenzene	0.292	0.311	0.305	0.273	0.247	0.195	0.270	16.06
73)	T	Atrazine	0.244	0.245	0.224	0.197	0.190	0.156	0.209	16.51
74)	MC	Pentachlorophenol	0.112	0.154	0.162	0.173	0.167	0.142	0.152	14.73
75)	T	Phenanthrene	1.203	1.295	1.185	1.006	0.973	0.726	1.064	19.39
76)	T	Anthracene	1.219	1.257	1.166	1.061	0.905	0.739	1.058	19.04
77)	T	Carbazole	1.146	1.170	1.105	0.972	0.910	0.953	1.043	10.63
78)	T	Di-n-butyl phthal	1.204	1.278	1.226	1.056	1.262	0.981	1.168	10.36
79)	TC	Fluoranthene	1.132	1.207	1.153	0.986	1.151	0.817	1.074	13.60
80)	T	Benzidine	0.295	0.384	0.386	0.317	0.289	0.293	0.327	14.00
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.147	1.189	1.144	1.086	0.984	0.811	1.060	13.31
84)	S	Terphenyl-d14	0.811	0.828	0.820	0.851	0.922	0.913	0.857	5.62
85)	T	3,3'-Dimethylbenz	0.348	0.459	0.494	0.447	0.378	0.352	0.413	14.90
86)	T	Butyl benzyl phth	0.423	0.464	0.453	0.441	0.385	0.383	0.425	8.07
87)	T	3,3'-Dichlorobenz	0.292	0.279	0.319	0.235	0.228	0.191	0.257	18.39
88)	T	Benzo[a]anthracen	0.904	0.941	0.925	0.883	0.852	0.748	0.876	8.00
89)	T	Chrysene	0.868	0.848	0.840	0.803	0.751	0.667	0.796	9.49
90)	T	Bis(2-ethylhexyl)	0.547	0.562	0.555	0.537	0.517	0.446	0.527	8.12
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	0.910	1.166	1.185	1.263	1.096	1.033	1.109	11.30
94)	T	Benzo[b]fluoranth	1.083	1.148	1.197	1.114	1.152	0.973	1.111	6.99
95)	T	Benzo[k]fluoranth	1.130	1.157	1.117	1.193	1.192	1.033	1.137	5.26
96)	TC	Benzo[a]pyrene	0.923	1.023	1.034	1.064	1.032	0.970	1.008	5.10
97)	T	Indeno[1,2,3-cd]p	0.993	1.060	1.193	1.326	1.445	1.360	1.230	14.50
98)	T	Dibenz[a,h]anthra	0.665	0.881	0.971	1.045	1.081	1.104	0.958	17.22
99)	T	Benzo[g,h,i]peryl	0.920	0.892	0.990	1.101	1.185	1.186	1.046	12.44

(#) = Out of Range

BW0514.M Wed Apr 02 08:59:05 2014 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\04-01-14\
Data File : B7703.D
Acq On : 1 Apr 2014 14:00
Operator : DANA
Sample : ABN070-13,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 01 14:19:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Apr 01 12:39:44 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	75	-0.01
2	T	N-Nitrosodimethylamine	0.956	0.970	-1.5	73	-0.03
3	T	Pyridine	1.915	1.592	16.9	75	-0.03
4	S	2-Fluorophenol	1.093	0.961	12.1	66	-0.02
5	T	Benzaldehyde	0.456	0.476	-4.4	81	-0.07
6	S	Phenol-d5	1.444	1.274	11.8	67	-0.01
7	MC	Phenol	1.485	1.252	15.7	65	-0.01
8	T	Aniline	1.024	0.956	6.6	75	-0.01
9	T	Bis(2-chloroethyl) ether	1.458	1.309	10.2	74	-0.01
10	M	2-Chlorophenol	1.555	1.403	9.8	75	-0.01
11	T	1,3-Dichlorobenzene	1.613	1.506	6.6	75	-0.01
12	MC	1,4-Dichlorobenzene	1.653	1.417	14.3	73	-0.01
13	T	Benzyl alcohol	0.987	0.934	5.4	75	-0.01
14	T	1,2-Dichlorobenzene	1.454	1.376	5.4	78	-0.01
15	T	2-Methylphenol	1.179	1.074	8.9	74	-0.01
16	T	Bis(2-chloroisopropyl) ethe	2.809	2.761	1.7	76	-0.01
17	T	4-Methylphenol	1.314	1.282	2.4	75	-0.01
18	MP	N-Nitrosodi-n-propylamine	1.218	1.091	10.4	74	-0.01
19	T	Acetophenone	1.944	1.713	11.9	76	-0.01
20	T	3-Methylphenol	1.296	1.282	1.1	75	-0.01
21	T	Hexachloroethane	0.656	0.669	-2.0	78	-0.01
23	I	Naphthalene-d8	1.000	1.000	0.0	75	-0.01
24	S	Nitrobenzene-d5	0.444	0.450	-1.4	77	-0.01
25	T	Nitrobenzene	0.476	0.440	7.6	78	-0.01
26	T	Isophorone	0.831	0.777	6.5	76	-0.01
27	TC	2-Nitrophenol	0.145	0.146	-0.7	73	0.00
28	T	2,4-Dimethylphenol	0.352	0.342	2.8	76	-0.01
29	T	Bis(2-chloroethoxy) methane	0.429	0.410	4.4	76	-0.01
30	T	Benzoic acid	0.206	0.244	-18.4	83	-0.01
31	T	2,4-Dimethylaniline	0.535	0.570	-6.5	110	-0.01
32	TC	2,4-Dichlorophenol	0.272	0.292	-7.4	80	-0.01
33	M	1,2,4-Trichlorobenzene	0.320	0.334	-4.4	80	-0.01
34	T	Naphthalene	1.142	0.979	14.3	72	-0.01
35	T	4-Chloroaniline	0.638	0.573	10.2	76	-0.01
36	T	4-Aminotoluene	0.725	0.619	14.6	75	-0.01
37	TC	Hexachlorobutadiene	0.207	0.208	-0.5	81	-0.01
38	T	Caprolactam	0.193	0.204	-5.7	80	-0.01
39	T	2-Aminotoluene	0.717	0.619	13.7	75	-0.01
40	MC	4-Chloro-3-methylphenol	0.322	0.305	5.3	78	-0.01
41	T	2-Methylnaphthalene	0.706	0.628	11.0	77	-0.01
43	I	Acenaphthene-d10	1.000	1.000	0.0	78	-0.02
44	TP	Hexachlorocyclopentadiene	0.231	0.248	-7.4	78	-0.01
45	TC	2,4,6-Trichlorophenol	0.304	0.312	-2.6	81	-0.01
46	T	2,4,5-Trichlorophenol	0.328	0.355	-8.2	83	-0.01

47	S	2-Fluorobiphenyl	1.038	1.003	3.4	74	0.00
48	T	1,1'-Biphenyl	1.388	1.206	13.1	77	-0.01
49	T	2-Chloronaphthalene	1.031	0.956	7.3	80	-0.01
50	T	2-Nitroaniline	0.302	0.346	-14.6	84	0.00
51	T	Dimethyl phthalate	1.067	1.030	3.5	80	-0.01
52	T	2,6-Dinitrotoluene	0.185	0.214	-15.7	82	-0.01
53	T	Acenaphthylene	1.685	1.557	7.6	76	-0.01
54	T	3-Nitroaniline	0.261	0.295	-13.0	84	-0.01
55	MC	Acenaphthene	1.152	0.992	13.9	75	-0.01
56	TP	2,4-Dinitrophenol	0.051	0.051	0.0	86	-0.02
57	MP	4-Nitrophenol	0.243	0.250	-2.9	78	-0.01
58	M	2,4-Dinitrotoluene	0.250	0.292	-16.8	81	-0.02
59	T	Dibenzofuran	1.597	1.496	6.3	80	-0.01
60	T	Diethyl phthalate	1.123	1.182	-5.3	83	-0.02
61	T	Fluorene	1.136	0.917	19.3	77	-0.02
62	T	4-Chlorophenyl phenyl ether	0.533	0.533	0.0	82	-0.02
63	T	4-Nitroaniline	0.233	0.227	2.6	76	-0.02
64		1,2,4,5-Tetrachlorobenzene	0.484	0.476	1.7	78	-0.01
65	T	2,3,4,6-Tetrachlorophenol	0.274	0.305	-11.3	89	-0.02
66	I	Phenanthrene-d10	1.000	1.000	0.0	80	-0.02
67	T	4,6-Dinitro-2-methylphenol	0.090	0.101	-12.2	96	-0.02
68	TC	N-Nitrosodiphenylamine	0.628	0.632	-0.6	82	-0.02
69	T	1,2-Diphenylhydrazine	1.268	1.192	6.0	81	-0.02
70	S	2,4,6-Tribromophenol	0.150	0.148	1.3	80	-0.02
71	T	4-Bromophenyl phenyl ether	0.226	0.234	-3.5	83	-0.02
72	T	Hexachlorobenzene	0.270	0.292	-8.1	86	-0.02
73	T	Atrazine	0.209	0.197	5.7	80	-0.02
74	MC	Pentachlorophenol	0.152	0.172	-13.2	80	-0.02
75	T	Phenanthrene	1.064	1.009	5.2	81	-0.02
76	T	Anthracene	1.058	1.061	-0.3	80	-0.02
77	T	Carbazole	1.043	1.002	3.9	83	-0.02
78	T	Di-n-butyl phthalate	1.168	1.082	7.4	82	-0.02
79	TC	Fluoranthene	1.074	1.034	3.7	84	-0.03
80	T	Benzidine	0.327	0.329	-0.6	101	-0.04
82	I	Chrysene-d12	1.000	1.000	0.0	90	-0.05
83	M	Pyrene	1.060	1.039	2.0	86	-0.03
84	S	Terphenyl-d14	0.857	0.807	5.8	85	-0.03
85	T	3,3'-Dimethylbenzidine	0.413	0.457	-10.7	101	-0.03
86	T	Butyl benzyl phthalate	0.425	0.423	0.5	86	-0.04
87	T	3,3'-Dichlorobenzidine	0.257	0.255	0.8	97	-0.05
88	T	Benzo[a]anthracene	0.876	0.905	-3.3	92	-0.05
89	T	Chrysene	0.796	0.827	-3.9	92	-0.04
90	T	Bis(2-ethylhexyl) phthalate	0.527	0.505	4.2	84	-0.05
92	I	Perylene-d12	1.000	1.000	0.0	94	-0.06
93	TC	Di-n-octyl phthalate	1.109	1.166	-5.1	86	-0.05
94	T	Benzo[b]fluoranthene	1.111	1.067	4.0	90	-0.05
95	T	Benzo[k]fluoranthene	1.137	1.176	-3.4	92	-0.05
96	TC	Benzo[a]pyrene	1.008	1.015	-0.7	89	-0.05
97	T	Indeno[1,2,3-cd]pyrene	1.230	1.401	-13.9	99	-0.07
98	T	Dibenz[a,h]anthracene	0.958	1.127	-17.6	101	-0.07
99	T	Benzo[g,h,i]perylene	1.046	1.228	-17.4	104	-0.07

(#) = Out of Range

BW0514.M Tue Apr 01 14:30:43 2014 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\04-02-14\
Data File : B7804.D
Acq On : 2 Apr 2014 17:50
Operator : DANA
Sample : ABN070-13,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 03 07:40:23 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Apr 01 12:39:44 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	72	-0.01
2	T	N-Nitrosodimethylamine	0.956	1.083	-13.3	78	0.00
3	T	Pyridine	1.915	1.588	17.1	72	-0.01
4	S	2-Fluorophenol	1.093	0.934	14.5	61	-0.01
5	T	Benzaldehyde	0.456	0.459	-0.7	82	-0.07
6	S	Phenol-d5	1.444	1.283	11.1	65	-0.01
7	MC	Phenol	1.485	1.190	19.9	59	-0.01
8	T	Aniline	1.024	0.887	13.4	66	-0.01
9	T	Bis(2-chloroethyl) ether	1.458	1.327	9.0	72	-0.01
10	M	2-Chlorophenol	1.555	1.502	3.4	77	-0.01
11	T	1,3-Dichlorobenzene	1.613	1.677	-4.0	80	-0.01
12	MC	1,4-Dichlorobenzene	1.653	1.413	14.5	70	-0.01
13	T	Benzyl alcohol	0.987	0.960	2.7	73	-0.01
14	T	1,2-Dichlorobenzene	1.454	1.442	0.8	79	-0.01
15	T	2-Methylphenol	1.179	1.052	10.8	69	-0.01
16	T	Bis(2-chloroisopropyl) ethe	2.809	2.782	1.0	73	-0.01
17	T	4-Methylphenol	1.314	1.360	-3.5	76	-0.01
18	MP	N-Nitrosodi-n-propylamine	1.218	1.036	14.9	68	-0.01
19	T	Acetophenone	1.944	1.675	13.8	71	0.00
20	T	3-Methylphenol	1.296	1.360	-4.9	76	-0.01
21	T	Hexachloroethane	0.656	0.729	-11.1	81	-0.01
23	I	Naphthalene-d8	1.000	1.000	0.0	71	-0.01
24	S	Nitrobenzene-d5	0.444	0.472	-6.3	76	-0.01
25	T	Nitrobenzene	0.476	0.444	6.7	75	-0.01
26	T	Isophorone	0.831	0.804	3.2	75	-0.01
27	TC	2-Nitrophenol	0.145	0.155	-6.9	73	0.00
28	T	2,4-Dimethylphenol	0.352	0.356	-1.1	74	-0.01
29	T	Bis(2-chloroethoxy) methane	0.429	0.401	6.5	70	-0.01
30	T	Benzoic acid	0.206	0.226	-9.7	73	-0.01
31	T	2,4-Dimethylaniline	0.535	0.579	-8.2	105	0.00
32	TC	2,4-Dichlorophenol	0.272	0.300	-10.3	78	-0.01
33	M	1,2,4-Trichlorobenzene	0.320	0.377	-17.8	85	-0.01
34	T	Naphthalene	1.142	0.924	19.1	64	-0.01
35	T	4-Chloroaniline	0.638	0.539	15.5	67	-0.01
36	T	4-Aminotoluene	0.725	0.613	15.4	70	0.00
37	TC	Hexachlorobutadiene	0.207	0.246	-18.8	91	-0.01
38	T	Caprolactam	0.193	0.190	1.6	70	-0.01
39	T	2-Aminotoluene	0.717	0.613	14.5	70	0.00
40	MC	4-Chloro-3-methylphenol	0.322	0.326	-1.2	79	-0.01
41	T	2-Methylnaphthalene	0.706	0.626	11.3	72	-0.01
43	I	Acenaphthene-d10	1.000	1.000	0.0	63	-0.02
44	TP	Hexachlorocyclopentadiene	0.231	0.266	-15.2	67	-0.01
45	TC	2,4,6-Trichlorophenol	0.304	0.313	-3.0	66	-0.01
46	T	2,4,5-Trichlorophenol	0.328	0.383	-16.8	72	0.00

47	S	2-Fluorobiphenyl	1.038	1.096	-5.6	66	0.00
48	T	1,1'-Biphenyl	1.388	1.323	4.7	68	-0.01
49	T	2-Chloronaphthalene	1.031	1.035	-0.4	70	-0.01
50	T	2-Nitroaniline	0.302	0.335	-10.9	66	0.00
51	T	Dimethyl phthalate	1.067	1.167	-9.4	74	-0.01
52	T	2,6-Dinitrotoluene	0.185	0.218	-17.8	68	-0.01
53	T	Acenaphthylene	1.685	1.666	1.1	66	-0.01
54	T	3-Nitroaniline	0.261	0.278	-6.5	64	-0.01
55	MC	Acenaphthene	1.152	1.121	2.7	69	-0.01
56	TP	2,4-Dinitrophenol	0.051	0.054	-5.9	73	-0.01
57	MP	4-Nitrophenol	0.243	0.261	-7.4	66	-0.01
58	M	2,4-Dinitrotoluene	0.250	0.287	-14.8	64	-0.02
59	T	Dibenzofuran	1.597	1.417	11.3	62	-0.01
60	T	Diethyl phthalate	1.123	1.260	-12.2	72	-0.02
61	T	Fluorene	1.136	1.024	9.9	69	-0.02
62	T	4-Chlorophenyl phenyl ether	0.533	0.574	-7.7	71	-0.02
63	T	4-Nitroaniline	0.233	0.203	12.9	55	-0.02
64		1,2,4,5-Tetrachlorobenzene	0.484	0.493	-1.9	66	-0.01
65	T	2,3,4,6-Tetrachlorophenol	0.274	0.245	10.6	58	-0.02
66	I	Phenanthrene-d10	1.000	1.000	0.0	65	-0.02
67	T	4,6-Dinitro-2-methylphenol	0.090	0.099	-10.0	75	-0.02
68	TC	N-Nitrosodiphenylamine	0.628	0.593	5.6	62	-0.02
69	T	1,2-Diphenylhydrazine	1.268	1.142	9.9	63	-0.02
70	S	2,4,6-Tribromophenol	0.150	0.159	-6.0	69	-0.02
71	T	4-Bromophenyl phenyl ether	0.226	0.258	-14.2	74	-0.02
72	T	Hexachlorobenzene	0.270	0.321	-18.9	76	-0.02
73	T	Atrazine	0.209	0.193	7.7	63	-0.02
74	MC	Pentachlorophenol	0.152	0.164	-7.9	61	-0.02
75	T	Phenanthrene	1.064	0.956	10.2	61	-0.02
76	T	Anthracene	1.058	1.032	2.5	63	-0.02
77	T	Carbazole	1.043	0.995	4.6	66	-0.02
78	T	Di-n-butyl phthalate	1.168	1.138	2.6	70	-0.02
79	TC	Fluoranthene	1.074	1.061	1.2	70	-0.03
80	T	Benzidine	0.327	0.353	-8.0	95	-0.04
82	I	Chrysene-d12	1.000	1.000	0.0	66	-0.05
83	M	Pyrene	1.060	1.125	-6.1	69	-0.03
84	S	Terphenyl-d14	0.857	0.903	-5.4	70	-0.03
85	T	3,3'-Dimethylbenzidine	0.413	0.474	-14.8	102	-0.03
86	T	Butyl benzyl phthalate	0.425	0.477	-12.2	72	-0.04
87	T	3,3'-Dichlorobenzidine	0.257	0.281	-9.3	79	-0.05
88	T	Benzo[a]anthracene	0.876	0.997	-13.8	75	-0.05
89	T	Chrysene	0.796	0.892	-12.1	74	-0.05
90	T	Bis(2-ethylhexyl) phthalate	0.527	0.590	-12.0	73	-0.05
92	I	Perylene-d12	1.000	1.000	0.0	82	-0.07
93	TC	Di-n-octyl phthalate	1.109	1.223	-10.3	79	-0.06
94	T	Benzo[b]fluoranthene	1.111	1.110	0.1	82	-0.06
95	T	Benzo[k]fluoranthene	1.137	1.173	-3.2	81	-0.06
96	TC	Benzo[a]pyrene	1.008	1.087	-7.8	84	-0.06
97	T	Indeno[1,2,3-cd]pyrene	1.230	1.285	-4.5	79	-0.08
98	T	Dibenz[a,h]anthracene	0.958	1.008	-5.2	79	-0.07
99	T	Benzo[g,h,i]perylene	1.046	1.153	-10.2	86	-0.08

(#) = Out of Range

BW0514.M Thu Apr 03 08:57:00 2014 MSD_B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C4754.D

Date Analyzed: 03/24/2014

Instrument ID: MSDC

Time Analyzed: 09:18

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	1958756		2.43		5477593		2.99		4428784		3.82	
	UPPER LIMIT	3917512		2.93		10955186		3.49		8857568		4.32	
	LOWER LIMIT	979378		1.93		2738797		2.49		2214392		3.32	
	LAB SAMPLE ID												
01	ICC010BNA1	1801593		2.44		5378222		2.98		3905338		3.80	
02	ICC020BNA1	1790647		2.44		5121092		2.98		3910752		3.80	
03	ICC040BNA1	1580950		2.44		4775910		2.98		3590556		3.81	
04	ICC080BNA1	1634395		2.44		5042093		2.98		3533789		3.80	
05	ICC120BNA1	1320758		2.44		4246804		2.98		2841929		3.81	
06	ICV040BNA1	1666592		2.44		4905682		2.98		3739562		3.81	
07	ICC120BNA2	1771030		2.44		5607884		2.98		4096264		3.80	
08	ICC080BNA2	1854699		2.44		5665239		2.98		4547676		3.80	
09	ICC040BNA2	2086156		2.44		5753312		2.98		4081730		3.79	
10	ICC020BNA2	1987757		2.44		5007198		2.98		4508528		3.78	
11	ICC010BNA2	1802084		2.44		4822881		2.98		3903541		3.78	
12	ICC001BNA2	1957191		2.44		5137362		2.98		4536696		3.78	
13	ICV040BNA2	1861618		2.44		4556050		2.98		4325479		3.78	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C4754.D

Date Analyzed: 03/24/2014

Instrument ID: MSDC

Time Analyzed: 09:18

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	5494634		4.60		5611755		6.38		2924667		7.70	
	UPPER LIMIT	10989268		5.10		11223510		6.88		5849334		8.20	
	LOWER LIMIT	2747317		4.10		2805878		5.88		1462334		7.20	
	LAB SAMPLE ID												
01	ICC010BNA1	5261622		4.55		5079058		6.32		2657644		7.61	
02	ICC020BNA1	4995008		4.56		4829941		6.33		2621495		7.62	
03	ICC040BNA1	5153928		4.58		4306154		6.34		2750808		7.66	
04	ICC080BNA1	4706150		4.56		3618145		6.33		2504250		7.63	
05	ICC120BNA1	3106803		4.57		3856227		6.33		2674531		7.66	
06	ICV040BNA1	5056075		4.58		4345185		6.34		2777693		7.66	
07	ICC120BNA2	5356761		4.55		4903898		6.32		3020578		7.61	
08	ICC080BNA2	5952650		4.55		5154838		6.30		2975719		7.63	
09	ICC040BNA2	6450377		4.54		6346352		6.30		3645938		7.62	
10	ICC020BNA2	5992902		4.53		5812068		6.27		3335873		7.60	
11	ICC010BNA2	5297520		4.53		5589479		6.27		3242668		7.60	
12	ICC001BNA2	6206749		4.53		5908008		6.27		3348449		7.60	
13	ICV040BNA2	5475734		4.53		5598067		6.27		3166106		7.60	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5115.D

Date Analyzed: 04/01/2014

Instrument ID: MSDC

Time Analyzed: 11:52

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	1486528		2.45		4559603		2.99		3371042		3.82	
	UPPER LIMIT	2973056		2.95		9119206		3.49		6742084		4.32	
	LOWER LIMIT	743264		1.95		2279802		2.49		1685521		3.32	
	LAB SAMPLE ID												
01	CCV040BNA2	1638779		2.44		5739584		2.99		4164747		3.82	
02	BLKS140331-06	1293694		2.44		5230361		2.99		2868089		3.81	
03	LCSS140331-06	1206476		2.44		3965986		2.99		2734473		3.80	
04	E14-02666-001MS	1499662		2.44		5524227		2.99		3330756		3.82	
05	E14-02666-001MSD	1595058		2.44		4575565		2.99		3372386		3.80	
06	E14-02666-001	2289579		2.44		6035630		2.99		4773909		3.80	
07	E14-02666-002	2236016		2.44		6586720		2.99		4810933		3.80	
08	E14-02666-003	2067073		2.44		6926392		2.99		3833124		3.80	
09	E14-02666-004	2199411		2.44		7217498		2.99		3836093		3.80	
10	E14-02666-005	1731676		2.44		6624993		2.99		3691582		3.80	
11	E14-02666-006	1274563		2.44		5252470		2.99		2921231		3.81	
12	E14-02666-013	2004851		2.44		5960301		2.99		3438967		3.80	
13	E14-02666-014	1928408		2.44		6582714		2.99		3650542		3.80	
14	E14-02636-021	1950751		2.44		6330474		2.99		3323656		3.80	
15	E14-02636-022	1626670		2.44		6419714		2.99		3354930		3.79	
16	E14-02636-023	1466100		2.44		5700377		2.99		2910497		3.79	
17	E14-02636-024	1527508		2.44		5988610		2.99		3052581		3.79	
18	E14-02636-025	1661212		2.44		6399938		2.98		3126550		3.78	
19	E14-02636-026	1611478		2.44		6363298		2.98		3490371		3.78	
20	E14-02636-027	1582294		2.44		6160966		2.98		3106871		3.78	
21	E14-02636-028	1423934		2.44		5761578		2.98		2966433		3.78	
22	E14-02636-029	1620374		2.44		6367010		2.98		3210555		3.78	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5115.D

Date Analyzed: 04/01/2014

Instrument ID: MSDC

Time Analyzed: 11:52

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	5056790		4.59		4145361		6.36		2856293		7.72	
	UPPER LIMIT	10113580		5.09		8290722		6.86		5712586		8.22	
	LOWER LIMIT	2528395		4.09		2072681		5.86		1428147		7.22	
	LAB SAMPLE ID												
01	CCV040BNA2	6324278		4.59		5836517		6.36		3677821		7.72	
02	BLKS140331-06	4405507		4.59		2888488		6.36		1915516		7.68	
03	LCSS140331-06	4219632		4.56		3156760		6.33		1901052		7.65	
04	E14-02666-001MS	4611718		4.59		2927092		6.36		2297239		7.69	
05	E14-02666-001MSD	4522479		4.55		2868196		6.32		2224687		7.64	
06	E14-02666-001	5183957		4.55		3335270		6.32		2520325		7.65	
07	E14-02666-002	5540798		4.55		3322345		6.31		2248703		7.67	
08	E14-02666-003	4724657		4.55		3704935		6.32		3001791		7.64	
09	E14-02666-004	4612552		4.54		3224441		6.31		2521231		7.63	
10	E14-02666-005	4954371		4.55		3962956		6.30		3018821		7.66	
11	E14-02666-006	4315563		4.58		3211624		6.34		2446012		7.67	
12	E14-02666-013	4313658		4.56		3332583		6.32		2567885		7.68	
13	E14-02666-014	4706335		4.55		3063618		6.31		2394027		7.64	
14	E14-02636-021	4130418		4.55		3148130		6.32		2430298		7.64	
15	E14-02636-022	4466014		4.54		3329371		6.29		2563310		7.61	
16	E14-02636-023	4013978		4.54		3095606		6.29		2373939		7.61	
17	E14-02636-024	3970610		4.54		3063111		6.30		2333884		7.62	
18	E14-02636-025	4085580		4.53		3223204		6.28		2451656		7.60	
19	E14-02636-026	4810357		4.52		3423631		6.27		2626406		7.59	
20	E14-02636-027	4162029		4.53		3101253		6.28		2378743		7.60	
21	E14-02636-028	3918034		4.53		2970388		6.26		2242960		7.62	
22	E14-02636-029	4260457		4.53		3240644		6.28		2459789		7.60	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5115.D

Date Analyzed: 04/01/2014

Instrument ID: MSDC

Time Analyzed: 11:52

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	1486528		2.45		4559603		2.99		3371042		3.82	
	UPPER LIMIT	2973056		2.95		9119206		3.49		6742084		4.32	
	LOWER LIMIT	743264		1.95		2279802		2.49		1685521		3.32	
	LAB SAMPLE ID												
01	E14-02636-030	1480931		2.44		5998589		2.98		3164682		3.78	
02	E14-02636-031	1691829		2.44		6611878		2.98		3496873		3.78	
03	E14-02636-032	1744463		2.44		6536206		2.98		3359254		3.78	
04	BLKS140331-05	1519332		2.44		6015689		2.99		3049842		3.79	
05	LCSS140331-05	1383346		2.44		5274270		2.99		2955478		3.8	
06	E14-02636-001	1604963		2.44		6180118		2.99		3176175		3.8	
07	E14-02636-002	1846081		2.44		5937584		2.99		3644370		3.83	
08	E14-02636-004	1572210		2.44		6052835		2.99		3019588		3.79	
09	E14-02636-005	1483339		2.44		5793892		2.98		2858638		3.79	
10	E14-02636-006	1424594		2.44		5509493		2.98		2664868		3.78	
11	E14-02636-008	1473191		2.44		5902520		2.98		2972698		3.78	
12	E14-02636-009	1433641		2.44		5680947		2.98		2862428		3.78	
13	E14-02636-013	1247966		2.44		5104591		2.98		2639962		3.78	
14	E14-02636-014	1829747		2.44		6390272		2.98		3763336		3.78	
15	E14-02636-015	1593444		2.44		6145685		2.99		3150972		3.79	
16	E14-02636-016	1652725		2.44		6348034		2.98		3174730		3.78	
17	E14-02636-017	1532466		2.44		5905227		2.98		3033537		3.78	
18	E14-02636-019	1634144		2.44		5980694		2.98		3251283		3.78	
19	E14-02636-020	1630738		2.44		6294712		2.98		2992279		3.79	
20	E14-02636-001MS	1264144		2.44		4710911		2.99		2823274		3.8	
21	E14-02636-001MSD	1474130		2.44		5295740		2.98		3015879		3.78	
22	E14-02636-003	1606157		2.44		5528526		2.98		3323160		3.78	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5115.D

Date Analyzed: 04/01/2014

Instrument ID: MSDC

Time Analyzed: 11:52

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	5056790	4.59	4145361	6.36	2856293	7.72
	UPPER LIMIT	10113580	5.09	8290722	6.86	5712586	8.22
	LOWER LIMIT	2528395	4.09	2072681	5.86	1428147	7.22
	LAB SAMPLE ID						
01	E14-02636-030	4268181	4.53	3282539	6.28	2464564	7.6
02	E14-02636-031	4576088	4.53	3591542	6.28	2706118	7.6
03	E14-02636-032	4366530	4.53	3411215	6.27	2575015	7.62
04	BLKS140331-05	4033487	4.54	3036100	6.30	2306265	7.63
05	LCSS140331-05	3865954	4.55	3032381	6.30	2243395	7.66
06	E14-02636-001	4257849	4.56	3235001	6.33	2403304	7.65
07	E14-02636-002	4593553	4.63	3809875	6.41	2887095	7.76
08	E14-02636-004	4025689	4.54	3202178	6.31	2291178	7.63
09	E14-02636-005	3793865	4.54	3040841	6.29	2257424	7.64
10	E14-02636-006	3422867	4.53	2859349	6.27	2146492	7.63
11	E14-02636-008	3997907	4.52	3087931	6.27	2293994	7.59
12	E14-02636-009	3915753	4.52	2990050	6.26	2306551	7.62
13	E14-02636-013	3526857	4.52	2814794	6.26	2220471	7.61
14	E14-02636-014	4688170	4.51	3165745	6.25	2510308	7.61
15	E14-02636-015	4295897	4.54	3224424	6.28	2563825	7.64
16	E14-02636-016	4242762	4.53	3312291	6.28	2463926	7.61
17	E14-02636-017	3870637	4.53	3039758	6.27	2311291	7.61
18	E14-02636-019	4188143	4.51	3321886	6.26	2521211	7.58
19	E14-02636-020	3881377	4.55	3160181	6.31	2281515	7.63
20	E14-02636-001MS	3977369	4.55	3102165	6.32	2356332	7.64
21	E14-02636-001MSD	3885756	4.53	2964027	6.29	2277617	7.61
22	E14-02636-003	4008796	4.53	3169212	6.26	2401317	7.62

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5115.D

Date Analyzed: 04/01/2014

Instrument ID: MSDC

Time Analyzed: 11:52

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	1486528	2.45	4559603	2.99	3371042	3.82
	UPPER LIMIT	2973056	2.95	9119206	3.49	6742084	4.32
	LOWER LIMIT	743264	1.95	2279802	2.49	1685521	3.32
	LAB SAMPLE ID						
01	E14-02636-007	1457529	2.44	5864141	2.98	3082069	3.78
02							
03							
04							
05							
06							
07							
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09							
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18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5115.D

Date Analyzed: 04/01/2014

Instrument ID: MSDC

Time Analyzed: 11:52

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	5056790		4.59		4145361		6.36		2856293		7.72	
	UPPER LIMIT	10113580		5.09		8290722		6.86		5712586		8.22	
	LOWER LIMIT	2528395		4.09		2072681		5.86		1428147		7.22	
	LAB SAMPLE ID												
01	E14-02636-007	4342915		4.52		3264747		6.27		2392783		7.59	
02													
03													
04													
05													
06													
07													
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18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A0581.D

Date Analyzed: 03/31/2014

Instrument ID: MSDA

Time Analyzed: 07:01

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	126728		3.36		505694		4.11		296512		5.18	
	UPPER LIMIT	253456		3.86		1011388		4.61		593024		5.68	
	LOWER LIMIT	63364		2.86		252847		3.61		148256		4.68	
	LAB SAMPLE ID												
01	ICC010BNA1	117775		3.36		482780		4.11		287192		5.18	
02	ICC020BNA1	131695		3.36		533737		4.11		324964		5.18	
03	ICC040BNA1	120740		3.36		490244		4.11		291891		5.18	
04	ICC080BNA1	125103		3.36		520964		4.12		305102		5.18	
05	ICC120BNA1	126711		3.36		517650		4.12		299908		5.18	
06	ICC120BNA2	137581		3.36		579729		4.11		346040		5.18	
07	ICC080BNA2	133937		3.36		557201		4.11		348780		5.18	
08	ICC040BNA2	135301		3.36		573992		4.11		347669		5.18	
09	ICC020BNA2	153730		3.36		628095		4.11		371768		5.18	
10	ICC010BNA2	141450		3.36		577152		4.11		344579		5.18	
11	ICC001BNA2	160562		3.36		639653		4.11		380787		5.18	
12	ICV040BNA1	148626		3.36		600140		4.12		340496		5.18	
13	ICV040BNA2	146728		3.36		607123		4.11		367213		5.18	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A0581.D

Date Analyzed: 03/31/2014

Instrument ID: MSDA

Time Analyzed: 07:01

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	496062	6.14	437219	7.70	274679	8.95
	UPPER LIMIT	992124	6.64	874438	8.20	549358	9.45
	LOWER LIMIT	248031	5.64	218610	7.20	137340	8.45
	LAB SAMPLE ID						
01	ICC010BNA1	485044	6.14	450013	7.68	286697	8.93
02	ICC020BNA1	536144	6.14	464653	7.68	280464	8.93
03	ICC040BNA1	485381	6.14	416355	7.68	250451	8.93
04	ICC080BNA1	511999	6.15	387122	7.69	225199	8.94
05	ICC120BNA1	488721	6.15	376461	7.67	237179	8.93
06	ICC120BNA2	578782	6.14	472180	7.67	303075	8.92
07	ICC080BNA2	587871	6.14	476946	7.68	313891	8.93
08	ICC040BNA2	585112	6.14	476855	7.67	328063	8.92
09	ICC020BNA2	639260	6.14	516857	7.67	347112	8.93
10	ICC010BNA2	606950	6.14	494247	7.68	333579	8.93
11	ICC001BNA2	661135	6.14	513451	7.66	347352	8.91
12	ICV040BNA1	554513	6.14	434839	7.67	246362	8.91
13	ICV040BNA2	635401	6.14	506782	7.65	343823	8.89
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A0651.D

Date Analyzed: 04/02/2014

Instrument ID: MSDA

Time Analyzed: 08:52

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	171496		3.36		677251		4.12		404499		5.18	
	UPPER LIMIT	342992		3.86		1354502		4.62		808998		5.68	
	LOWER LIMIT	85748		2.86		338626		3.62		202250		4.68	
	LAB SAMPLE ID												
01	CCV040BNA2	105930		3.36		458709		4.11		284601		5.17	
02	BLKS140401-03	192637		3.36		850703		4.11		519513		5.18	
03	E14-02713-001	138468		3.36		594106		4.11		373926		5.17	
04	LCSS140401-03	174671		3.36		748493		4.11		461413		5.18	
05	E14-02679-001MS	197064		3.36		841890		4.11		541367		5.18	
06	E14-02679-001MSD	168980		3.36		736214		4.11		456745		5.18	
07	E14-02679-001	179912		3.36		940066		4.11		598616		5.18	
08	E14-02173-001	289445		3.36		1096469		4.11		649082		5.18	
09	E14-02173-011	187756		3.36		745133		4.11		408455		5.19	
10	E14-02280-002	163475		3.36		647120		4.12		337517		5.19	
11	E14-02619-001	224199		3.36		939609		4.12		558954		5.18	
12	E14-02636-033	194428		3.36		715395		4.12		417466		5.19	
13	E14-02636-034	188403		3.36		809875		4.11		472325		5.18	
14	E14-02293-003	190733		3.36		711558		4.11		351959		5.19	
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A0651.D

Date Analyzed: 04/02/2014

Instrument ID: MSDA

Time Analyzed: 08:52

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	627520		6.14		388815		7.68		241715		8.93	
	UPPER LIMIT	1255040		6.64		777630		8.18		483430		9.43	
	LOWER LIMIT	313760		5.64		194408		7.18		120858		8.43	
	LAB SAMPLE ID												
01	CCV040BNA2	521030		6.13		462626		7.66		330797		8.90	
02	BLKS140401-03	896543		6.13		632510		7.66		388495		8.90	
03	E14-02713-001	671750		6.13		513708		7.65		329796		8.89	
04	LCSS140401-03	793724		6.13		485495		7.66		269299		8.90	
05	E14-02679-001MS	928422		6.13		576263		7.66		323343		8.89	
06	E14-02679-001MSD	811134		6.13		539882		7.66		310863		8.90	
07	E14-02679-001	917900		6.13		535321		7.65		451868		8.89	
08	E14-02173-001	721068		6.14		371568		7.66		333910		8.90	
09	E14-02173-011	478955		6.18		409311		7.69		267867		8.90	
10	E14-02280-002	483681		6.15		370794		7.67		269060		8.92	
11	E14-02619-001	864483		6.13		403431		7.67		275709		8.92	
12	E14-02636-033	780101		6.13		427863		7.68		300953		8.93	
13	E14-02636-034	780569		6.13		423431		7.66		292423		8.90	
14	E14-02293-003	505645		6.15		330446		7.66		280278		8.90	
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7686.D

Date Analyzed: 04/01/2014

Instrument ID: MSDB

Time Analyzed: 08:04

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	150475		3.77		551764		4.54		349988		5.58	
	UPPER LIMIT	300950		4.27		1103528		5.04		699976		6.08	
	LOWER LIMIT	75238		3.27		275882		4.04		174994		5.08	
	LAB SAMPLE ID												
01	ICC001BNA1	141571		3.77		518533		4.53		336820		5.58	
02	ICC010BNA1	139629		3.77		489296		4.54		314067		5.58	
03	ICC020BNA1	122028		3.77		445619		4.54		287271		5.58	
04	ICC080BNA1	122618		3.76		495697		4.52		327277		5.57	
05	ICC120BNA1	119766		3.76		506166		4.52		324070		5.57	
06	ICC120BNA2	144817		3.75		536014		4.52		347260		5.57	
07	ICC080BNA2	124289		3.75		460195		4.52		309951		5.57	
08	ICC040BNA2	121714		3.75		458077		4.52		302371		5.57	
09	ICC020BNA2	126006		3.75		467769		4.52		316238		5.57	
10	ICC010BNA2	115480		3.75		434683		4.52		299875		5.57	
11	ICC001BNA2	134385		3.75		498602		4.52		319911		5.57	
12	ICV040BNA1	112822		3.76		414102		4.52		273826		5.57	
13	ICV040BNA2	127554		3.75		488887		4.52		317942		5.57	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7686.D

Date Analyzed: 04/01/2014

Instrument ID: MSDB

Time Analyzed: 08:04

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	447735		6.49		402584		8.14		278884		9.57	
	UPPER LIMIT	895470		6.99		805168		8.64		557768		10.07	
	LOWER LIMIT	223868		5.99		201292		7.64		139442		9.07	
	LAB SAMPLE ID												
01	ICC001BNA1	439956		6.48		431244		8.09		281511		9.51	
02	ICC010BNA1	415977		6.48		415330		8.11		276196		9.54	
03	ICC020BNA1	389867		6.48		387885		8.12		264025		9.55	
04	ICC080BNA1	420234		6.47		360431		8.13		267488		9.55	
05	ICC120BNA1	406288		6.47		342354		8.11		277914		9.53	
06	ICC120BNA2	450727		6.47		407868		8.07		298931		9.47	
07	ICC080BNA2	417877		6.47		272546		8.06		285973		9.46	
08	ICC040BNA2	424312		6.46		394391		8.08		290598		9.50	
09	ICC020BNA2	420627		6.47		390570		8.06		294175		9.46	
10	ICC010BNA2	406110		6.47		382898		8.08		275058		9.48	
11	ICC001BNA2	427000		6.47		376818		8.08		273211		9.49	
12	ICV040BNA1	359854		6.47		360838		8.09		260780		9.51	
13	ICV040BNA2	436588		6.47		398888		8.10		288576		9.53	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7804.D

Date Analyzed: 04/02/2014

Instrument ID: MSDB

Time Analyzed: 17:50

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	107964		3.76		391389		4.52		221795		5.57	
	UPPER LIMIT	215928		4.26		782778		5.02		443590		6.07	
	LOWER LIMIT	53982		3.26		195695		4.02		110898		5.07	
	LAB SAMPLE ID												
01	CCV040BNA2	133872		3.75		475635		4.52		260317		5.57	
02	BLKA140401-02	105933		3.75		381437		4.52		212532		5.57	
03	LCSA140401-02	96572		3.75		358745		4.52		202556		5.57	
04	E14-02616-001MS	102243		3.76		375988		4.52		203451		5.57	
05	E14-02616-001MSD	102992		3.76		379579		4.52		208833		5.57	
06	E14-02645-001	107925		3.75		383224		4.52		213600		5.57	
07	E14-02616-001	98982		3.75		349181		4.52		195281		5.57	
08	E14-02629-001	93922		3.75		329789		4.52		177324		5.57	
09	E14-02631-001	96711		3.75		342251		4.52		185305		5.57	
10	E14-02637-022	97272		3.75		345318		4.52		184408		5.57	
11	E14-02637-023	104868		3.75		369311		4.52		192358		5.57	
12	E14-02637-024	101457		3.75		353697		4.52		191637		5.57	
13	E14-02637-026	102398		3.75		338479		4.52		179581		5.57	
14	E14-02637-028	108531		3.75		375776		4.52		197340		5.57	
15	E14-02637-030	98791		3.75		352891		4.52		191237		5.57	
16	E14-02648-003	104202		3.75		362364		4.52		193793		5.57	
17	E14-02605-001	107223		3.75		378185		4.52		201282		5.57	
18	E14-02695-001	93385		3.75		307454		4.52		164508		5.57	
19	E14-02634-001	99810		3.75		344609		4.52		189887		5.57	
20	E14-02634-004	93409		3.75		340249		4.52		178866		5.57	
21	E14-02634-005	106436		3.75		367907		4.52		200360		5.57	
22	E14-02636-035	106502		3.75		342393		4.52		207435		5.57	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7804.D

Date Analyzed: 04/02/2014

Instrument ID: MSDB

Time Analyzed: 17:50

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	289507		6.47		266954		8.09		228499		9.50	
	UPPER LIMIT	579014		6.97		533908		8.59		456998		10.00	
	LOWER LIMIT	144754		5.97		133477		7.59		114250		9.00	
	LAB SAMPLE ID												
01	CCV040BNA2	380382		6.47		387508		8.10		317226		9.53	
02	BLKA140401-02	301876		6.47		255778		8.06		155835		9.47	
03	LCSA140401-02	267912		6.47		206114		8.05		136723		9.44	
04	E14-02616-001MS	270822		6.46		201920		8.06		147745		9.47	
05	E14-02616-001MSD	284053		6.46		210833		8.07		154447		9.49	
06	E14-02645-001	298051		6.46		252966		8.06		158801		9.47	
07	E14-02616-001	274484		6.46		231086		8.06		140957		9.48	
08	E14-02629-001	250373		6.46		216369		8.06		132445		9.48	
09	E14-02631-001	250978		6.46		208376		8.05		132540		9.46	
10	E14-02637-022	249363		6.46		218117		8.05		139271		9.45	
11	E14-02637-023	262530		6.46		224385		8.05		139772		9.45	
12	E14-02637-024	276308		6.47		220956		8.05		139802		9.45	
13	E14-02637-026	247365		6.46		214294		8.07		137849		9.49	
14	E14-02637-028	264582		6.47		217421		8.04		141650		9.43	
15	E14-02637-030	271354		6.46		220941		8.06		138621		9.48	
16	E14-02648-003	263704		6.47		217967		8.04		138552		9.43	
17	E14-02605-001	280713		6.46		224996		8.07		140600		9.49	
18	E14-02695-001	216219		6.46		191184		8.06		129533		9.47	
19	E14-02634-001	262624		6.47		224795		8.05		137042		9.44	
20	E14-02634-004	252771		6.46		219545		8.06		134534		9.46	
21	E14-02634-005	286743		6.46		208988		8.06		126026		9.47	
22	E14-02636-035	266170		6.47		216712		8.07		124274		9.48	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7804.D

Date Analyzed: 04/02/2014

Instrument ID: MSDB

Time Analyzed: 17:50

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	107964		3.76		391389		4.52		221795		5.57	
	UPPER LIMIT	215928		4.26		782778		5.02		443590		6.07	
	LOWER LIMIT	53982		3.26		195695		4.02		110898		5.07	
	LAB SAMPLE ID												
01	E14-02619-002	104971		3.75		339539		4.52		192423		5.57	
02	E14-02619-003	109988		3.75		335149		4.52		202571		5.57	
03	E14-02635-011	114768		3.75		387628		4.52		209838		5.57	
04													
05													
06													
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18													
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20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7804.D

Date Analyzed: 04/02/2014

Instrument ID: MSDB

Time Analyzed: 17:50

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	289507	6.47	266954	8.09	228499	9.50
	UPPER LIMIT	579014	6.97	533908	8.59	456998	10.00
	LOWER LIMIT	144754	5.97	133477	7.59	114250	9.00
	LAB SAMPLE ID						
01	E14-02619-002	255694	6.47	208870	8.08	130454	9.49
02	E14-02619-003	276855	6.47	230463	8.08	143177	9.5
03	E14-02635-011	291682	6.47	207697	8.10	126138	9.52
04							
05							
06							
07							
08							
09							
10							
11							
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18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMI-VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5143.D
Acq On : 1 Apr 2014 19:07
Operator : EDM
Sample : B-476_(2,E14-02636-001,S,15.03g,18.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Apr 02 09:16:25 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1604963	40.00	UG	0.00
23) Naphthalene-d8	2.99	136	6180118	40.00	UG	0.00
43) Acenaphthene-d10	3.80	164	3176175	40.00	UG	0.00
66) Phenanthrene-d10	4.56	188	4257849	40.00	UG	0.00
82) Chrysene-d12	6.33	240	3235001	40.00	UG	0.00
92) Perylene-d12	7.65	264	2403304	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1537139	28.08	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 56.16%			
47) 2-Fluorobiphenyl	3.46	172	3568197m	43.87	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 87.74%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.46	244	3419124	45.68	UG	0.00
Spiked Amount 50.000	Range 15 - 122		Recovery = 91.36%			

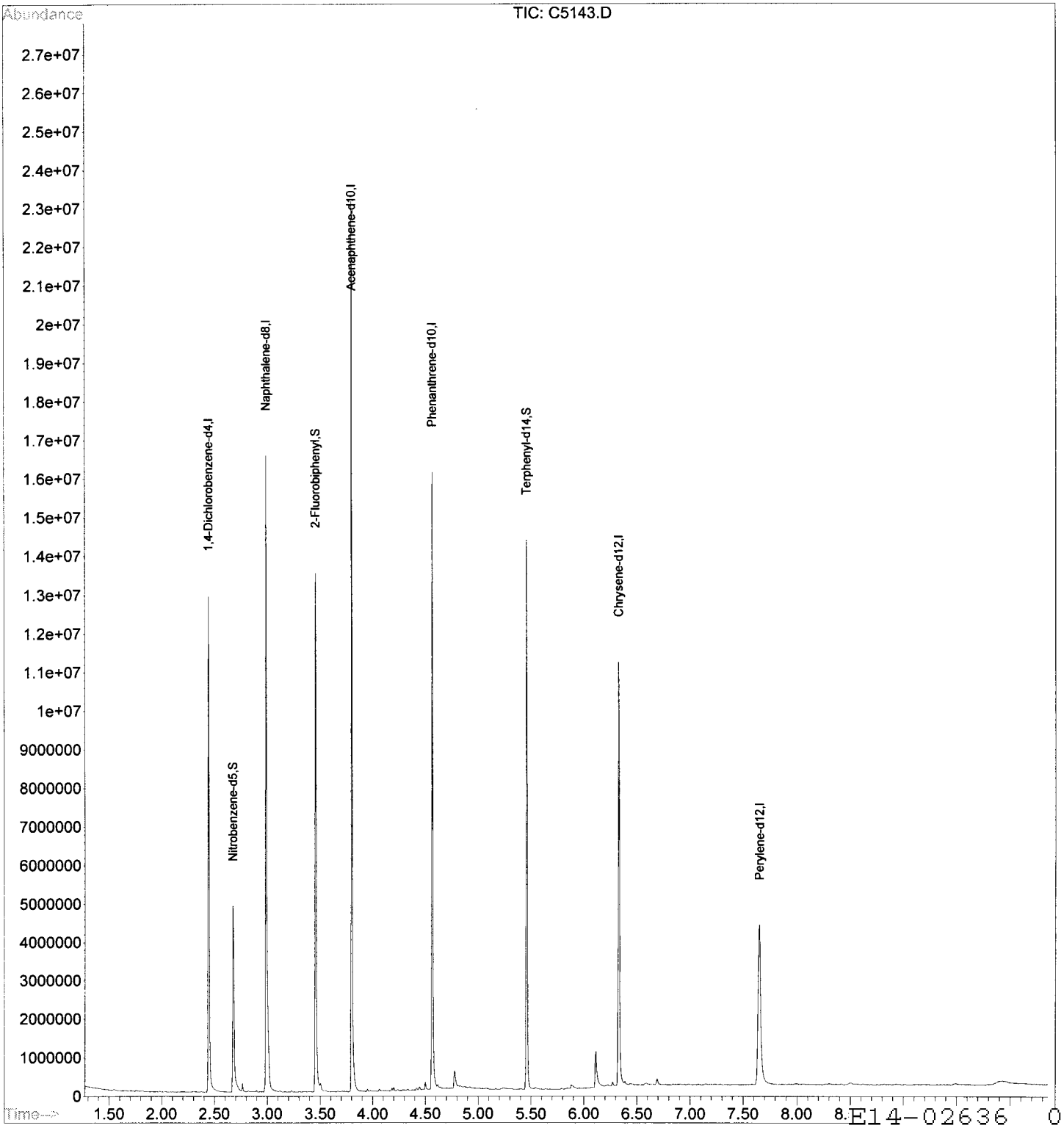
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5143.D
Acq On : 1 Apr 2014 19:07
Operator : EDM
Sample : B-476_(2,E14-02636-001,S,15.03g,18.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Apr 02 09:16:25 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5144.D
Acq On : 1 Apr 2014 19:22
Operator : EDM
Sample : B-476_(1,E14-02636-002,S,15.04g,20.2,0.5
Misc : 140331-05,03/31/14,03/28/14,5
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Apr 02 09:41:43 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

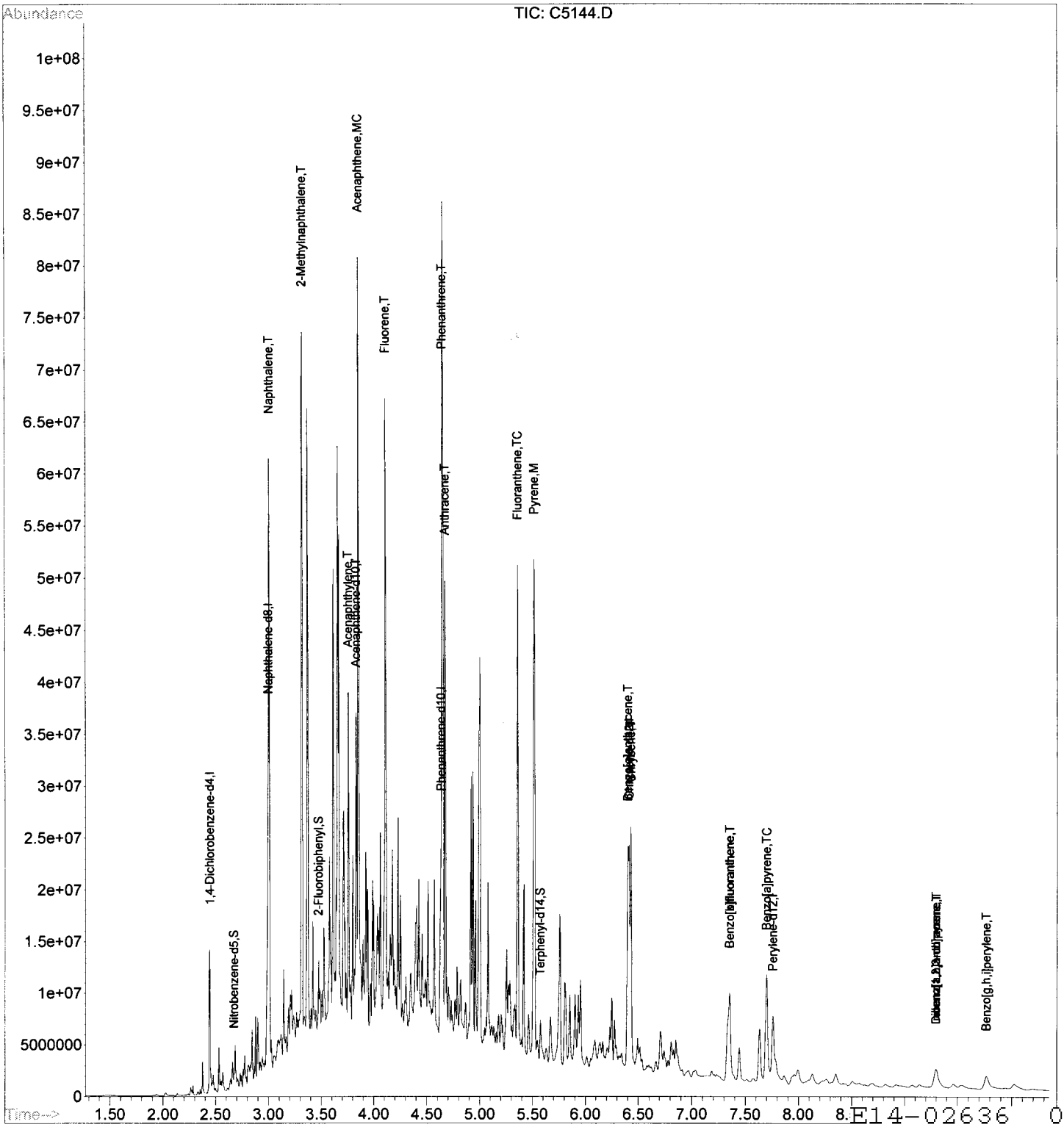
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1846081	40.00	UG		0.00
23) Naphthalene-d8	2.99	136	5937584	40.00	UG		0.01
43) Acenaphthene-d10	3.83	164	3644370	40.00	UG		0.03
66) Phenanthrene-d10	4.63	188	4593553	40.00	UG		0.06
82) Chrysene-d12	6.41	240	3809875	40.00	UG		0.08
92) Perylene-d12	7.76	264	2887095	40.00	UG		0.13
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#				
6) Phenol-d5	0.00	99	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#				
24) Nitrobenzene-d5	2.67	82	362159	6.89	UG		0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 13.78%#				
47) 2-Fluorobiphenyl	3.47	172	779202m	8.35	UG		0.02
Spiked Amount 50.000	Range 33 - 91		Recovery = 16.70%#				
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#				
84) Terphenyl-d14	5.57	244	675972m	7.67	UG		0.11
Spiked Amount 50.000	Range 15 - 122		Recovery = 15.34%				
Target Compounds							Qvalue
34) Naphthalene	3.00	128	8940386	64.36	UG	#	80
41) 2-Methylnaphthalene	3.31	142	8287294	68.10	UG		90
53) Acenaphthylene	3.76	152	3738994	25.88	UG	#	92
55) Acenaphthene	3.85	153	8083234	91.75	UG	#	86
61) Fluorene	4.11	166	8429276	88.96	UG	#	86
75) Phenanthrene	4.64	178	12023673	104.88	UG	#	1
76) Anthracene	4.67	178	7379356	70.34	UG	#	66
79) Fluoranthene	5.36	202	9123274m	80.00	UG		
83) Pyrene	5.51	202	11663858m	115.94	UG		
88) Benzo[a]anthracene	6.40	228	6546827	79.18	UG		93
89) Chrysene	6.43	228	6273267m	86.15	UG		
94) Benzo[b]fluoranthene	7.35	252	3579977m	41.66	UG		
95) Benzo[k]fluoranthene	7.35	252	2675045m	32.53	UG		
96) Benzo[a]pyrene	7.70	252	5273885	70.96	UG	#	92
97) Indeno[1,2,3-cd]pyrene	9.30	276	1674046	19.91	UG	#	21
98) Dibenz[a,h]anthracene	9.29	278	567033	8.57	UG	#	72
99) Benzo[g,h,i]perylene	9.77	276	1493473	20.75	UG	#	30

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5144.D
Acq On : 1 Apr 2014 19:22
Operator : EDM
Sample : B-476_(1,E14-02636-002,S,15.04g,20.2,0.5
Misc : 140331-05,03/31/14,03/28/14,5
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Apr 02 09:41:43 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0123

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-Q1-14\
Data File : C5159.D
Acq On : 1 Apr 2014 23:13
Operator : EDM
Sample : B-476_(1,E14-02636-003,S,15.32g,18.7,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 25 08:40:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

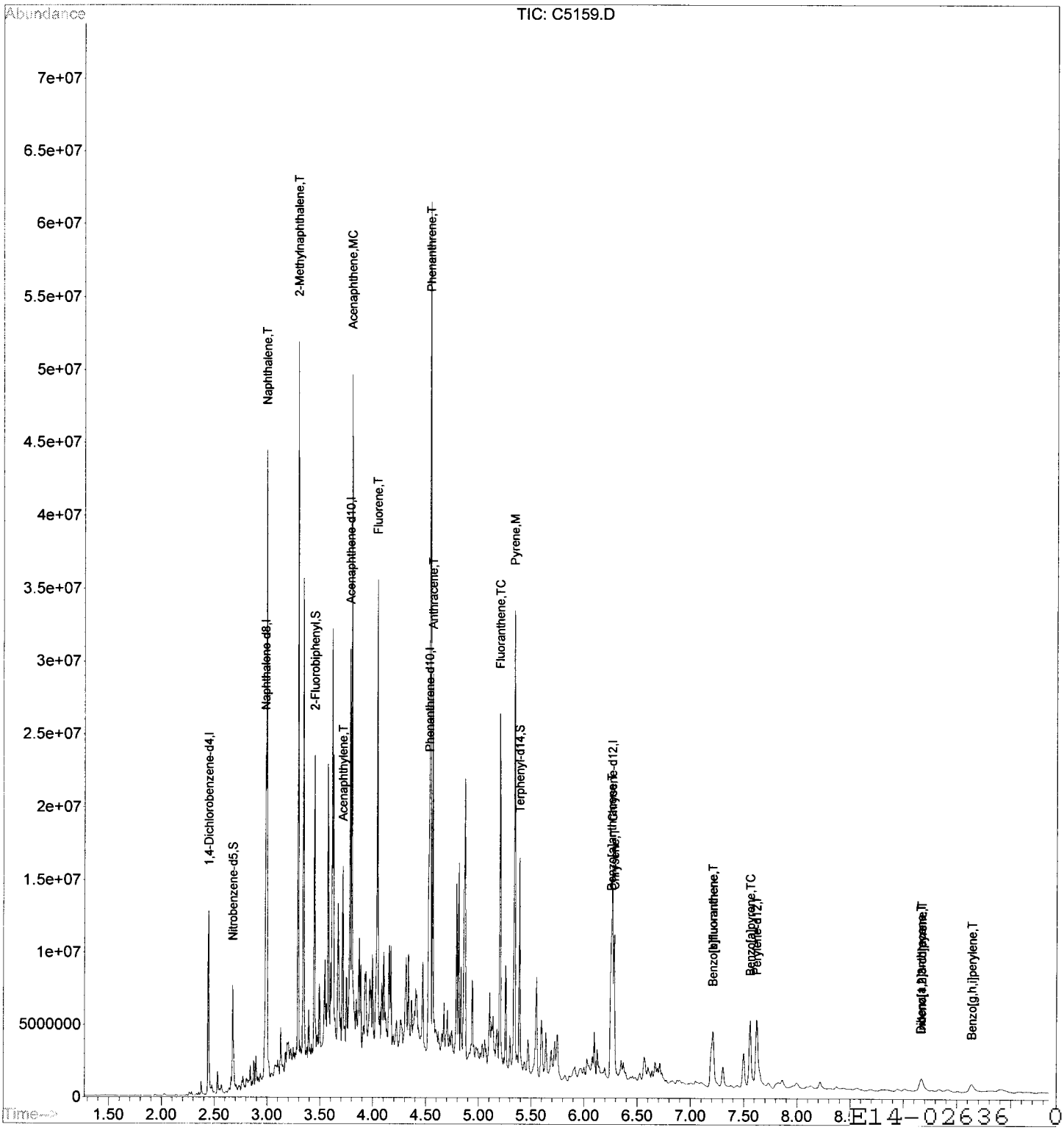
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1606157	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5528526	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3323160	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	4008796	40.00	UG	-0.04
82) Chrysene-d12	6.26	240	3169212	40.00	UG	-0.07
92) Perylene-d12	7.62	264	2401317	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1689956	34.51	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	69.02%		
47) 2-Fluorobiphenyl	3.45	172	3865136m	45.41	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	90.82%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.39	244	3003561	40.96	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery =	81.92%		
Target Compounds						Qvalue
34) Naphthalene	2.99	128	7280483	56.29	UG #	72
41) 2-Methylnaphthalene	3.29	142	5388912	47.56	UG	93
53) Acenaphthylene	3.72	152	1557984	11.82	UG #	93
55) Acenaphthene	3.80	153	4559798	56.76	UG #	88
61) Fluorene	4.04	166	4955112	57.35	UG	95
75) Phenanthrene	4.54	178	7779912	77.76	UG #	44
76) Anthracene	4.56	178	5215266	56.96	UG #	87
79) Fluoranthene	5.20	202	6201627	62.32	UG #	73
83) Pyrene	5.34	202	7351972	87.85	UG #	54
88) Benzo[a]anthracene	6.25	228	3050622	44.36	UG #	93
89) Chrysene	6.28	228	2722976m	44.95	UG	
94) Benzo[b]fluoranthene	7.20	252	1420944m	19.88	UG	
95) Benzo[k]fluoranthene	7.21	252	1428840m	20.89	UG	
96) Benzo[a]pyrene	7.56	252	2313221	37.42	UG #	92
97) Indeno[1,2,3-cd]pyrene	9.17	276	741760	10.61	UG #	24
98) Dibenz[a,h]anthracene	9.16	278	215491	3.92	UG #	63
99) Benzo[g,h,i]perylene	9.64	276	727087m	12.15	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5159.D
Acq On : 1 Apr 2014 23:13
Operator : EDM
Sample : B-476_(1,E14-02636-003,S,15.32g,18.7,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Apr 25 08:40:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-01-14\
Data File : C5145.D
Acq On : 1 Apr 2014 19:38
Operator : EDM
Sample : B-475_(3,E14-02636-004,S,15.17g,18.2,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Apr 02 10:17:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1572210	40.00	UG	0.00
23) Naphthalene-d8	2.99	136	6052835m	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	3019588m	40.00	UG	-0.01
66) Phenanthrene-d10	4.54	188	4025689m	40.00	UG	-0.02
82) Chrysene-d12	6.31	240	3202178m	40.00	UG	-0.03
92) Perylene-d12	7.63	264	2291178	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1655237	30.88	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 61.76%			
47) 2-Fluorobiphenyl	3.45	172	3512452m	45.42	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 90.84%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.42	244	3261212m	44.02	UG	-0.04
Spiked Amount 50.000	Range 15 - 122		Recovery = 88.04%			

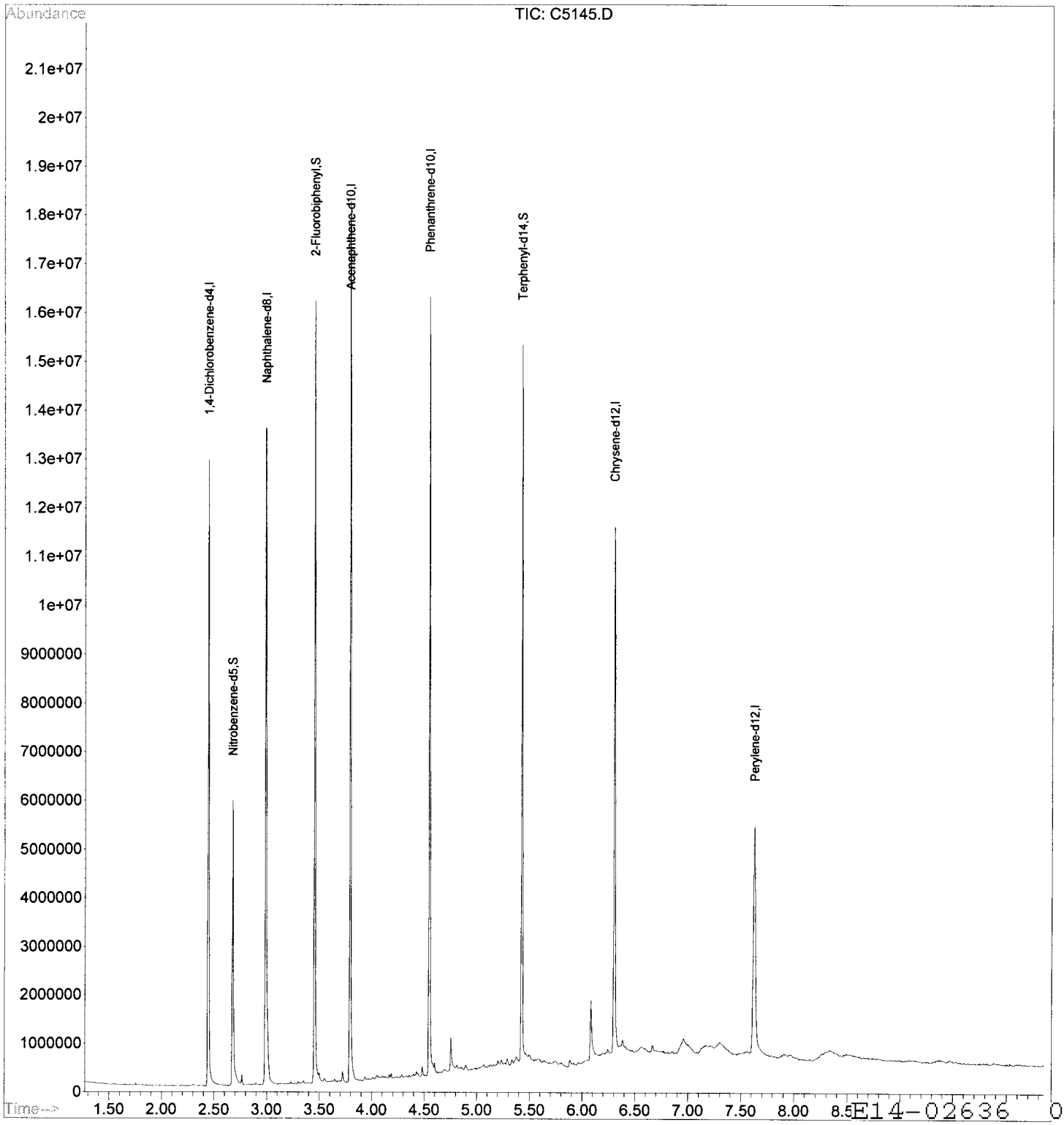
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-01-14\
Data File : C5145.D
Acq On : 1 Apr 2014 19:38
Operator : EDM
Sample : B-475_(3,E14-02636-004,S,15.17g,18.2,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Apr 02 10:17:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0127

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5146.D
Acq On : 1 Apr 2014 19:53
Operator : EDM
Sample : B-475_(8,E14-02636-005,S,15.22g,20.3,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 02 10:19:19 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1483339	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5793892	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	2858638	40.00	UG	-0.01
66) Phenanthrene-d10	4.54	188	3793865	40.00	UG	-0.02
82) Chrysene-d12	6.29	240	3040841	40.00	UG	-0.04
92) Perylene-d12	7.64	264	2257424	40.00	UG	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1479902	28.84	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 57.68%			
47) 2-Fluorobiphenyl	3.45	172	3262454m	44.56	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 89.12%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.42	244	3005190	42.71	UG	-0.04
Spiked Amount 50.000	Range 15 - 122		Recovery = 85.42%			

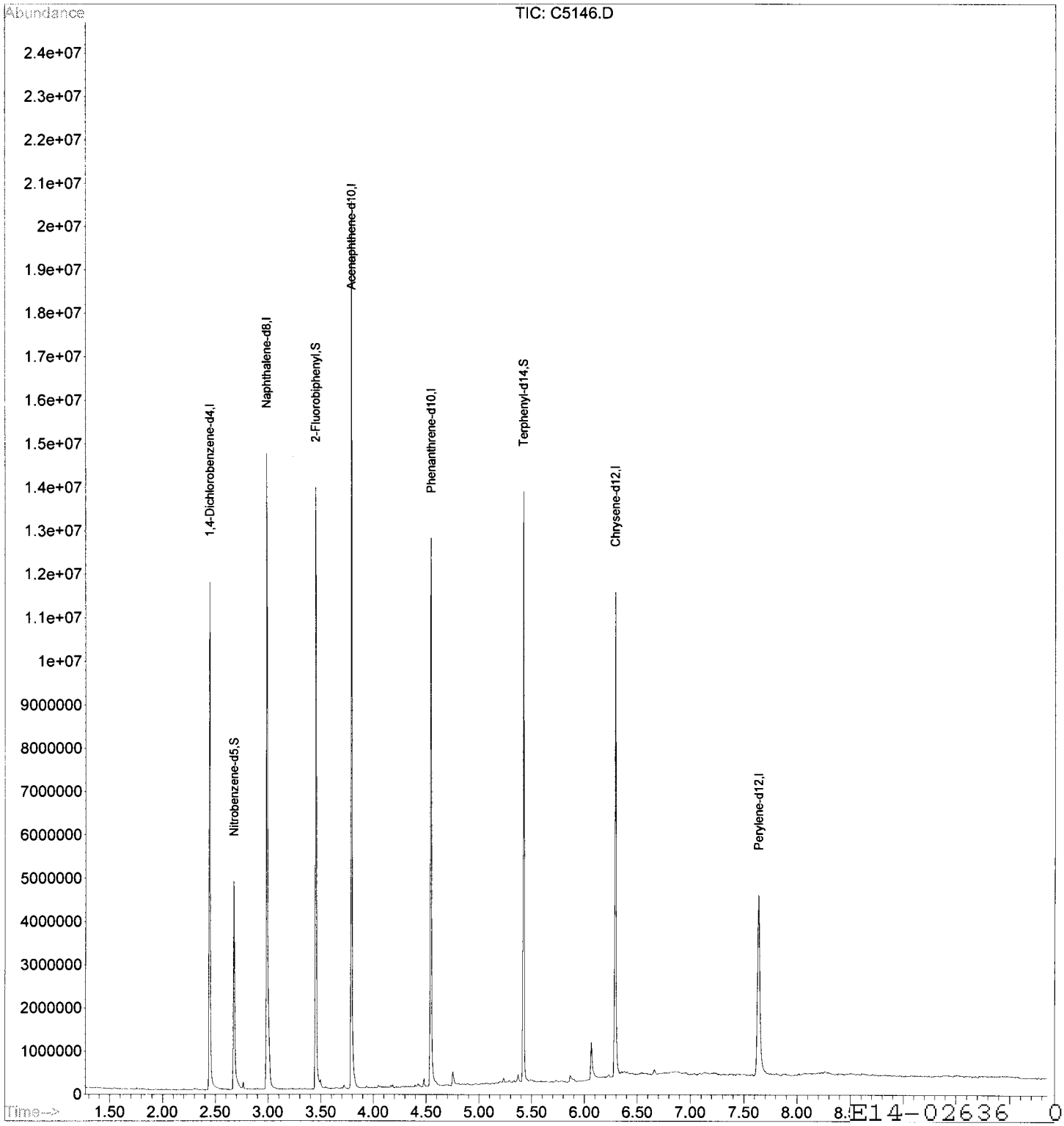
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5146.D
Acq On : 1 Apr 2014 19:53
Operator : EDM
Sample : B-475_(8,E14-02636-005,S,15.22g,20.3,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Apr 02 10:19:19 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0129

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5147.D
Acq On : 1 Apr 2014 20:09
Operator : EDM
Sample : B-475_(9,E14-02636-006,S,15.38g,17.4,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 02 10:20:48 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1424594	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5509493	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	2664868	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	3422867	40.00	UG	-0.03
82) Chrysene-d12	6.27	240	2859349	40.00	UG	-0.06
92) Perylene-d12	7.63	264	2146492	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1477449	30.28	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	60.56%		
47) 2-Fluorobiphenyl	3.45	172	3048370m	44.67	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	89.34%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.40	244	2816260	42.57	UG	-0.06
Spiked Amount 50.000	Range 15 - 122		Recovery =	85.14%		

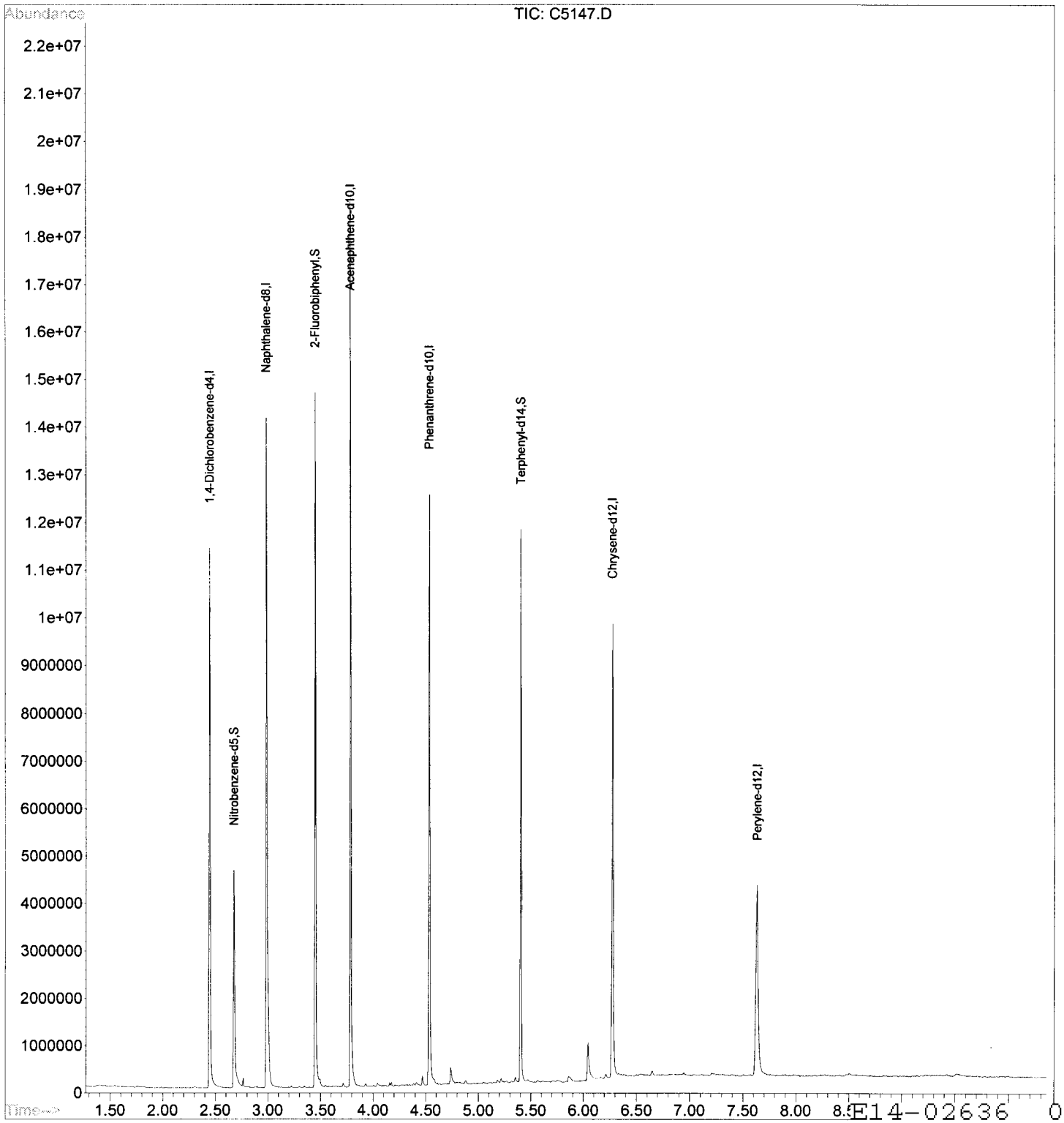
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5147.D
Acq On : 1 Apr 2014 20:09
Operator : EDM
Sample : B-475_(9,E14-02636-006,S,15.38g,17.4,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 02 10:20:48 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0131

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5148.D
Acq On : 1 Apr 2014 20:24
Operator : EDM
Sample : B-478_(3,E14-02636-008,S,15.23g,18.1,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 02 09:21:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1473191	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5902520	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	2972698	40.00	UG	-0.02
66) Phenanthrene-d10	4.52	188	3997907	40.00	UG	-0.04
82) Chrysene-d12	6.27	240	3087931	40.00	UG	-0.06
92) Perylene-d12	7.59	264	2293994	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1584390	30.31	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	60.62%		
47) 2-Fluorobiphenyl	3.45	172	3412985m	44.83	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	89.66%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.39	244	3110847	43.54	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery =	87.08%		

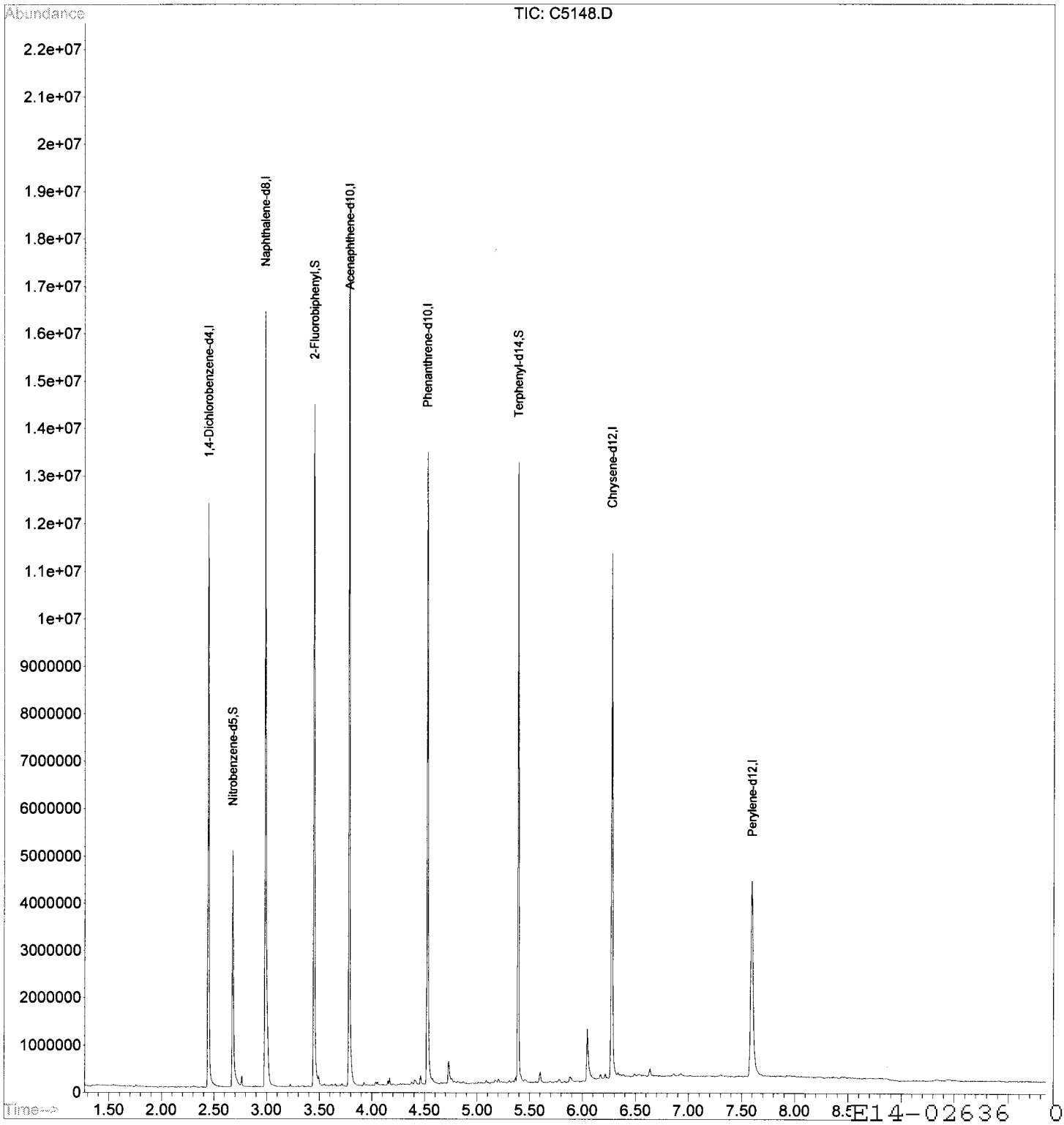
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5148.D
Acq On : 1 Apr 2014 20:24
Operator : EDM
Sample : B-478_(3,E14-02636-008,S,15.23g,18.1,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Apr 02 09:21:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0133

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5149.D
Acq On : 1 Apr 2014 20:39
Operator : EDM
Sample : B-478_(8,E14-02636-009,S,15.12g,20.6,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 02 09:22:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1433641	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5680947	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	2862428	40.00	UG	-0.02
66) Phenanthrene-d10	4.52	188	3915753	40.00	UG	-0.05
82) Chrysene-d12	6.26	240	2990050	40.00	UG	-0.07
92) Perylene-d12	7.62	264	2306551	40.00	UG	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1393655	27.70	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	55.40%		
47) 2-Fluorobiphenyl	3.44	172	3333295	45.47	UG	-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery =	90.94%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.38	244	2980573	43.08	UG	-0.08
Spiked Amount 50.000	Range 15 - 122		Recovery =	86.16%		
Target Compounds						Qvalue
34) Naphthalene	2.99	128	266227	2.00	UG	# 54
55) Acenaphthene	3.80	153	71297	1.03	UG	93
75) Phenanthrene	4.53	178	149548	1.53	UG	94
79) Fluoranthene	5.20	202	71703	0.74	UG	# 74
83) Pyrene	5.33	202	90161	1.14	UG	# 56

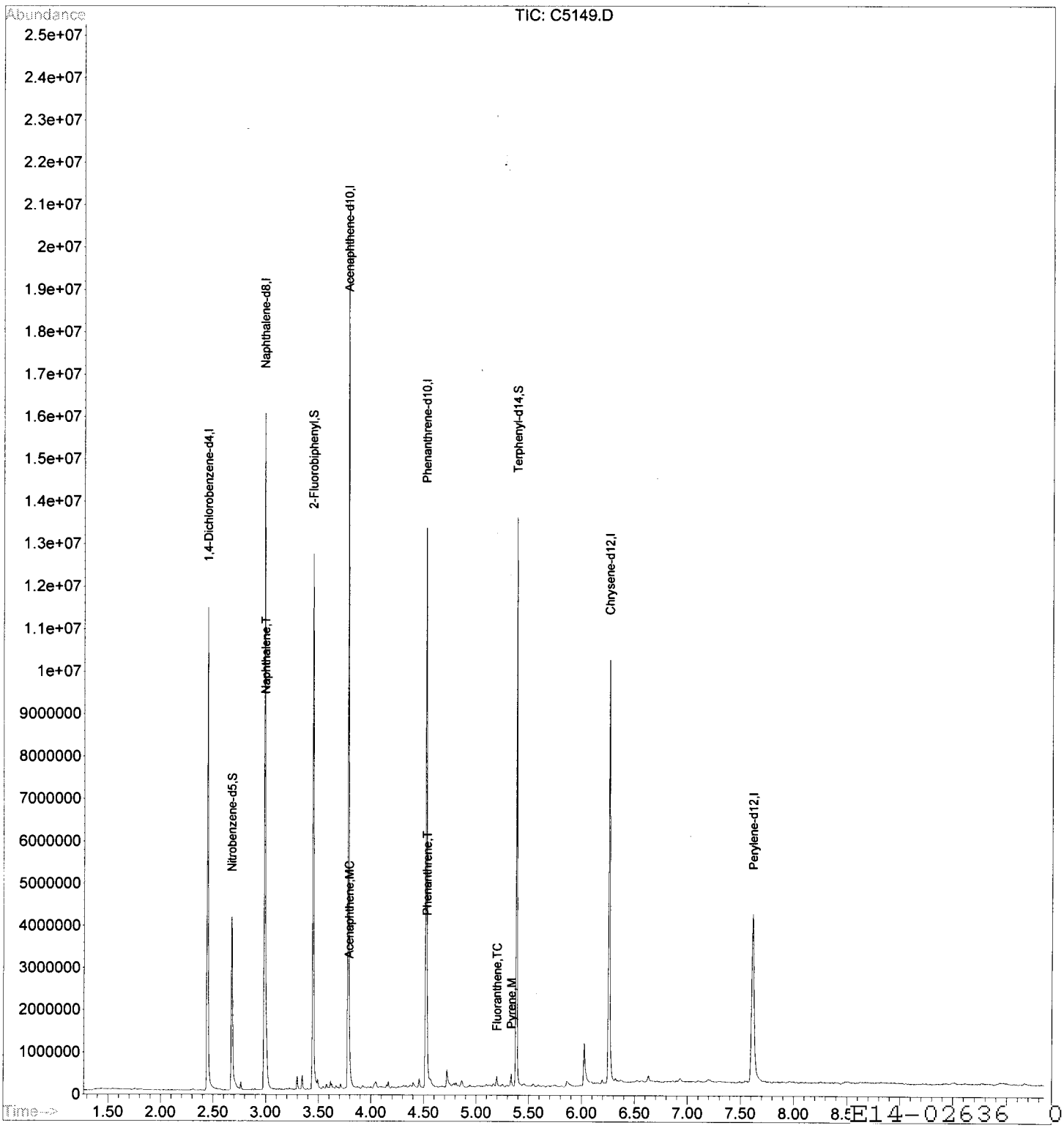
(#) = qualifier out of range (m) = manual integration (+) = signals summed

E14-02636 0134

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5149.D
Acq On : 1 Apr 2014 20:39
Operator : EDM
Sample : B-478_(8,E14-02636-009,S,15.12g,20.6,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Apr 02 09:22:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0135

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5150.D
Acq On : 1 Apr 2014 20:55
Operator : EDM
Sample : B-479_(3,E14-02636-013,S,15.01g,14.0,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Apr 02 09:31:28 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1247966	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5104591	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	2639962	40.00	UG	-0.02
66) Phenanthrene-d10	4.52	188	3526857	40.00	UG	-0.05
82) Chrysene-d12	6.26	240	2814794	40.00	UG	-0.07
92) Perylene-d12	7.61	264	2220471	40.00	UG	-0.01

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1317350	29.14	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 58.28%			
47) 2-Fluorobiphenyl	3.45	172	2999285m	44.36	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 88.72%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.38	244	2999904	46.06	UG	-0.08
Spiked Amount 50.000	Range 15 - 122		Recovery = 92.12%			

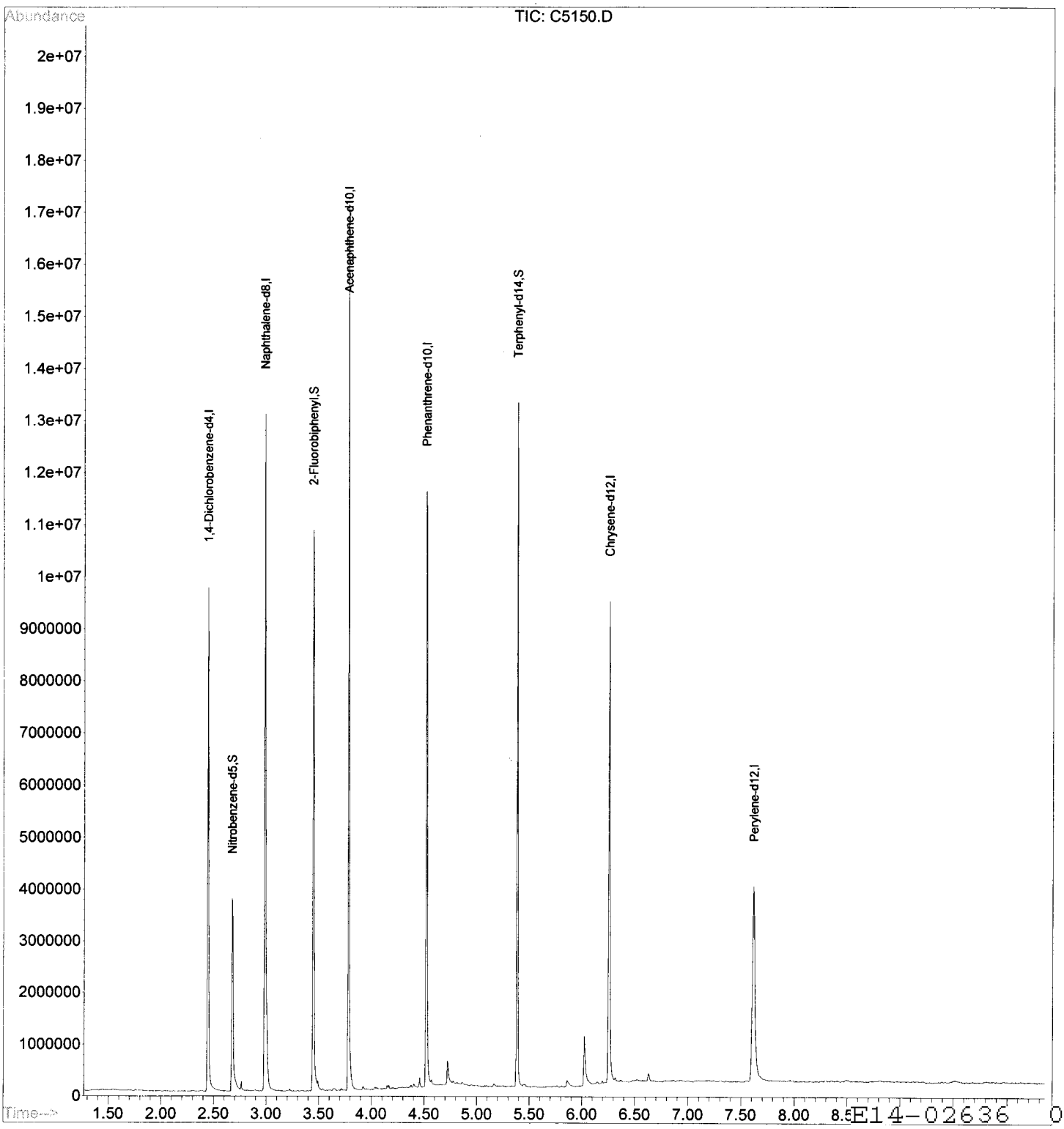
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5150.D
Acq On : 1 Apr 2014 20:55
Operator : EDM
Sample : B-479_(3,E14-02636-013,S,15.01g,14.0,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Apr 02 09:31:28 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0137

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5151.D
Acq On : 1 Apr 2014 21:10
Operator : EDM
Sample : B-479_(8,E14-02636-014,S,15.00g,20.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Apr 02 09:32:19 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1829747	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6390272	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3763336	40.00	UG	-0.02
66) Phenanthrene-d10	4.51	188	4688170	40.00	UG	-0.05
82) Chrysene-d12	6.25	240	3165745	40.00	UG	-0.08
92) Perylene-d12	7.61	264	2510308	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1895328	33.49	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 66.98%			
47) 2-Fluorobiphenyl	3.44	172	4380845	45.45	UG	-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery = 90.90%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.38	244	3349861	45.73	UG	-0.09
Spiked Amount 50.000	Range 15 - 122		Recovery = 91.46%			

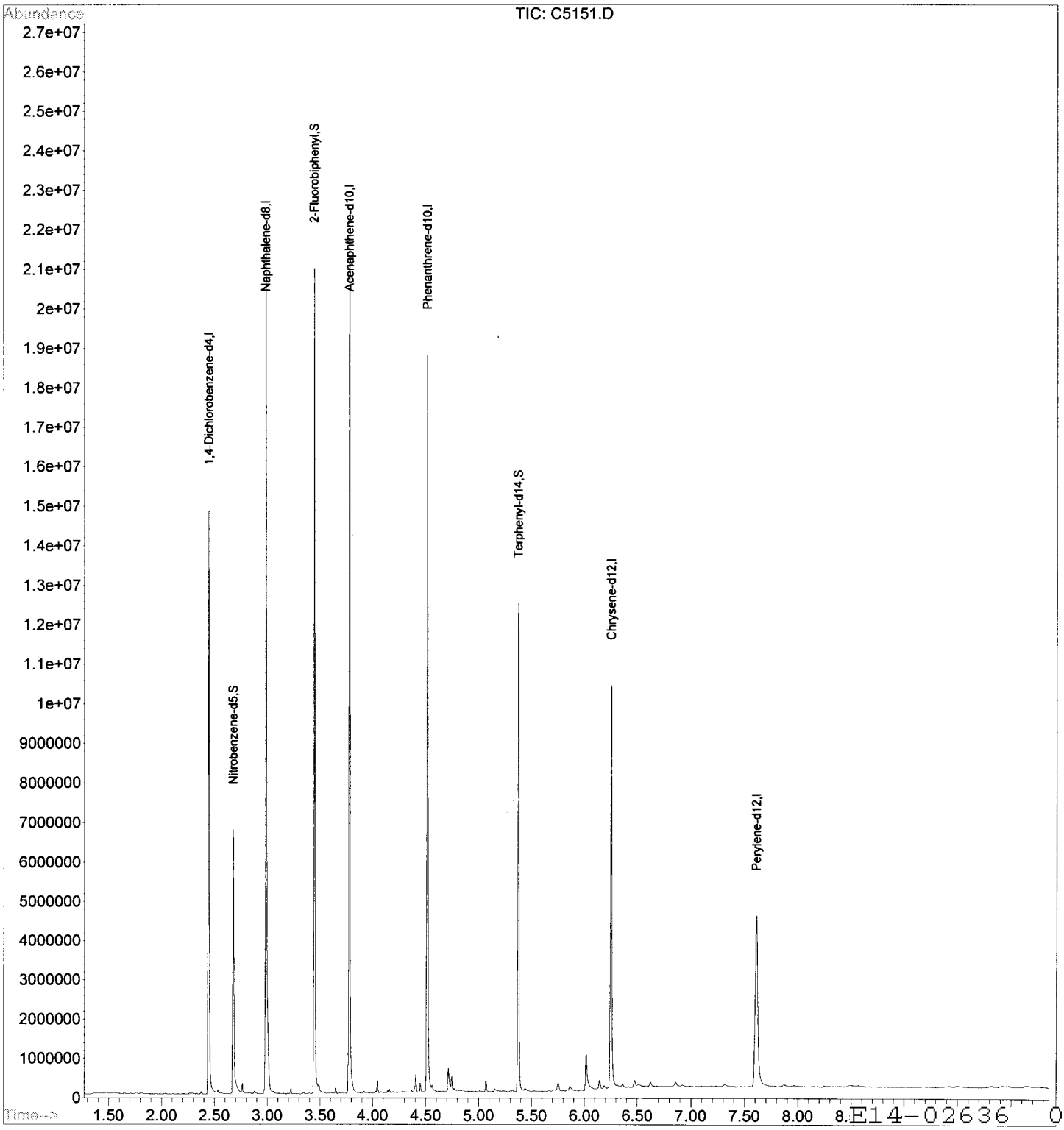
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5151.D
Acq On : 1 Apr 2014 21:10
Operator : EDM
Sample : B-479_(8,E14-02636-014,S,15.00g,20.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Apr 02 09:32:19 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0139

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5152.D
Acq On : 1 Apr 2014 21:26
Operator : EDM
Sample : B-480_(4,E14-02636-015,S,15.12g,16.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Apr 02 09:33:09 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

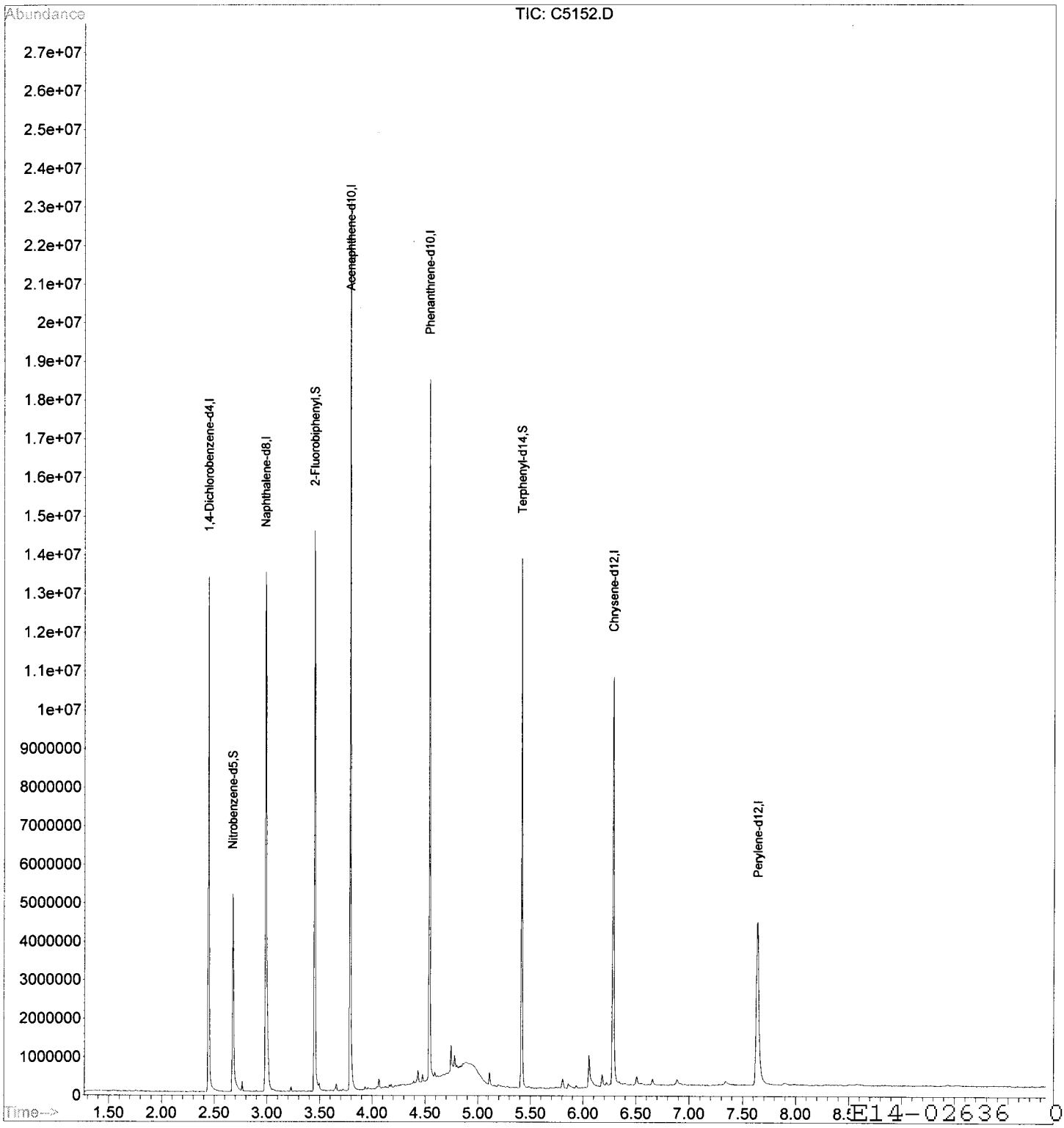
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1593444	40.00	UG	0.00
23) Naphthalene-d8	2.99	136	6145685	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	3150972	40.00	UG	-0.01
66) Phenanthrene-d10	4.54	188	4295897	40.00	UG	-0.03
82) Chrysene-d12	6.28	240	3224424	40.00	UG	-0.05
92) Perylene-d12	7.64	264	2563825	40.00	UG	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1612239	29.62	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 59.24%			
47) 2-Fluorobiphenyl	3.45	172	3522517m	43.65	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 87.30%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.41	244	3110987m	41.70	UG	-0.05
Spiked Amount 50.000	Range 15 - 122		Recovery = 83.40%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5152.D
Acq On : 1 Apr 2014 21:26
Operator : EDM
Sample : B-480_(4,E14-02636-015,S,15.12g,16.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Apr 02 09:33:09 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5153.D
Acq On : 1 Apr 2014 21:41
Operator : EDM
Sample : B-480_(6,E14-02636-016,S,15.13g,21.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Apr 02 09:33:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1652725	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6348034	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3174730	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	4242762	40.00	UG	-0.03
82) Chrysene-d12	6.28	240	3312291	40.00	UG	-0.05
92) Perylene-d12	7.61	264	2463926	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1670127	29.70	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 59.40%			
47) 2-Fluorobiphenyl	3.45	172	3638293m	44.75	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 89.50%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.40	244	3106082	40.53	UG	-0.06
Spiked Amount 50.000	Range 15 - 122		Recovery = 81.06%			

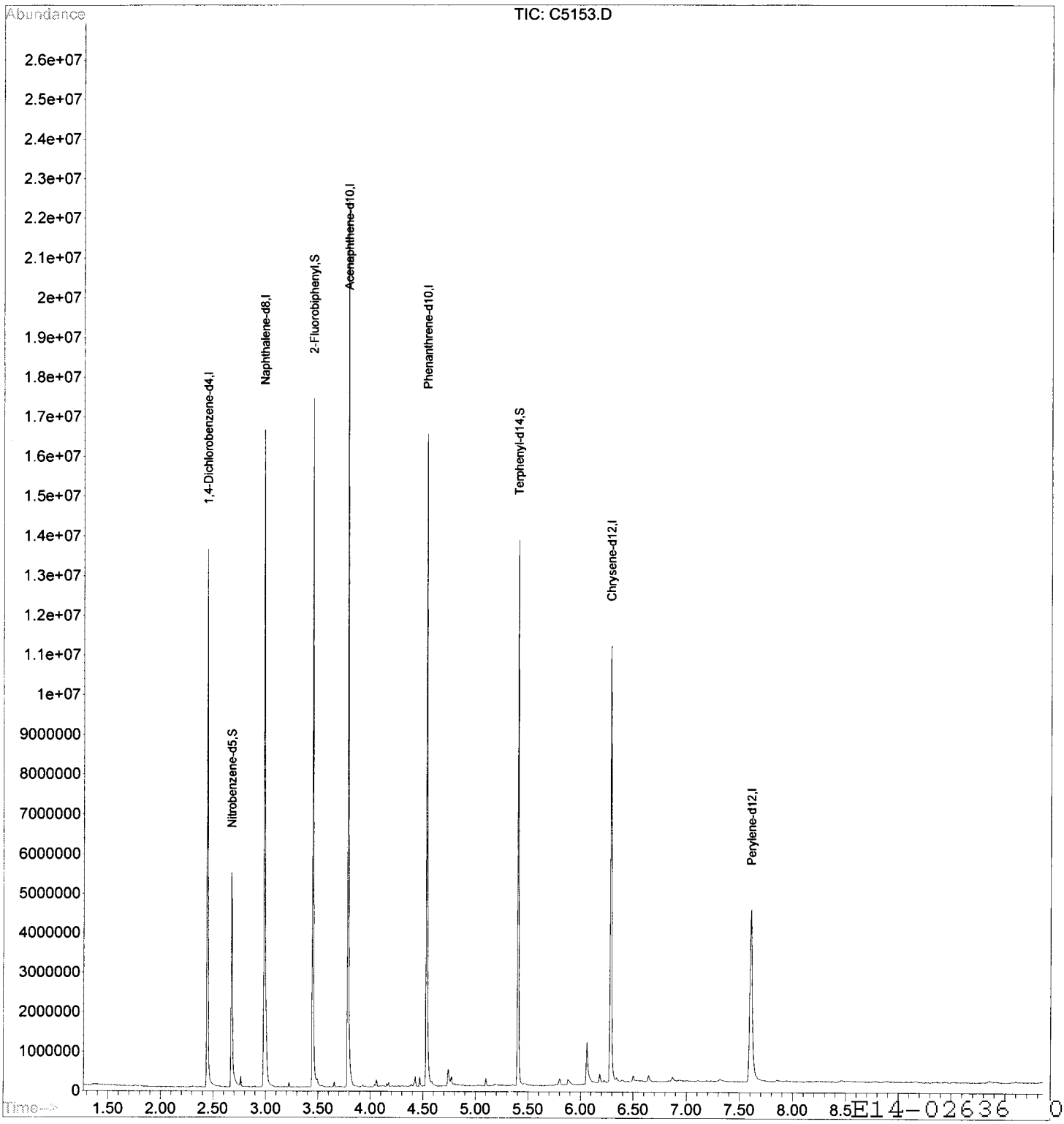
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5153.D
Acq On : 1 Apr 2014 21:41
Operator : EDM
Sample : B-480_(6,E14-02636-016,S,15.13g,21.8,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Apr 02 09:33:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5154.D
Acq On : 1 Apr 2014 21:56
Operator : EDM
Sample : B-480_(8,E14-02636-017,S,15.12g,35.4,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Apr 02 09:35:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

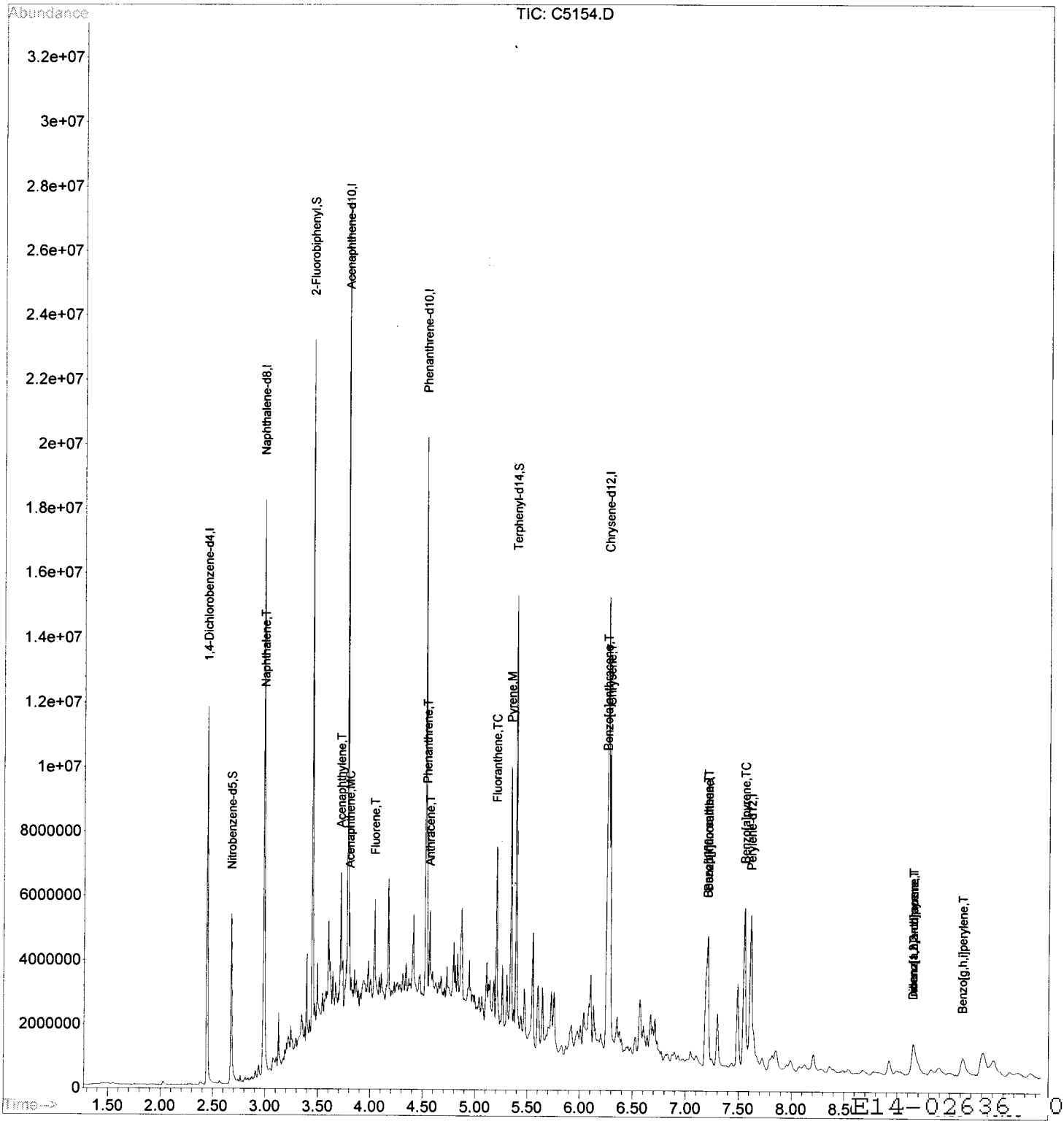
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1532466	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5905227	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3033537	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	3870637	40.00	UG	-0.04
82) Chrysene-d12	6.27	240	3039758	40.00	UG	-0.06
92) Perylene-d12	7.61	264	2311291	40.00	UG	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1507992	28.83	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	57.66%		
47) 2-Fluorobiphenyl	3.45	172	3457345m	44.50	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	89.00%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.39	244	3141645	44.67	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery =	89.34%		
Target Compounds						Qvalue
34) Naphthalene	2.99	128	141631	1.03	UG	# 58
53) Acenaphthylene	3.72	152	859634	7.15	UG	96
55) Acenaphthene	3.80	153	197738	2.70	UG	97
61) Fluorene	4.04	166	150340	1.91	UG	# 75
75) Phenanthrene	4.54	178	1021249	10.57	UG	97
76) Anthracene	4.56	178	690910	7.82	UG	98
79) Fluoranthene	5.21	202	1535964	15.98	UG	# 76
83) Pyrene	5.34	202	2355505	29.34	UG	# 67
88) Benzo[a]anthracene	6.25	228	2311636	35.04	UG	94
89) Chrysene	6.28	228	2394991m	41.22	UG	
94) Benzo[b]fluoranthene	7.20	252	1338504m	19.45	UG	
95) Benzo[k]fluoranthene	7.21	252	1557695m	23.66	UG	
96) Benzo[a]pyrene	7.56	252	2523606	42.41	UG	# 93
97) Indeno[1,2,3-cd]pyrene	9.15	276	848041	12.60	UG	# 27
98) Dibenz[a,h]anthracene	9.15	278	225485	4.26	UG	# 77
99) Benzo[g,h,i]perylene	9.62	276	817911m	14.20	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5154.D
Acq On : 1 Apr 2014 21:56
Operator : EDM
Sample : B-480_(8,E14-02636-017,S,15.12g,35.4,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Apr 02 09:35:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0145

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5155.D
Acq On : 1 Apr 2014 22:12
Operator : EDM
Sample : B-481_(3,E14-02636-019,S,15.09g,30.0,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 02 09:37:59 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

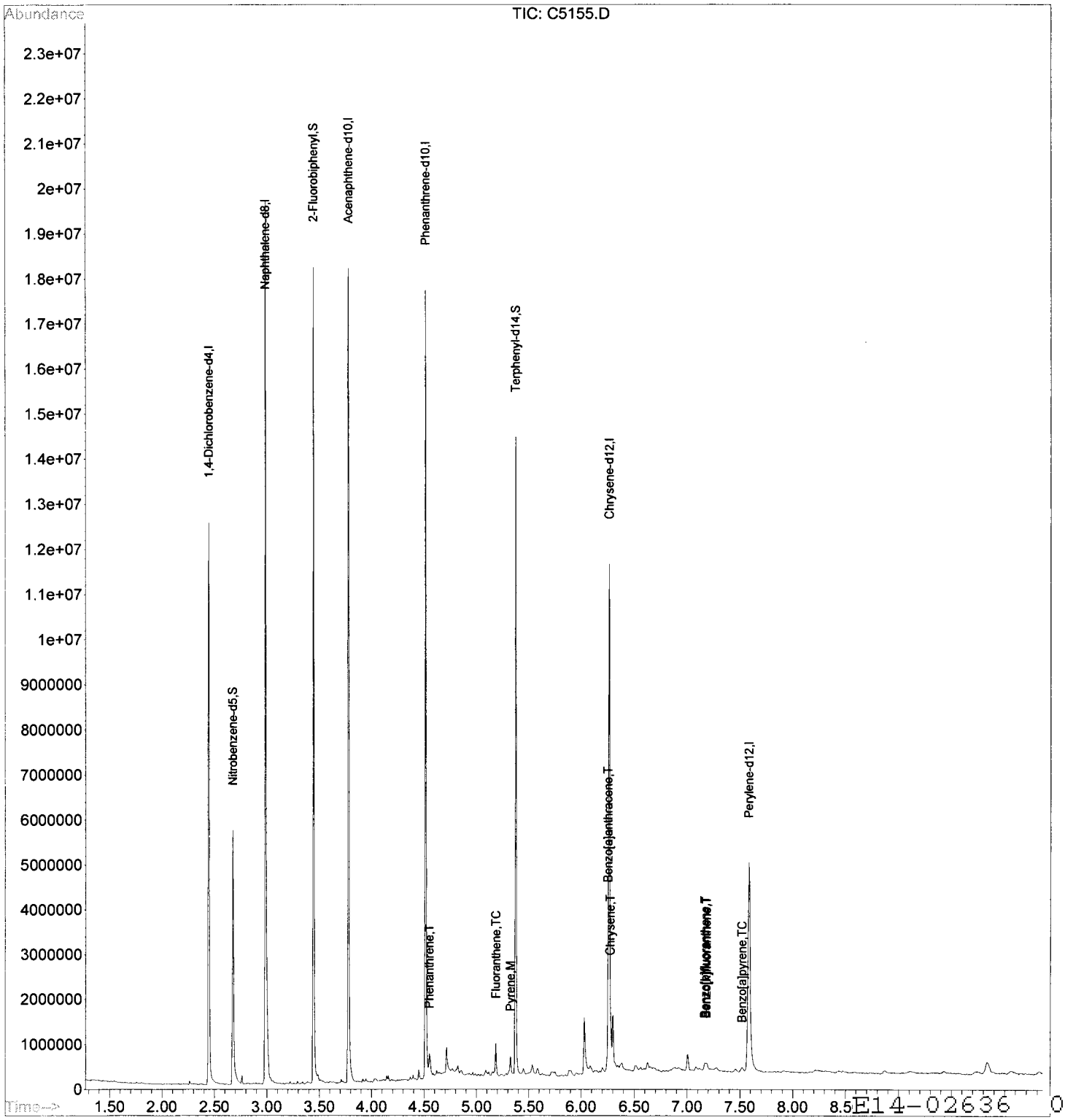
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1634144	40.00	UG		0.00
23) Naphthalene-d8	2.98	136	5980694	40.00	UG		0.00
43) Acenaphthene-d10	3.78	164	3251283	40.00	UG		-0.02
66) Phenanthrene-d10	4.51	188	4188143	40.00	UG		-0.05
82) Chrysene-d12	6.26	240	3321886	40.00	UG		-0.07
92) Perylene-d12	7.58	264	2521211	40.00	UG		-0.04
System Monitoring Compounds							
4) 2-Fluorophenol	1.80	112	622	0.01	UG		-0.12
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.01%		#	
6) Phenol-d5	2.27	99	1247	0.02	UG		0.01
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.02%		#	
24) Nitrobenzene-d5	2.67	82	1631906	30.81	UG		0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	61.62%			
47) 2-Fluorobiphenyl	3.44	172	3662684m	43.99	UG		-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery =	87.98%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%		#	
84) Terphenyl-d14	5.37	244	3134748	40.78	UG		-0.09
Spiked Amount 50.000	Range 15 - 122		Recovery =	81.56%			
Target Compounds							Qvalue
75) Phenanthrene	4.55	178	162066	1.55	UG		98
79) Fluoranthene	5.18	202	127949	1.23	UG	#	77
83) Pyrene	5.32	202	121920m	1.39	UG		
88) Benzo[a]anthracene	6.25	228	105767	1.47	UG	#	87
89) Chrysene	6.28	228	166282	2.62	UG	#	86
94) Benzo[b]fluoranthene	7.17	252	56069m	0.75	UG		
95) Benzo[k]fluoranthene	7.18	252	54941m	0.77	UG		
96) Benzo[a]pyrene	7.52	252	51279	0.79	UG	#	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5155.D
Acq On : 1 Apr 2014 22:12
Operator : EDM
Sample : B-481_(3,E14-02636-019,S,15.09g,30.0,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Apr 02 09:37:59 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0147

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5156.D
Acq On : 1 Apr 2014 22:27
Operator : EDM
Sample : B-481_(8,E14-02636-020,S,15.22g,28.9,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 02 09:38:54 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1630738	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6294712	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	2992279	40.00	UG	-0.01
66) Phenanthrene-d10	4.55	188	3881377	40.00	UG	-0.02
82) Chrysene-d12	6.31	240	3160181	40.00	UG	-0.02
92) Perylene-d12	7.63	264	2281515	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1690589	30.32	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 60.64%			
47) 2-Fluorobiphenyl	3.45	172	3424663m	44.69	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 89.38%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.43	244	3093468	42.31	UG	-0.03
Spiked Amount 50.000	Range 15 - 122		Recovery = 84.62%			

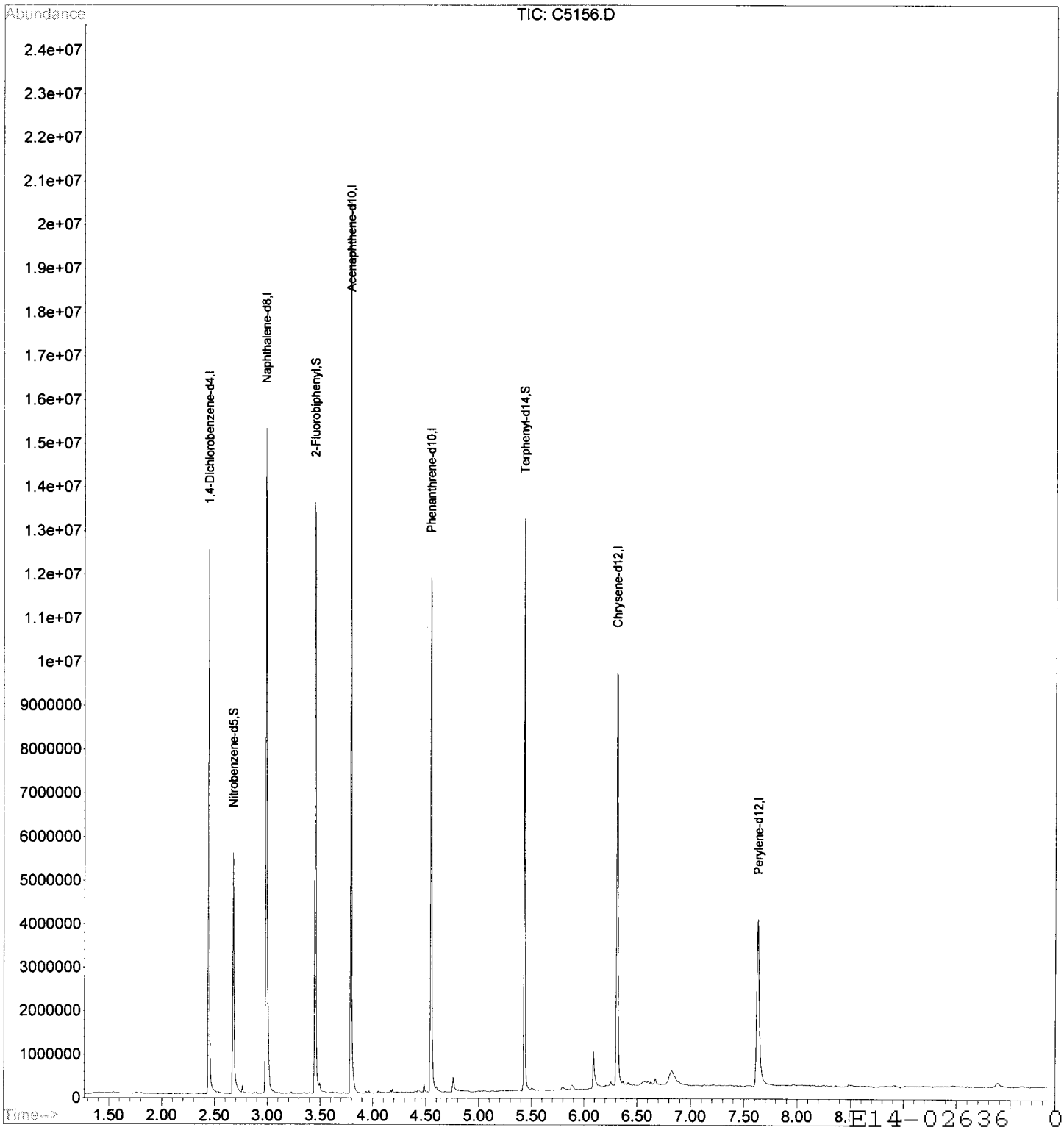
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5156.D
Acq On : 1 Apr 2014 22:27
Operator : EDM
Sample : B-481_(8,E14-02636-020,S,15.22g,28.9,0.5
Misc : 140331-05,03/31/14,03/28/14,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Apr 02 09:38:54 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0149

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-01-14\
Data File : C5131.D
Acq On : 1 Apr 2014 16:00
Operator : EDM
Sample : B-482_(3,E14-02636-023,S,15.16g,18.1,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 01 16:13:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1466100	40.00	UG	0.00
23) Naphthalene-d8	2.99	136	5700377	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	2910497	40.00	UG	-0.01
66) Phenanthrene-d10	4.54	188	4013978	40.00	UG	-0.03
82) Chrysene-d12	6.29	240	3095606	40.00	UG	-0.04
92) Perylene-d12	7.61	264	2373939	40.00	UG	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1458766	28.89	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 57.78%			
47) 2-Fluorobiphenyl	3.45	172	3348309m	44.92	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 89.84%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.41	244	3079730	43.00	UG	-0.05
Spiked Amount 50.000	Range 15 - 122		Recovery = 86.00%			

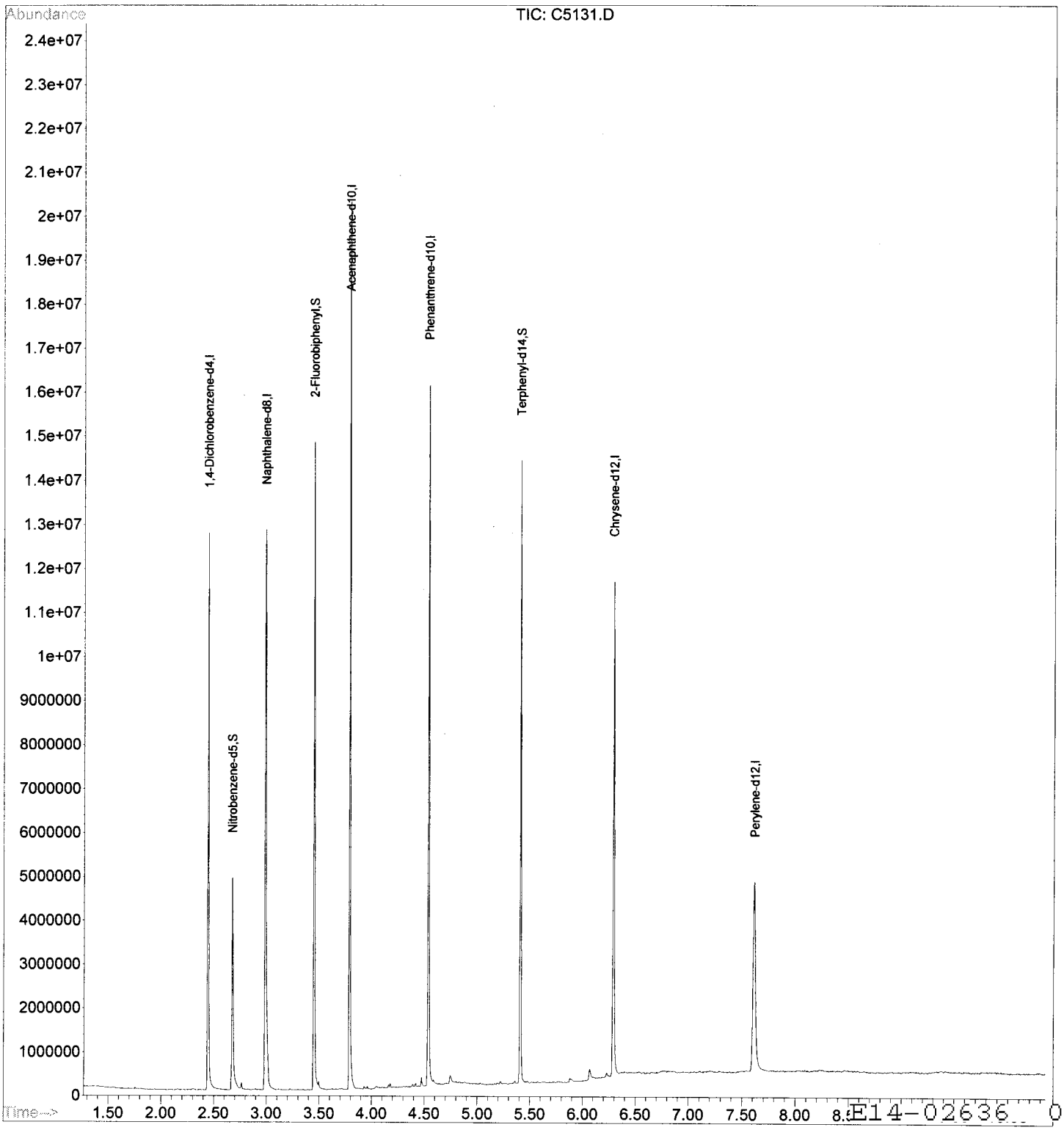
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-01-14\
Data File : C5131.D
Acq On : 1 Apr 2014 16:00
Operator : EDM
Sample : B-482_(3,E14-02636-023,S,15.16g,18.1,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 01 16:13:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0151

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-01-14\
Data File : C5132.D
Acq On : 1 Apr 2014 16:16
Operator : EDM
Sample : B-482_(8,E14-02636-024,S,15.01g,23.5,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 01 16:27:46 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1527508	40.00	UG	0.00
23) Naphthalene-d8	2.99	136	5988610	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	3052581	40.00	UG	-0.01
66) Phenanthrene-d10	4.54	188	3970610	40.00	UG	-0.03
82) Chrysene-d12	6.30	240	3063111	40.00	UG	-0.04
92) Perylene-d12	7.62	264	2333884	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1497082	28.22	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	56.44%		
47) 2-Fluorobiphenyl	3.45	172	3565152m	45.60	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	91.20%#		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.41	244	2993998	42.24	UG	-0.05
Spiked Amount 50.000	Range 15 - 122		Recovery =	84.48%		

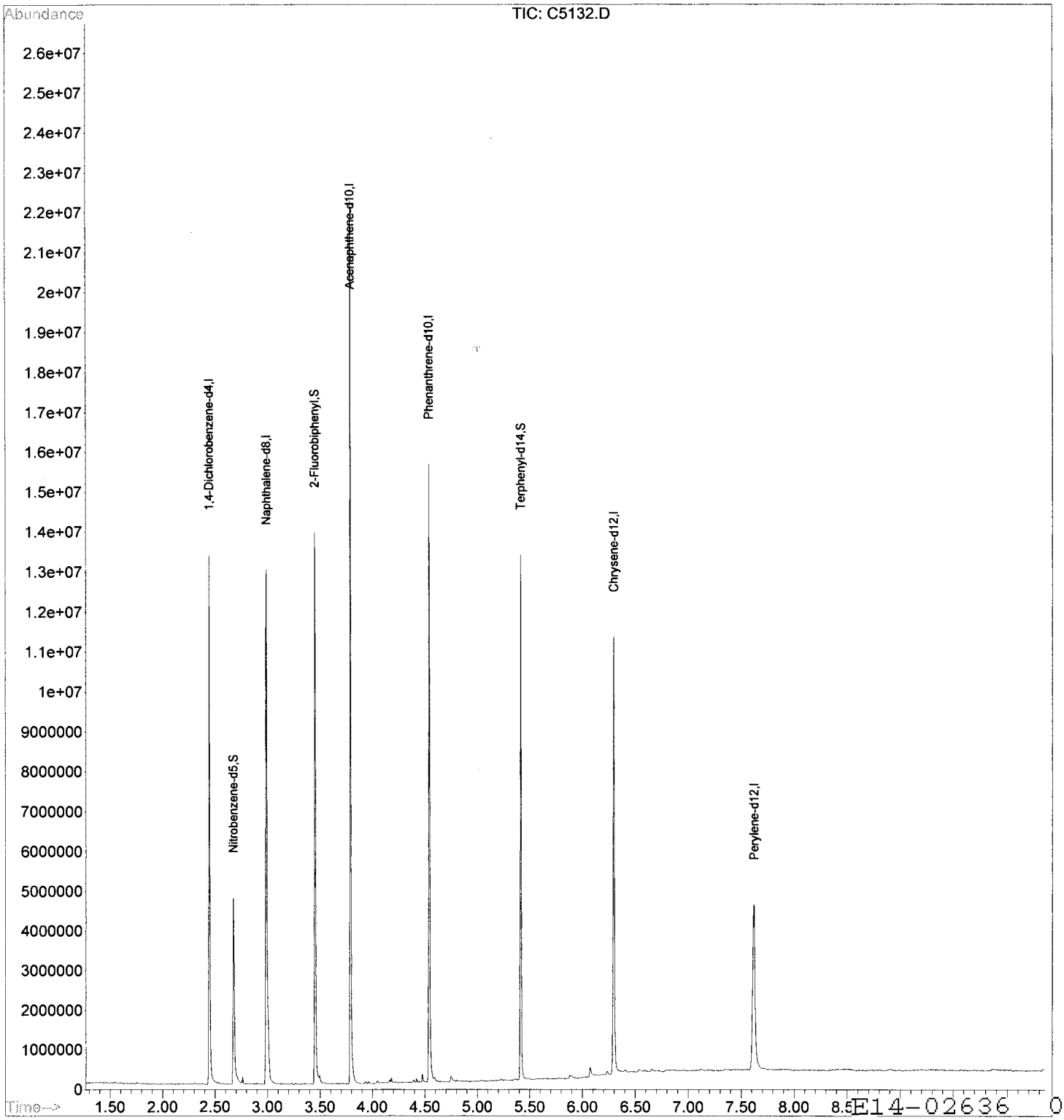
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-01-14\
Data File : C5132.D
Acq On : 1 Apr 2014 16:16
Operator : EDM
Sample : B-482_(8,E14-02636-024,S,15.01g,23.5,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 01 16:27:46 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0153

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5134.D
Acq On : 1 Apr 2014 16:47
Operator : EDM
Sample : B-483_(6,E14-02636-026,S,15.13g,34.2,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 02 09:29:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1611478	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6363298	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3490371	40.00	UG	-0.02
66) Phenanthrene-d10	4.52	188	4810357	40.00	UG	-0.04
82) Chrysene-d12	6.27	240	3423631	40.00	UG	-0.06
92) Perylene-d12	7.59	264	2626406	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1478163	26.23	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	52.46%		
47) 2-Fluorobiphenyl	3.45	172	3804202	42.56	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	85.12%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.38	244	3263054	41.19	UG	-0.08
Spiked Amount 50.000	Range 15 - 122		Recovery =	82.38%		

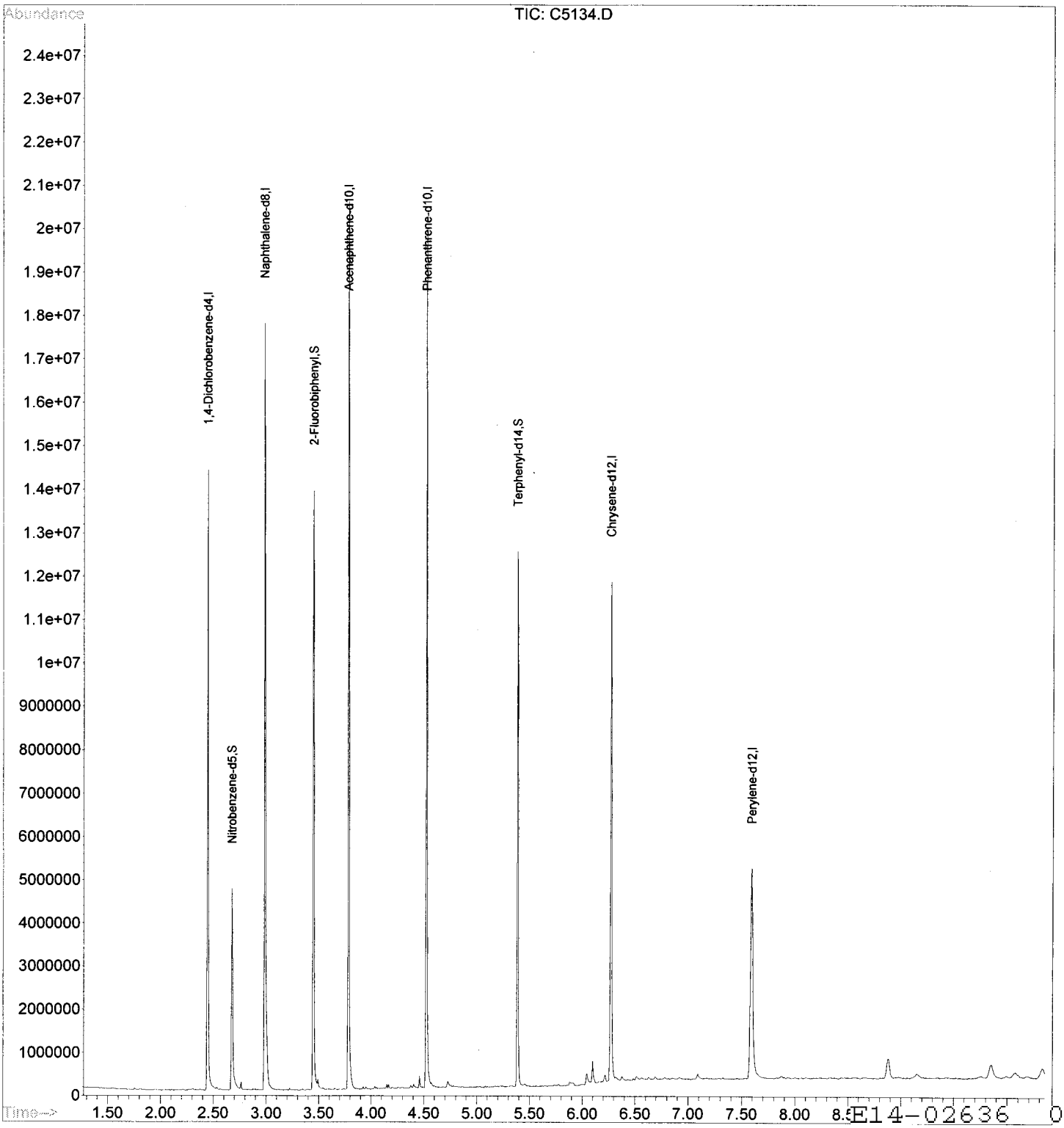
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5134.D
Acq On : 1 Apr 2014 16:47
Operator : EDM
Sample : B-483_(6,E14-02636-026,S,15.13g,34.2,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 02 09:29:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0155

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5135.D
Acq On : 1 Apr 2014 17:03
Operator : EDM
Sample : B-483_(8,E14-02636-027,S,15.41g,46.1,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 02 09:33:11 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1582294	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6160966	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3106871	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	4162029	40.00	UG	-0.04
82) Chrysene-d12	6.28	240	3101253	40.00	UG	-0.05
92) Perylene-d12	7.60	264	2378743	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1681536	30.82	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 61.64%			
47) 2-Fluorobiphenyl	3.45	172	3568144m	44.84	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 89.68%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.39	244	3217239	44.84	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery = 89.68%			

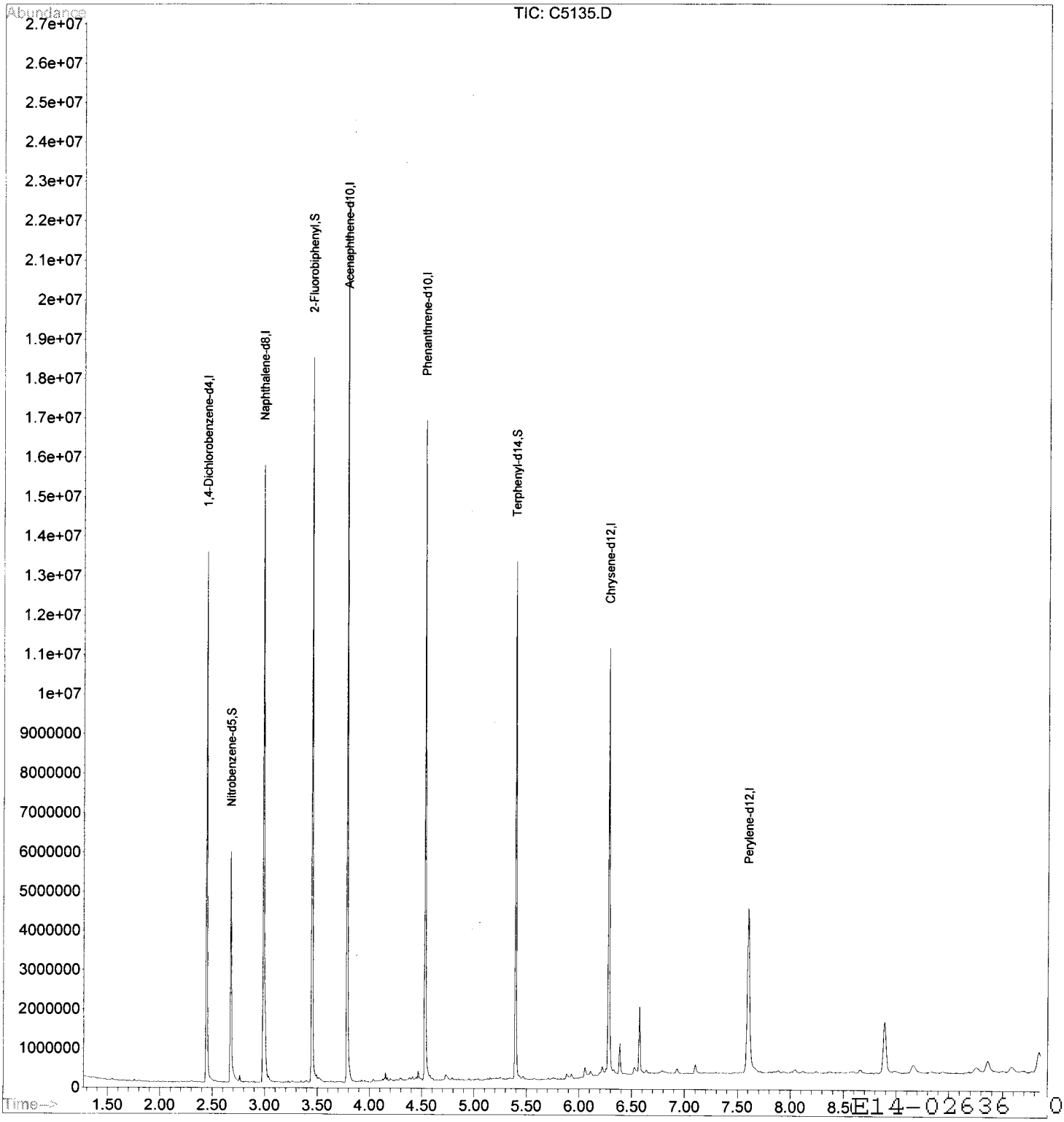
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5135.D
Acq On : 1 Apr 2014 17:03
Operator : EDM
Sample : B-483_(8,E14-02636-027,S,15.41g,46.1,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 02 09:33:11 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0157

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5136.D
Acq On : 1 Apr 2014 17:18
Operator : EDM
Sample : B-483_(1,E14-02636-028,S,15.09g,20.2,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 02 09:34:47 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

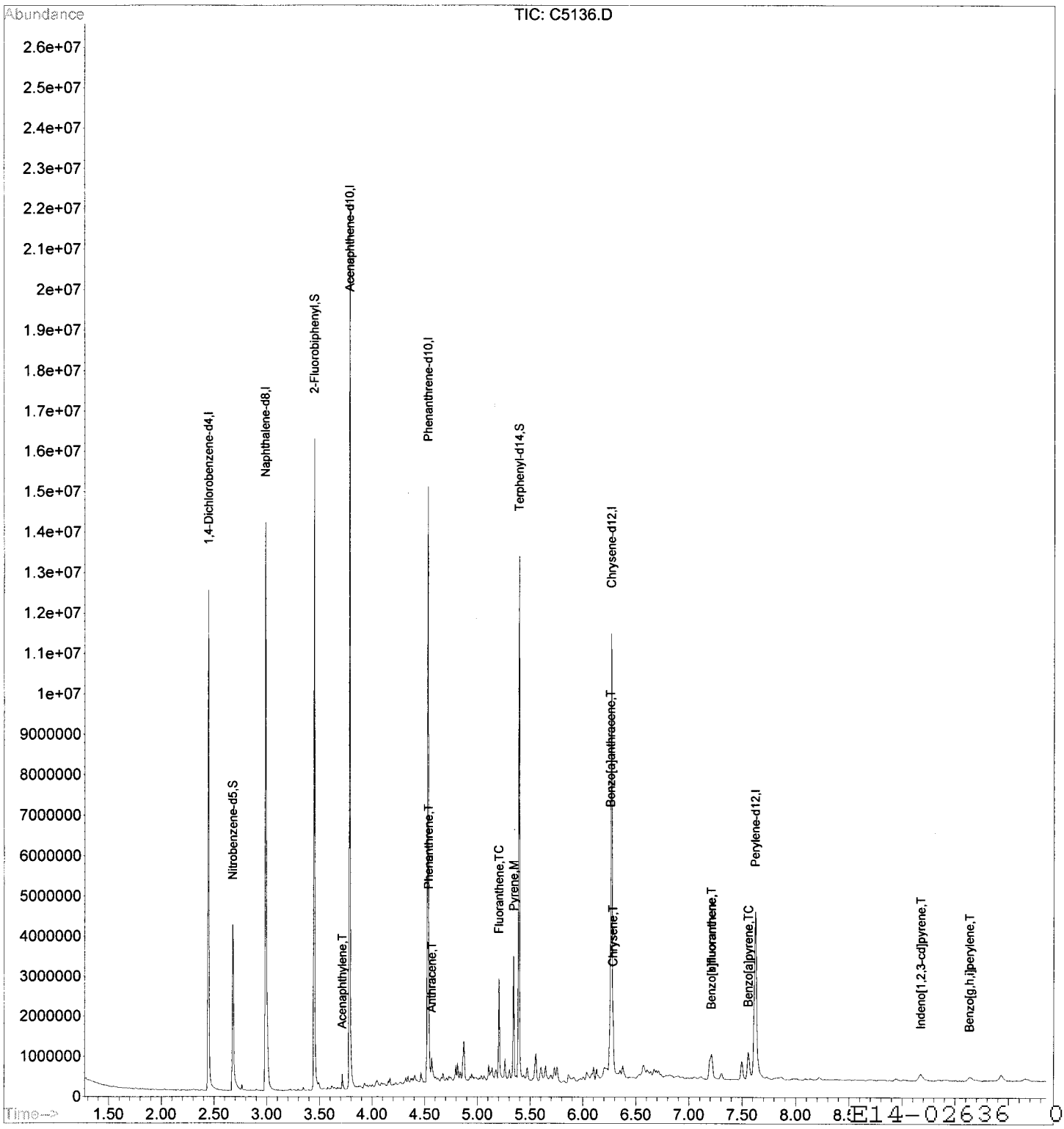
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1423934	40.00	UG		0.00
23) Naphthalene-d8	2.98	136	5761578	40.00	UG		0.00
43) Acenaphthene-d10	3.78	164	2966433	40.00	UG		-0.02
66) Phenanthrene-d10	4.53	188	3918034	40.00	UG		-0.04
82) Chrysene-d12	6.26	240	2970388	40.00	UG		-0.07
92) Perylene-d12	7.62	264	2242960	40.00	UG		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#			
24) Nitrobenzene-d5	2.67	82	1354212	26.54	UG		0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	53.08%			
47) 2-Fluorobiphenyl	3.45	172	3408325m	44.86	UG		0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	89.72%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#			
84) Terphenyl-d14	5.39	244	3156455	45.93	UG		-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery =	91.86%			
Target Compounds							Qvalue
53) Acenaphthylene	3.72	152	119893	1.02	UG		97
75) Phenanthrene	4.54	178	278175	2.84	UG		97
76) Anthracene	4.56	178	156576m	1.75	UG		
79) Fluoranthene	5.20	202	674662	6.94	UG	#	75
83) Pyrene	5.34	202	820859	10.47	UG	#	68
88) Benzo[a]anthracene	6.25	228	308754	4.79	UG	#	95
89) Chrysene	6.28	228	354011m	6.24	UG		
94) Benzo[b]fluoranthene	7.20	252	232334m	3.48	UG		
95) Benzo[k]fluoranthene	7.21	252	259433m	4.06	UG		
96) Benzo[a]pyrene	7.56	252	336950	5.84	UG	#	93
97) Indeno[1,2,3-cd]pyrene	9.17	276	150630	2.31	UG	#	26
99) Benzo[g,h,i]perylene	9.64	276	124172m	2.22	UG		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5136.D
Acq On : 1 Apr 2014 17:18
Operator : EDM
Sample : B-483_(1,E14-02636-028,S,15.09g,20.2,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 02 09:34:47 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5137.D
Acq On : 1 Apr 2014 17:34
Operator : EDM
Sample : B-484_(6,E14-02636-029,S,15.03g,11.9,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 02 09:35:39 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1620374	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6367010	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3210555	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	4260457	40.00	UG	-0.04
82) Chrysene-d12	6.28	240	3240644	40.00	UG	-0.05
92) Perylene-d12	7.60	264	2459789	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1552223	27.53	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 55.06%			
47) 2-Fluorobiphenyl	3.45	172	3564268m	43.35	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 86.70%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.39	244	3361582	44.83	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery = 89.66%			

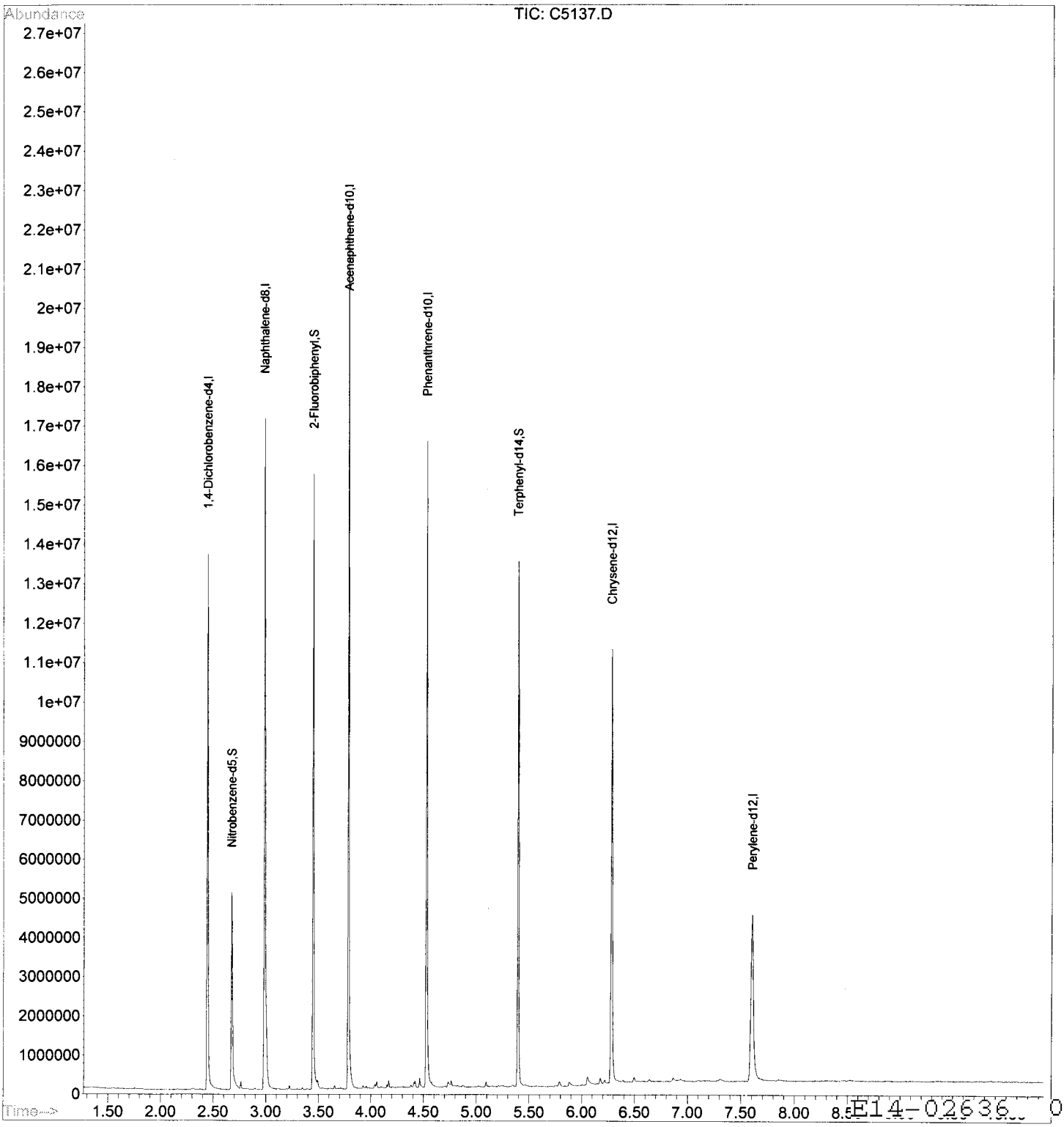
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5137.D
Acq On : 1 Apr 2014 17:34
Operator : EDM
Sample : B-484_(6,E14-02636-029,S,15.03g,11.9,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 02 09:35:39 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0161

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5138.D
Acq On : 1 Apr 2014 17:49
Operator : EDM
Sample : B-484_(9,E14-02636-030,S,15.21g,13.6,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 02 09:36:32 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1480931	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5998589	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3164682	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	4268181	40.00	UG	-0.04
82) Chrysene-d12	6.28	240	3282539	40.00	UG	-0.05
92) Perylene-d12	7.60	264	2464564	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1566536	29.48	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 58.96%			
47) 2-Fluorobiphenyl	3.45	172	3498670m	43.17	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 86.34%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.39	244	3405908	44.84	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery = 89.68%			

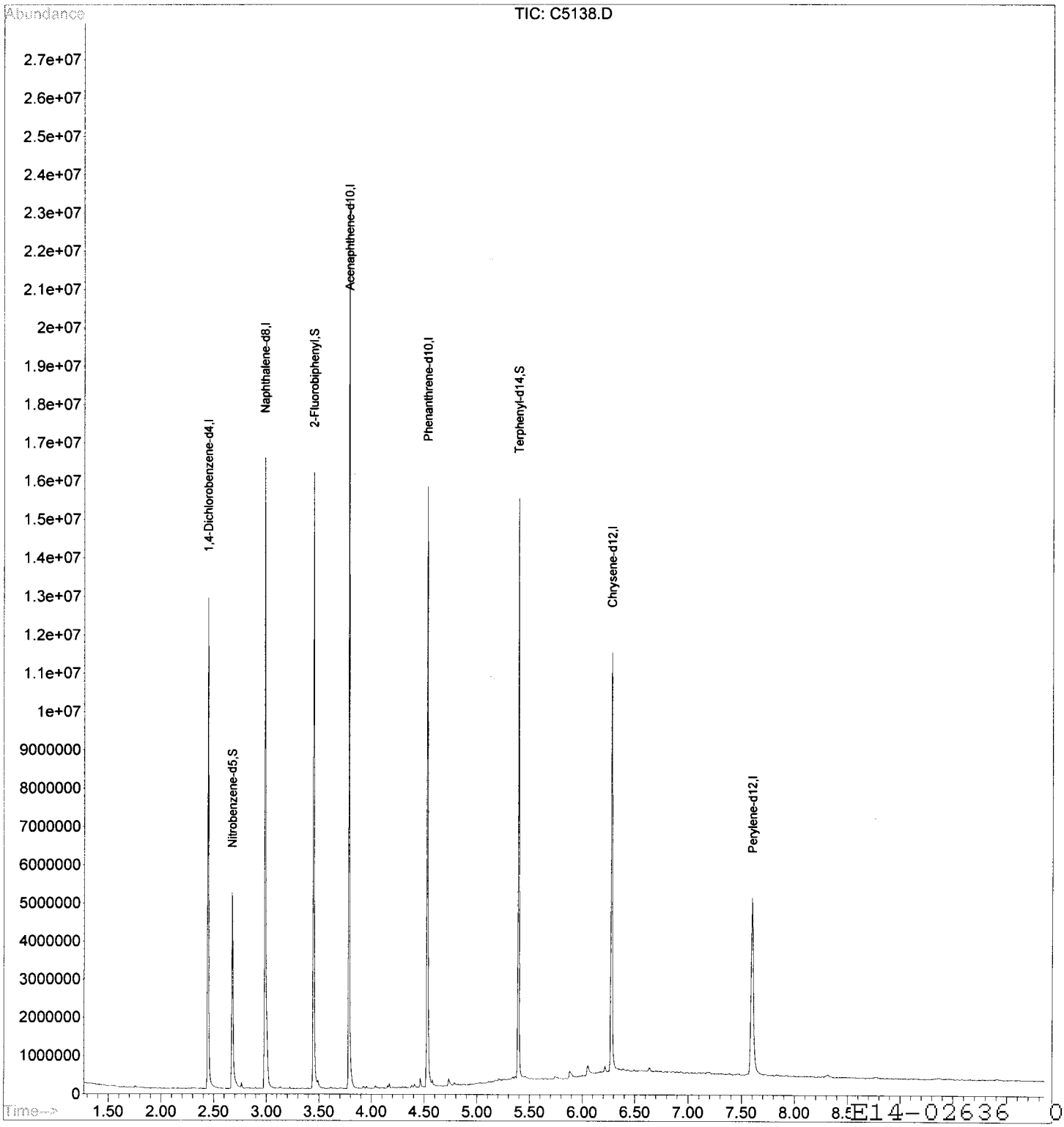
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5138.D
Acq On : 1 Apr 2014 17:49
Operator : EDM
Sample : B-484_(9,E14-02636-030,S,15.21g,13.6,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 02 09:36:32 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5139.D
Acq On : 1 Apr 2014 18:05
Operator : EDM
Sample : B-484_(1,E14-02636-031,S,15.12g,17.6,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 02 09:37:34 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1691829	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6611878	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3496873	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	4576088	40.00	UG	-0.04
82) Chrysene-d12	6.28	240	3591542	40.00	UG	-0.05
92) Perylene-d12	7.60	264	2706118	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1589780	27.15	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 54.30%			
47) 2-Fluorobiphenyl	3.45	172	4045561	45.17	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 90.34%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.39	244	3358796	40.42	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery = 80.84%			

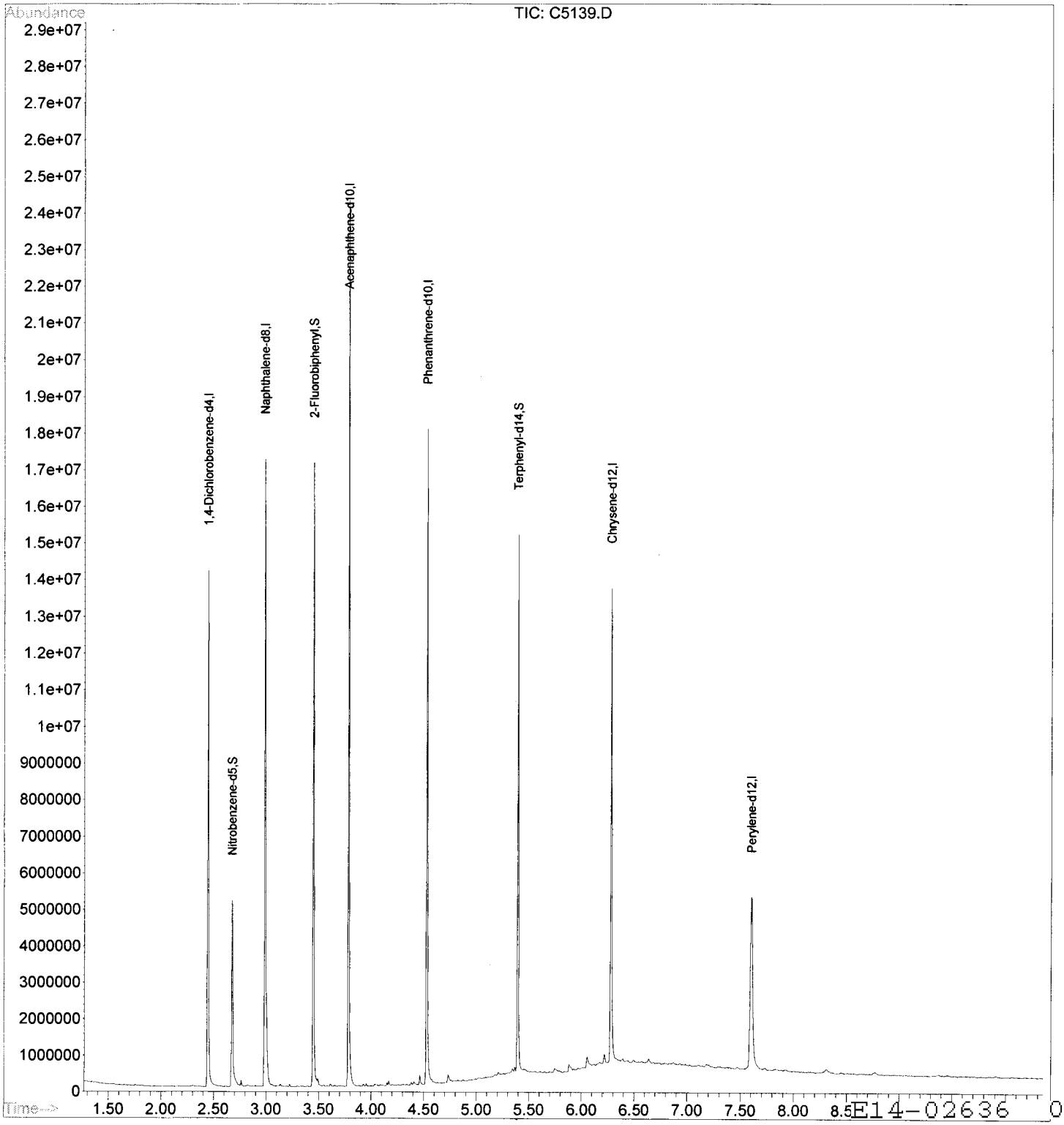
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5139.D
Acq On : 1 Apr 2014 18:05
Operator : EDM
Sample : B-484_(1,E14-02636-031,S,15.12g,17.6,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 02 09:37:34 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0165

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5140.D
Acq On : 1 Apr 2014 18:20
Operator : EDM
Sample : B-485_(4,E14-02636-032,S,15.00g,18.3,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 02 09:38:44 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1744463	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6536206	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3359254	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	4366530	40.00	UG	-0.04
82) Chrysene-d12	6.27	240	3411215m	40.00	UG	-0.06
92) Perylene-d12	7.62	264	2575015m	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1644756	28.41	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 56.82%			
47) 2-Fluorobiphenyl	3.45	172	3848076m	44.73	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 89.46%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.40	244	3220454m	40.80	UG	-0.06
Spiked Amount 50.000	Range 15 - 122		Recovery = 81.60%			

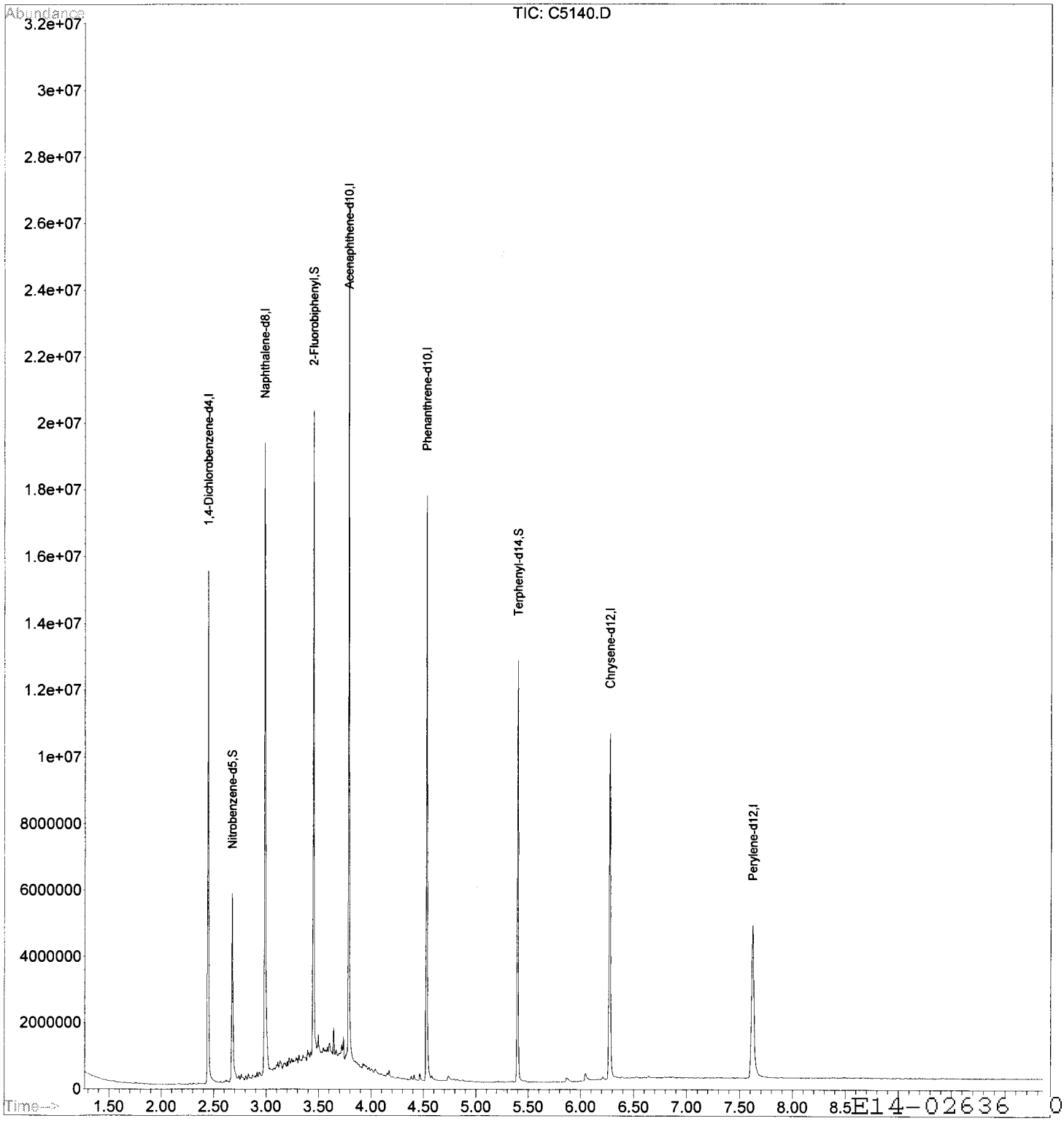
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5140.D
Acq On : 1 Apr 2014 18:20
Operator : EDM
Sample : B-485_(4,E14-02636-032,S,15.00g,18.3,0.5
Misc : 140331-06,03/31/14,03/28/14,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 02 09:38:44 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0167

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0663.D
Acq On : 2 Apr 2014 12:09
Operator : JC
Sample : B-485_(5,E14-02636-033,S,15.32g,14.1,0.5
Misc : 140401-03,04/01/14,03/28/14,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 03 06:09:42 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:42:00 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.358	152	194428	40.00	UG	0.00
23) Naphthalene-d8	4.118	136	715395	40.00	UG	0.00
43) Acenaphthene-d10	5.188	164	417466	40.00	UG	0.00
66) Phenanthrene-d10	6.134	188	780101	40.00	UG	-0.01
82) Chrysene-d12	7.680	240	427863	40.00	UG	-0.01
92) Perylene-d12	8.926	264	300953	40.00	UG	-0.02

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.690	82	276796	36.94	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 73.88%			
47) 2-Fluorobiphenyl	4.765	172	389478	30.94	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 61.88%			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	6.995	244	402834	46.79	UG	-0.01
Spiked Amount 50.000	Range 15 - 122		Recovery = 93.58%			

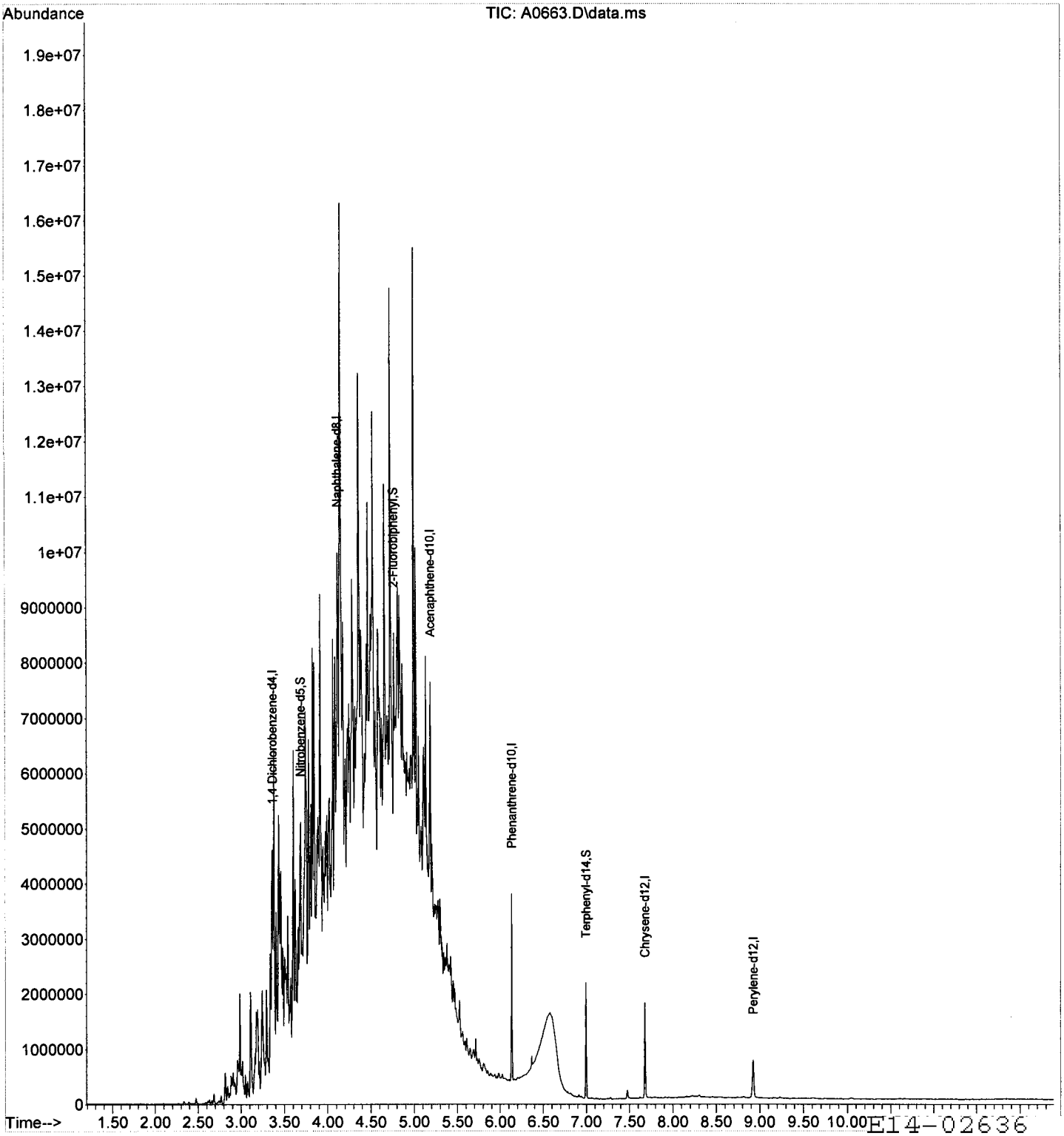
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0663.D
Acq On : 2 Apr 2014 12:09
Operator : JC
Sample : B-485_(5,E14-02636-033,S,15.32g,14.1,0.5
Misc : 140401-03,04/01/14,03/28/14,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 03 06:09:42 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:42:00 2014
Response via : Initial Calibration



E14-02636 0169

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0664.D
Acq On : 2 Apr 2014 12:25
Operator : JC
Sample : B-485_(1,E14-02636-034,S,15.11g,34.6,0.5
Misc : 140401-03,04/01/14,03/28/14,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 02 15:39:02 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:42:00 2014
Response via : Initial Calibration

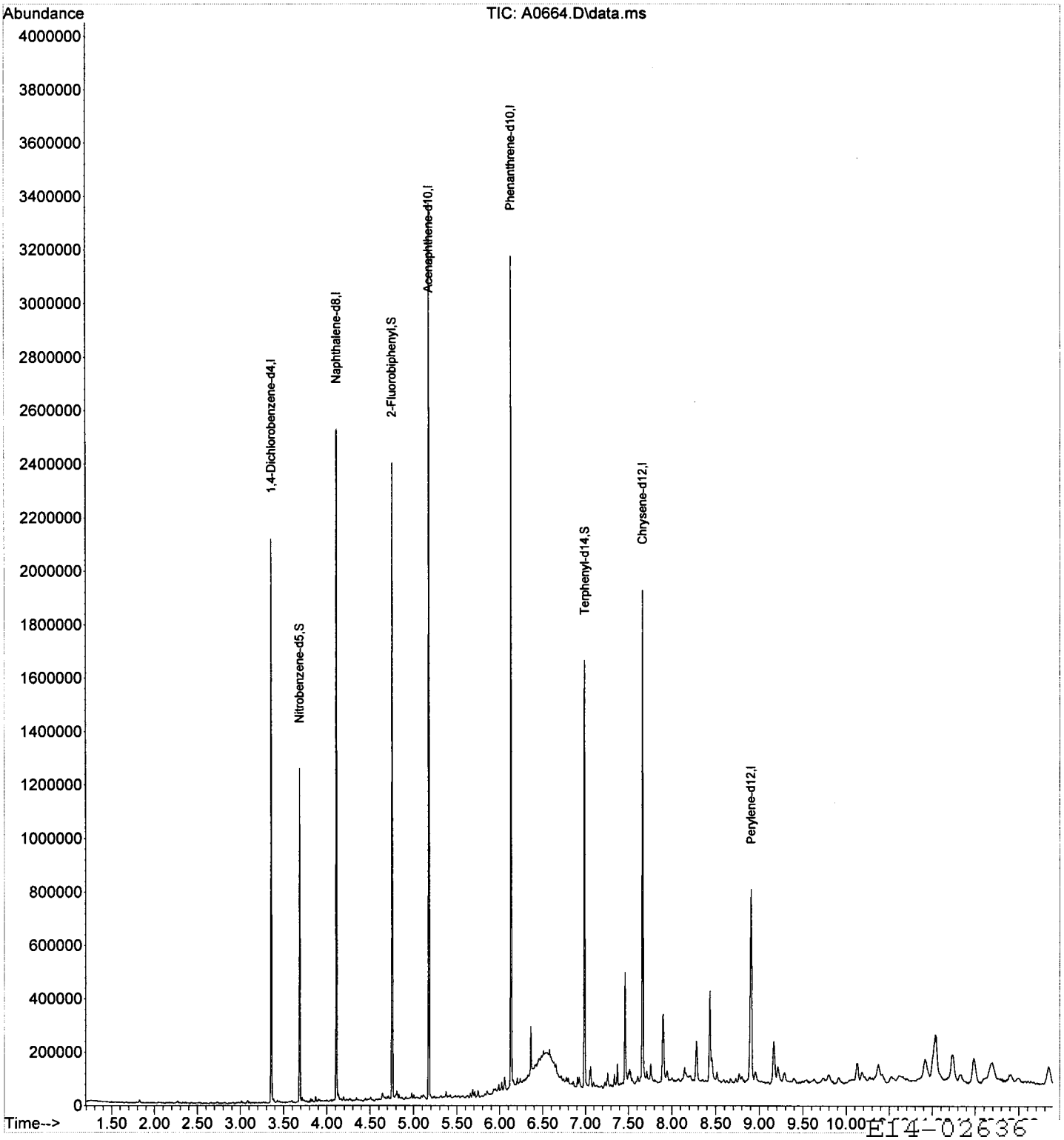
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.358	152	188403	40.00	UG	0.00
23) Naphthalene-d8	4.113	136	809875	40.00	UG	0.00
43) Acenaphthene-d10	5.177	164	472325	40.00	UG	0.00
66) Phenanthrene-d10	6.129	188	780569	40.00	UG	-0.02
82) Chrysene-d12	7.664	240	423431	40.00	UG	-0.03
92) Perylene-d12	8.905	264	292423m	40.00	UG	-0.04
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.685	82	204176	24.07	UG	-0.01
Spiked Amount 50.000	Range 24 - 91		Recovery =	48.14%		
47) 2-Fluorobiphenyl	4.754	172	411773	28.91	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	57.82%		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	6.990	244	374536	43.96	UG	-0.02
Spiked Amount 50.000	Range 15 - 122		Recovery =	87.92%		
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0664.D
Acq On : 2 Apr 2014 12:25
Operator : JC
Sample : B-485_(1,E14-02636-034,S,15.11g,34.6,0.5
Misc : 140401-03,04/01/14,03/28/14,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 02 15:39:02 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:42:00 2014
Response via : Initial Calibration



E14-02636 0171

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-02-14\
Data File : B7841.D
Acq On : 3 Apr 2014 3:56
Operator : DANA
Sample : FIELD_BL,E14-02636-035,A,1000ml,100,1
Misc : 140401-02,04/01/14,03/28/14,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Apr 03 08:54:37 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Apr 01 12:39:44 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.75	152	106502	40.00	UG	-0.02
23) Naphthalene-d8	4.52	136	342393	40.00	UG	-0.02
43) Acenaphthene-d10	5.57	164	207435	40.00	UG	-0.02
66) Phenanthrene-d10	6.47	188	266170	40.00	UG	-0.02
82) Chrysene-d12	8.07	240	216712	40.00	UG	-0.07
92) Perylene-d12	9.48	264	124274	40.00	UG	-0.09
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	4.09	82	166308	43.73	UG	-0.02
Spiked Amount 50.000	Range 27 - 102		Recovery = 87.46%			
47) 2-Fluorobiphenyl	5.14	172	264463m	49.13	UG	-0.01
Spiked Amount 50.000	Range 26 - 101		Recovery = 98.26%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.36	244	274307m	59.05	UG	-0.04
Spiked Amount 50.000	Range 23 - 124		Recovery = 118.10%			

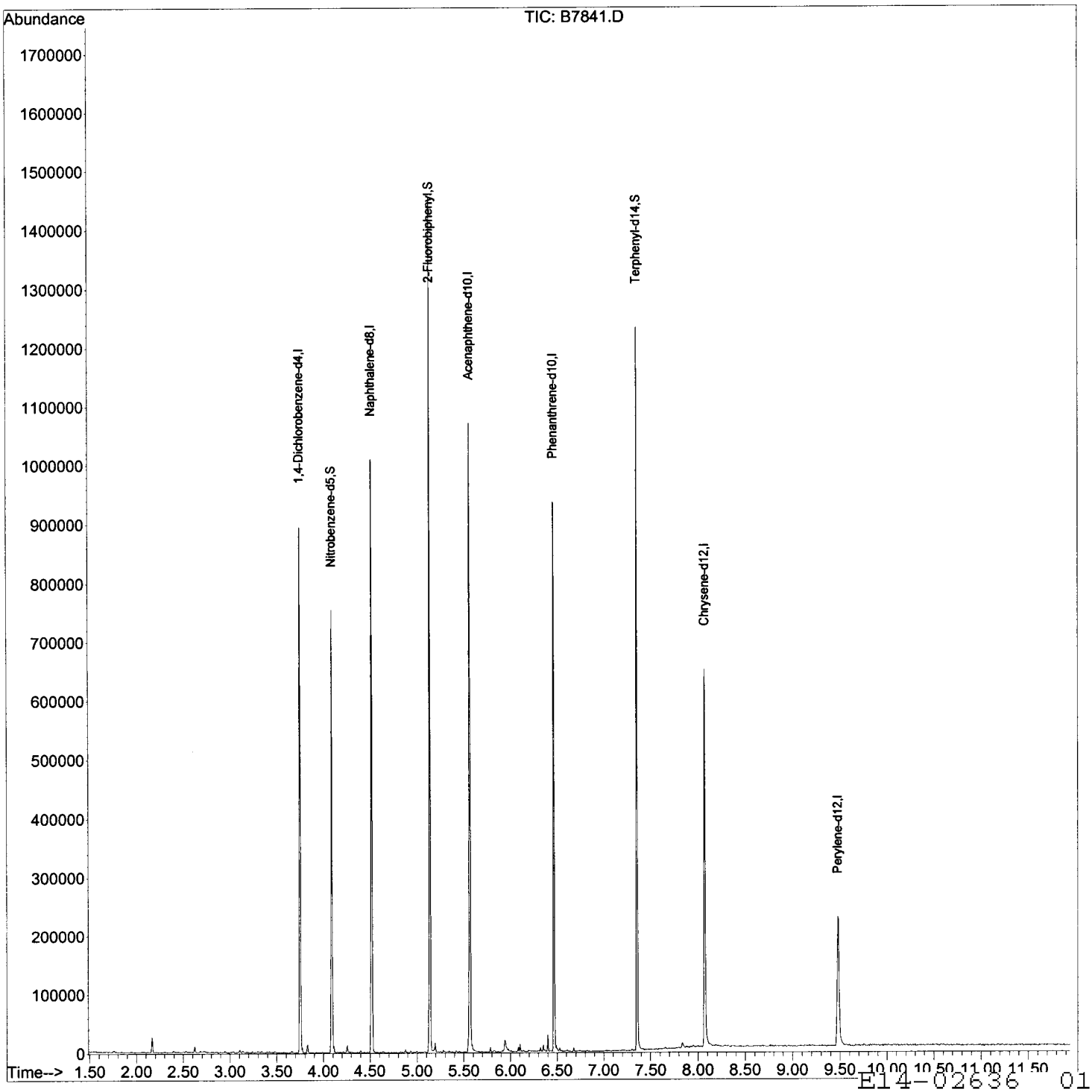
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-02-14\
Data File : B7841.D
Acq On : 3 Apr 2014 3:56
Operator : DANA
Sample : FIELD_BL,E14-02636-035,A,1000ml,100,1
Misc : 140401-02,04/01/14,03/28/14,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Apr 03 08:54:37 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Apr 01 12:39:44 2014
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140331-05
Client ID: .
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5141.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		0.033	0.020
Pyridine	ND		0.033	0.020
Benzaldehyde	ND		0.033	0.020
Phenol	ND		0.033	0.020
Aniline	ND		0.033	0.023
Bis(2-chloroethyl) ether	ND		0.033	0.020
2-Chlorophenol	ND		0.033	0.031
1,3-Dichlorobenzene	ND		0.033	0.020
1,4-Dichlorobenzene	ND		0.033	0.029
Benzyl alcohol	ND		0.033	0.027
1,2-Dichlorobenzene	ND		0.033	0.029
2-Methylphenol	ND		0.033	0.025
Bis(2-chloroisopropyl) ether	ND		0.033	0.022
4-Methylphenol **	ND		0.033	0.024
N-Nitrosodi-n-propylamine	ND		0.033	0.030
Acetophenone	ND		0.033	0.029
3-Methylphenol	ND		0.033	0.024
Hexachloroethane	ND		0.033	0.029
Nitrobenzene	ND		0.033	0.022
Isophorone	ND		0.033	0.033
2-Nitrophenol	ND		0.033	0.020
2,4-Dimethylphenol	ND		0.033	0.020
Bis(2-chloroethoxy) methane	ND		0.033	0.028
Benzoic acid	ND		0.033	0.025
2,4-Dimethylaniline	ND		0.033	0.020
2,4-Dichlorophenol	ND		0.033	0.025
1,2,4-Trichlorobenzene	ND		0.033	0.020
Naphthalene	ND		0.033	0.020
4-Chloroaniline	ND		0.033	0.020
4-Aminotoluene	ND		0.033	0.020
Hexachlorobutadiene	ND		0.033	0.026
Caprolactam	ND		0.033	0.020
2-Aminotoluene	ND		0.033	0.020
4-Chloro-3-methylphenol	ND		0.033	0.021
2-Methylnaphthalene	ND		0.033	0.025
Hexachlorocyclopentadiene	ND		0.033	0.020
2,4,6-Trichlorophenol	ND		0.033	0.020
2,4,5-Trichlorophenol	ND		0.033	0.020
1,1'-Biphenyl	ND		0.033	0.020
2-Chloronaphthalene	ND		0.033	0.020
2-Nitroaniline	ND		0.033	0.020
Dimethyl phthalate	ND		0.033	0.022

E14-02636 0174

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140331-05
Client ID: .
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5141.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		0.033	0.020
Acenaphthylene	ND		0.033	0.020
3-Nitroaniline	ND		0.033	0.025
Acenaphthene	ND		0.033	0.031
2,4-Dinitrophenol	ND		0.033	0.020
4-Nitrophenol	ND		0.033	0.031
2,4-Dinitrotoluene	ND		0.033	0.020
Dibenzofuran	ND		0.033	0.027
Diethyl phthalate	ND		0.033	0.020
Fluorene	ND		0.033	0.020
4-Chlorophenyl phenyl ether	ND		0.033	0.020
4-Nitroaniline	ND		0.033	0.020
1,2,4,5-Tetrachlorobenzene	ND		0.033	0.020
2,3,4,6-Tetrachlorophenol	ND		0.033	0.020
4,6-Dinitro-2-methylphenol	ND		0.033	0.020
N-Nitrosodiphenylamine	ND		0.033	0.020
1,2-Diphenylhydrazine	ND		0.033	0.020
4-Bromophenyl phenyl ether	ND		0.033	0.020
Hexachlorobenzene	ND		0.033	0.020
Atrazine	ND		0.033	0.020
Pentachlorophenol	ND		0.033	0.020
Phenanthrene	ND		0.033	0.020
Anthracene	ND		0.033	0.020
Carbazole	ND		0.033	0.020
Di-n-butyl phthalate	ND		0.033	0.020
Fluoranthene	ND		0.033	0.020
Benzidine	ND		0.033	0.020
Pyrene	ND		0.033	0.020
3,3'-Dimethylbenzidine	ND		0.033	0.020
Butyl benzyl phthalate	ND		0.033	0.020
3,3'-Dichlorobenzidine	ND		0.033	0.020
Benzo[a]anthracene	ND		0.033	0.020
Chrysene	ND		0.033	0.020
Bis(2-ethylhexyl) phthalate	ND		0.033	0.020
Di-n-octyl phthalate	ND		0.033	0.020
Benzo[b]fluoranthene	ND		0.033	0.020
Benzo[k]fluoranthene	ND		0.033	0.020
Benzo[a]pyrene	ND		0.033	0.020
Indeno[1,2,3-cd]pyrene	ND		0.033	0.020
Dibenz[a,h]anthracene	ND		0.033	0.020
Benzo[g,h,i]perylene	ND		0.033	0.020

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKS140331-05
Client ID: .
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5141.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5141.D
Acq On : 1 Apr 2014 18:36
Operator : EDM
Sample : .,BLKS140331-05,S,15.00g,0,0.5
Misc : 140331-05,03/31/14,NA,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 02 09:13:37 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1519332	40.00	UG	0.00
23) Naphthalene-d8	2.99	136	6015689	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	3049842	40.00	UG	-0.01
66) Phenanthrene-d10	4.54	188	4033487	40.00	UG	-0.03
82) Chrysene-d12	6.30	240	3036100	40.00	UG	-0.04
92) Perylene-d12	7.63	264	2306265	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.92	112	4199949	89.58	UG	0.00
Spiked Amount 100.000	Range 25 - 100		Recovery = 89.58%			
6) Phenol-d5	2.27	99	5562805	96.28	UG	0.00
Spiked Amount 100.000	Range 25 - 108		Recovery = 96.28%			
24) Nitrobenzene-d5	2.67	82	1809589	33.96	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 67.92%			
47) 2-Fluorobiphenyl	3.45	172	3393485m	43.45	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 86.90%			
70) 2,4,6-Tribromophenol	4.18	330	1056494	100.70	UG	-0.02
Spiked Amount 100.000	Range 37 - 115		Recovery = 100.70%			
84) Terphenyl-d14	5.42	244	3508248m	49.94	UG	-0.04
Spiked Amount 50.000	Range 15 - 122		Recovery = 99.88%			

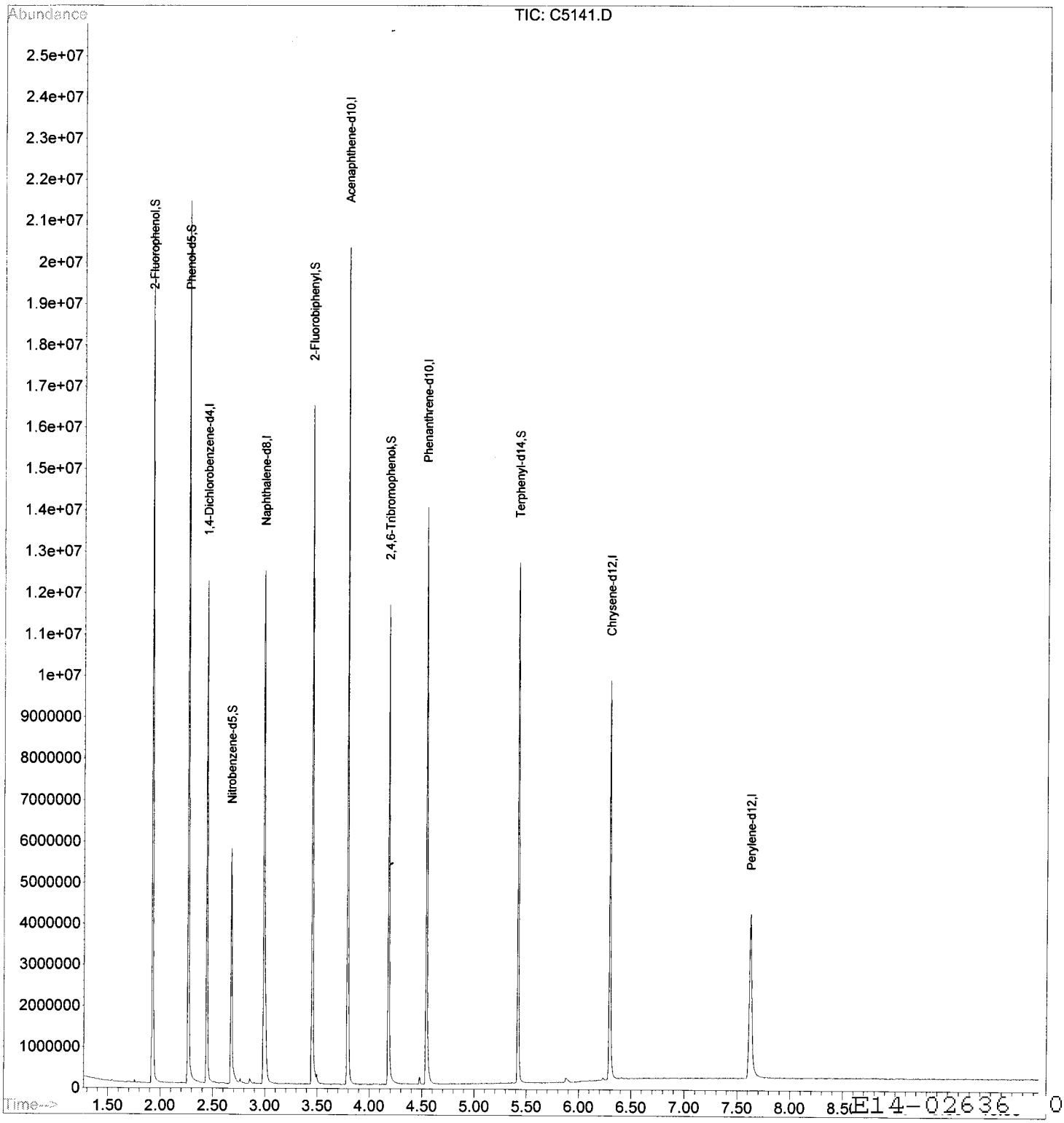
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5141.D
Acq On : 1 Apr 2014 18:36
Operator : EDM
Sample : .,BLKS140331-05,S,15.00g,0,0.5
Misc : 140331-05,03/31/14,NA,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 02 09:13:37 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0178

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5141.D
Acq On : 1 Apr 2014 18:36
Operator : EDM
Sample : .,BLKS140331-05,S,15.00g,0,0.5
Misc : 140331-05,03/31/14,NA,1
ALS Vial : 26 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

CS0514.M Wed Apr 02 09:13:51 2014 RPT1

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140331-06
Client ID: .
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5117.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		0.033	0.020
Pyridine	ND		0.033	0.020
Benzaldehyde	ND		0.033	0.020
Phenol	ND		0.033	0.020
Aniline	ND		0.033	0.023
Bis(2-chloroethyl) ether	ND		0.033	0.020
2-Chlorophenol	ND		0.033	0.031
1,3-Dichlorobenzene	ND		0.033	0.020
1,4-Dichlorobenzene	ND		0.033	0.029
Benzyl alcohol	ND		0.033	0.027
1,2-Dichlorobenzene	ND		0.033	0.029
2-Methylphenol	ND		0.033	0.025
Bis(2-chloroisopropyl) ether	ND		0.033	0.022
4-Methylphenol **	ND		0.033	0.024
N-Nitrosodi-n-propylamine	ND		0.033	0.030
Acetophenone	ND		0.033	0.029
3-Methylphenol	ND		0.033	0.024
Hexachloroethane	ND		0.033	0.029
Nitrobenzene	ND		0.033	0.022
Isophorone	ND		0.033	0.033
2-Nitrophenol	ND		0.033	0.020
2,4-Dimethylphenol	ND		0.033	0.020
Bis(2-chloroethoxy) methane	ND		0.033	0.028
Benzoic acid	ND		0.033	0.025
2,4-Dimethylaniline	ND		0.033	0.020
2,4-Dichlorophenol	ND		0.033	0.025
1,2,4-Trichlorobenzene	ND		0.033	0.020
Naphthalene	ND		0.033	0.020
4-Chloroaniline	ND		0.033	0.020
4-Aminotoluene	ND		0.033	0.020
Hexachlorobutadiene	ND		0.033	0.026
Caprolactam	ND		0.033	0.020
2-Aminotoluene	ND		0.033	0.020
4-Chloro-3-methylphenol	ND		0.033	0.021
2-Methylnaphthalene	ND		0.033	0.025
Hexachlorocyclopentadiene	ND		0.033	0.020
2,4,6-Trichlorophenol	ND		0.033	0.020
2,4,5-Trichlorophenol	ND		0.033	0.020
1,1'-Biphenyl	ND		0.033	0.020
2-Chloronaphthalene	ND		0.033	0.020
2-Nitroaniline	ND		0.033	0.020
Dimethyl phthalate	ND		0.033	0.022

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140331-06
Client ID: .
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5117.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		0.033	0.020
Acenaphthylene	ND		0.033	0.020
3-Nitroaniline	ND		0.033	0.025
Acenaphthene	ND		0.033	0.031
2,4-Dinitrophenol	ND		0.033	0.020
4-Nitrophenol	ND		0.033	0.031
2,4-Dinitrotoluene	ND		0.033	0.020
Dibenzofuran	ND		0.033	0.027
Diethyl phthalate	ND		0.033	0.020
Fluorene	ND		0.033	0.020
4-Chlorophenyl phenyl ether	ND		0.033	0.020
4-Nitroaniline	ND		0.033	0.020
1,2,4,5-Tetrachlorobenzene	ND		0.033	0.020
2,3,4,6-Tetrachlorophenol	ND		0.033	0.020
4,6-Dinitro-2-methylphenol	ND		0.033	0.020
N-Nitrosodiphenylamine	ND		0.033	0.020
1,2-Diphenylhydrazine	ND		0.033	0.020
4-Bromophenyl phenyl ether	ND		0.033	0.020
Hexachlorobenzene	ND		0.033	0.020
Atrazine	ND		0.033	0.020
Pentachlorophenol	ND		0.033	0.020
Phenanthrene	ND		0.033	0.020
Anthracene	ND		0.033	0.020
Carbazole	ND		0.033	0.020
Di-n-butyl phthalate	ND		0.033	0.020
Fluoranthene	ND		0.033	0.020
Benzidine	ND		0.033	0.020
Pyrene	ND		0.033	0.020
3,3'-Dimethylbenzidine	ND		0.033	0.020
Butyl benzyl phthalate	ND		0.033	0.020
3,3'-Dichlorobenzidine	ND		0.033	0.020
Benzo[a]anthracene	ND		0.033	0.020
Chrysene	ND		0.033	0.020
Bis(2-ethylhexyl) phthalate	ND		0.033	0.020
Di-n-octyl phthalate	ND		0.033	0.020
Benzo[b]fluoranthene	ND		0.033	0.020
Benzo[k]fluoranthene	ND		0.033	0.020
Benzo[a]pyrene	ND		0.033	0.020
Indeno[1,2,3-cd]pyrene	ND		0.033	0.020
Dibenz[a,h]anthracene	ND		0.033	0.020
Benzo[g,h,i]perylene	ND		0.033	0.020

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKS140331-06
Client ID: .
Date Received: NA
Date Extracted: 03/31/2014
Date Analyzed: 04/01/2014
Data file: C5117.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5117.D
Acq On : 1 Apr 2014 12:23
Operator : EDM
Sample : .,BLKS140331-06,S,15.00g,0,0.5
Misc : 140331-06,03/31/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 01 12:35:30 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1293694	40.00	UG	0.00
23) Naphthalene-d8	2.99	136	5230361	40.00	UG	0.00
43) Acenaphthene-d10	3.81	164	2868089	40.00	UG	0.01
66) Phenanthrene-d10	4.59	188	4405507	40.00	UG	0.02
82) Chrysene-d12	6.36	240	2888488	40.00	UG	0.03
92) Perylene-d12	7.68	264	1915516	40.00	UG	0.06
System Monitoring Compounds						
4) 2-Fluorophenol	1.93	112	2785957	69.78	UG	0.00
Spiked Amount 100.000	Range 25 - 100		Recovery = 69.78%			
6) Phenol-d5	2.27	99	3956212	80.41	UG	0.00
Spiked Amount 100.000	Range 25 - 108		Recovery = 80.41%			
24) Nitrobenzene-d5	2.67	82	1437608	31.03	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 62.06%			
47) 2-Fluorobiphenyl	3.46	172	3168317m	43.13	UG	0.01
Spiked Amount 50.000	Range 33 - 91		Recovery = 86.26%			
70) 2,4,6-Tribromophenol	4.22	330	993015	86.65	UG	0.02
Spiked Amount 100.000	Range 37 - 115		Recovery = 86.65%			
84) Terphenyl-d14	5.50	244	2991350m	44.76	UG	0.04
Spiked Amount 50.000	Range 15 - 122		Recovery = 89.52%			

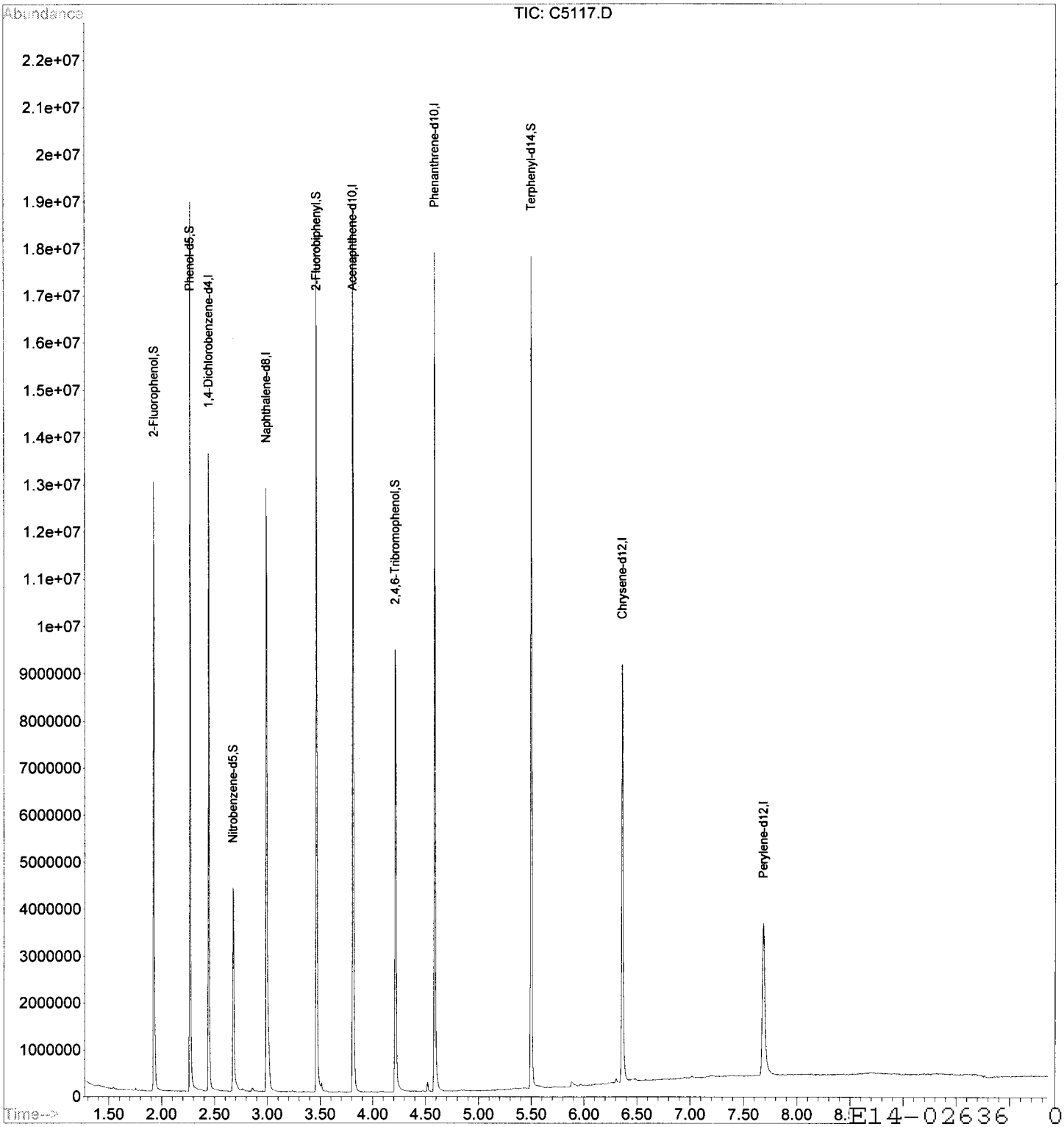
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5117.D
Acq On : 1 Apr 2014 12:23
Operator : EDM
Sample : .,BLKS140331-06,S,15.00g,0,0.5
Misc : 140331-06,03/31/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 01 12:35:30 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



E14-02636 0184

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\04-01-14\
Data File : C5117.D
Acq On : 1 Apr 2014 12:23
Operator : EDM
Sample : .,BLKS140331-06,S,15.00g,0,0.5
Misc : 140331-06,03/31/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

CS0514.M Tue Apr 01 12:35:40 2014 RPT1

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140401-03
Client ID: .
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0653.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		0.033	0.020
Pyridine	ND		0.033	0.020
Benzaldehyde	ND		0.033	0.020
Phenol	ND		0.033	0.020
Aniline	ND		0.033	0.023
Bis(2-chloroethyl) ether	ND		0.033	0.020
2-Chlorophenol	ND		0.033	0.031
1,3-Dichlorobenzene	ND		0.033	0.020
1,4-Dichlorobenzene	ND		0.033	0.029
Benzyl alcohol	ND		0.033	0.027
1,2-Dichlorobenzene	ND		0.033	0.029
2-Methylphenol	ND		0.033	0.025
Bis(2-chloroisopropyl) ether	ND		0.033	0.022
4-Methylphenol **	ND		0.033	0.024
N-Nitrosodi-n-propylamine	ND		0.033	0.030
Acetophenone	ND		0.033	0.029
3-Methylphenol	ND		0.033	0.024
Hexachloroethane	ND		0.033	0.029
Nitrobenzene	ND		0.033	0.022
Isophorone	ND		0.033	0.033
2-Nitrophenol	ND		0.033	0.020
2,4-Dimethylphenol	ND		0.033	0.020
Bis(2-chloroethoxy) methane	ND		0.033	0.028
Benzoic acid	ND		0.033	0.025
2,4-Dimethylaniline	ND		0.033	0.020
2,4-Dichlorophenol	ND		0.033	0.025
1,2,4-Trichlorobenzene	ND		0.033	0.020
Naphthalene	ND		0.033	0.020
4-Chloroaniline	ND		0.033	0.020
4-Aminotoluene	ND		0.033	0.020
Hexachlorobutadiene	ND		0.033	0.026
Caprolactam	ND		0.033	0.020
2-Aminotoluene	ND		0.033	0.020
4-Chloro-3-methylphenol	ND		0.033	0.021
2-Methylnaphthalene	ND		0.033	0.025
Hexachlorocyclopentadiene	ND		0.033	0.020
2,4,6-Trichlorophenol	ND		0.033	0.020
2,4,5-Trichlorophenol	ND		0.033	0.020
1,1'-Biphenyl	ND		0.033	0.020
2-Chloronaphthalene	ND		0.033	0.020
2-Nitroaniline	ND		0.033	0.020
Dimethyl phthalate	ND		0.033	0.022

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140401-03
Client ID: .
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0653.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		0.033	0.020
Acenaphthylene	ND		0.033	0.020
3-Nitroaniline	ND		0.033	0.025
Acenaphthene	ND		0.033	0.031
2,4-Dinitrophenol	ND		0.033	0.020
4-Nitrophenol	ND		0.033	0.031
2,4-Dinitrotoluene	ND		0.033	0.020
Dibenzofuran	ND		0.033	0.027
Diethyl phthalate	ND		0.033	0.020
Fluorene	ND		0.033	0.020
4-Chlorophenyl phenyl ether	ND		0.033	0.020
4-Nitroaniline	ND		0.033	0.020
1,2,4,5-Tetrachlorobenzene	ND		0.033	0.020
2,3,4,6-Tetrachlorophenol	ND		0.033	0.020
4,6-Dinitro-2-methylphenol	ND		0.033	0.020
N-Nitrosodiphenylamine	ND		0.033	0.020
1,2-Diphenylhydrazine	ND		0.033	0.020
4-Bromophenyl phenyl ether	ND		0.033	0.020
Hexachlorobenzene	ND		0.033	0.020
Atrazine	ND		0.033	0.020
Pentachlorophenol	ND		0.033	0.020
Phenanthrene	ND		0.033	0.020
Anthracene	ND		0.033	0.020
Carbazole	ND		0.033	0.020
Di-n-butyl phthalate	ND		0.033	0.020
Fluoranthene	ND		0.033	0.020
Benzidine	ND		0.033	0.020
Pyrene	ND		0.033	0.020
3,3'-Dimethylbenzidine	ND		0.033	0.020
Butyl benzyl phthalate	ND		0.033	0.020
3,3'-Dichlorobenzidine	ND		0.033	0.020
Benzo[a]anthracene	ND		0.033	0.020
Chrysene	ND		0.033	0.020
Bis(2-ethylhexyl) phthalate	ND		0.033	0.020
Di-n-octyl phthalate	ND		0.033	0.020
Benzo[b]fluoranthene	ND		0.033	0.020
Benzo[k]fluoranthene	ND		0.033	0.020
Benzo[a]pyrene	ND		0.033	0.020
Indeno[1,2,3-cd]pyrene	ND		0.033	0.020
Dibenz[a,h]anthracene	ND		0.033	0.020
Benzo[g,h,i]perylene	ND		0.033	0.020

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKS140401-03
Client ID: .
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: A0653.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0653.D
Acq On : 2 Apr 2014 9:25
Operator : JC
Sample : .,BLKS140401-03,S,15.00g,0,0.5
Misc : 140401-03,04/01/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 10:29:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:42:00 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.358	152	192637	40.00	UG	0.00
23) Naphthalene-d8	4.112	136	850703	40.00	UG	0.00
43) Acenaphthene-d10	5.177	164	519513	40.00	UG	0.00
66) Phenanthrene-d10	6.129	188	896543	40.00	UG	-0.02
82) Chrysene-d12	7.664	240	632510	40.00	UG	-0.03
92) Perylene-d12	8.905	264	388495	40.00	UG	-0.04
System Monitoring Compounds						
4) 2-Fluorophenol	2.577	112	300820	43.90	UG	0.00
Spiked Amount 100.000	Range 25 - 100		Recovery = 43.90%			
6) Phenol-d5	3.134	99	428095	46.88	UG	-0.01
Spiked Amount 100.000	Range 25 - 108		Recovery = 46.88%			
24) Nitrobenzene-d5	3.685	82	255219	28.64	UG	-0.01
Spiked Amount 50.000	Range 24 - 91		Recovery = 57.28%			
47) 2-Fluorobiphenyl	4.754	172	492625	31.45	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 62.90%			
70) 2,4,6-Tribromophenol	5.669	330	104458	41.99	UG	-0.02
Spiked Amount 100.000	Range 37 - 115		Recovery = 41.99%			
84) Terphenyl-d14	6.985	244	476483	37.44	UG	-0.02
Spiked Amount 50.000	Range 15 - 122		Recovery = 74.88%			

Target Compounds	Qvalue

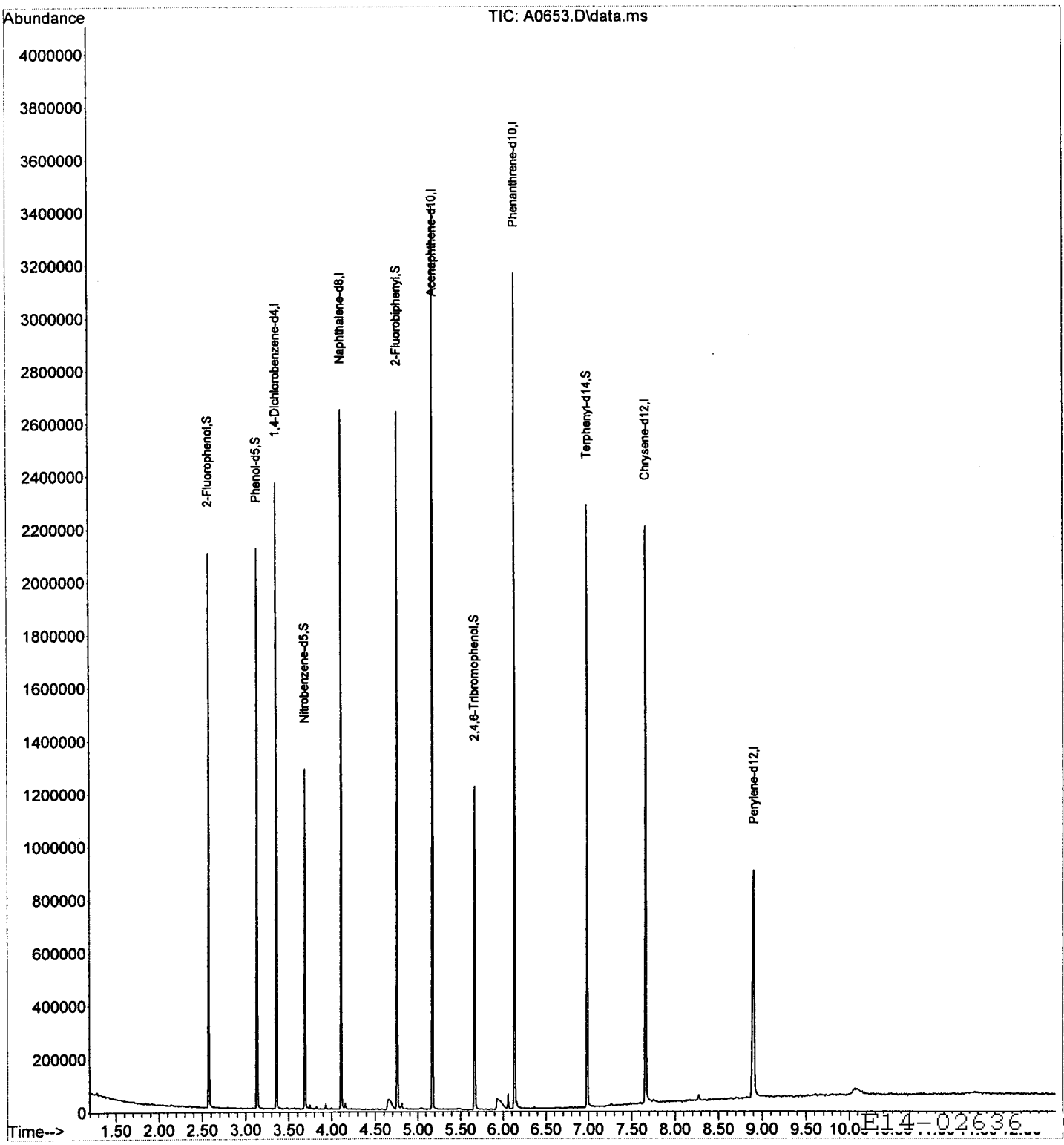
(#) = qualifier out of range (m) = manual integration (+) = signals summed

E14-02636 0189

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0653.D
Acq On : 2 Apr 2014 9:25
Operator : JC
Sample : .,BLKS140401-03,S,15.00g,0,0.5
Misc : 140401-03,04/01/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 10:29:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 31 11:42:00 2014
Response via : Initial Calibration



Library Search Compound Report

Data Path : C:\msdchem\1\DATA\04-02-14\
Data File : A0653.D
Acq On : 2 Apr 2014 9:25
Operator : JC
Sample : .,BLKS140401-03,S,15.00g,0,0.5
Misc : 140401-03,04/01/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\AS0414.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\Database\NIST05a.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

AS0414.M Wed Apr 02 15:56:22 2014 MSD_A

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA140401-02
Client ID: .
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: B7821.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		1.00	0.403
Pyridine	ND		1.00	0.236
Benzaldehyde	ND		1.00	0.295
Phenol	ND		1.00	0.450
Aniline	ND		1.00	0.236
Bis(2-chloroethyl) ether	ND		1.00	0.428
2-Chlorophenol	ND		1.00	0.284
1,3-Dichlorobenzene	ND		1.00	0.366
1,4-Dichlorobenzene	ND		1.00	0.427
Benzyl alcohol	ND		1.00	0.389
1,2-Dichlorobenzene	ND		1.00	0.306
2-Methylphenol	ND		1.00	0.425
Bis(2-chloroisopropyl) ether	ND		1.00	0.438
4-Methylphenol **	ND		1.00	0.450
N-Nitrosodi-n-propylamine	ND		1.00	0.331
Acetophenone	ND		1.00	0.460
3-Methylphenol	ND		1.00	0.450
Hexachloroethane	ND		1.00	0.372
Nitrobenzene	ND		1.00	0.265
Isophorone	ND		1.00	0.263
2-Nitrophenol	ND		1.00	0.311
2,4-Dimethylphenol	ND		1.00	0.323
Bis(2-chloroethoxy) methane	ND		1.00	0.259
Benzoic acid	ND		1.00	0.263
2,4-Dimethylaniline	ND		1.00	0.217
2,4-Dichlorophenol	ND		1.00	0.457
1,2,4-Trichlorobenzene	ND		1.00	0.319
Naphthalene	ND		1.00	0.273
4-Chloroaniline	ND		1.00	0.305
4-Aminotoluene	ND		1.00	0.215
Hexachlorobutadiene	ND		1.00	0.378
Caprolactam	ND		1.00	0.513
2-Aminotoluene	ND		1.00	0.249
4-Chloro-3-methylphenol	ND		1.00	0.256
2-Methylnaphthalene	ND		1.00	0.433
Hexachlorocyclopentadiene	ND		1.00	0.223
2,4,6-Trichlorophenol	ND		1.00	0.223
2,4,5-Trichlorophenol	ND		1.00	0.218
1,1'-Biphenyl	ND		1.00	0.268
2-Chloronaphthalene	ND		1.00	0.223
2-Nitroaniline	ND		1.00	0.329
Dimethyl phthalate	ND		1.00	0.329

E14-02636 0192

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA140401-02
Client ID: .
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: B7821.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		1.00	0.391
Acenaphthylene	ND		1.00	0.316
3-Nitroaniline	ND		1.00	0.237
Acenaphthene	ND		1.00	0.261
2,4-Dinitrophenol	ND		1.00	0.318
4-Nitrophenol	ND		1.00	0.582
2,4-Dinitrotoluene	ND		1.00	0.230
Dibenzofuran	ND		1.00	0.275
Diethyl phthalate	ND		1.00	0.449
Fluorene	ND		1.00	0.447
4-Chlorophenyl phenyl ether	ND		1.00	0.476
4-Nitroaniline	ND		1.00	0.331
1,2,4,5-Tetrachlorobenzene	ND		1.00	0.218
2,3,4,6-Tetrachlorophenol	ND		1.00	0.224
4,6-Dinitro-2-methylphenol	ND		1.00	0.280
N-Nitrosodiphenylamine	ND		1.00	0.310
1,2-Diphenylhydrazine	ND		1.00	0.366
4-Bromophenyl phenyl ether	ND		1.00	0.481
Hexachlorobenzene	ND		1.00	0.357
Atrazine	ND		1.00	0.418
Pentachlorophenol	ND		1.00	0.223
Phenanthrene	ND		1.00	0.372
Anthracene	ND		1.00	0.322
Carbazole	ND		1.00	0.276
Di-n-butyl phthalate	ND		1.00	0.264
Fluoranthene	ND		1.00	0.362
Benzidine	ND		1.00	0.265
Pyrene	ND		1.00	0.308
3,3'-Dimethylbenzidine	ND		1.00	0.233
Butyl benzyl phthalate	ND		1.00	0.304
3,3'-Dichlorobenzidine	ND		1.00	0.285
Benzo[a]anthracene	ND		1.00	0.243
Chrysene	ND		1.00	0.243
Bis(2-ethylhexyl) phthalate	ND		1.00	0.304
Di-n-octyl phthalate	ND		1.00	0.507
Benzo[b]fluoranthene	ND		1.00	0.716
Benzo[k]fluoranthene	ND		1.00	0.683
Benzo[a]pyrene	ND		1.00	0.381
Indeno[1,2,3-cd]pyrene	ND		1.00	0.509
Dibenz[a,h]anthracene	ND		1.00	0.514
Benzo[g,h,i]perylene	ND		1.00	0.468

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B — Compound detected in Blank
C — Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA140401-02
Client ID: .
Date Received: NA
Date Extracted: 04/01/2014
Date Analyzed: 04/02/2014
Data file: B7821.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-02-14\
Data File : B7821.D
Acq On : 2 Apr 2014 22:20
Operator : DANA
Sample : .,BLKA140401-02,A,1000ml,100,1
Misc : 140401-02,04/01/14,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 03 07:51:11 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Apr 01 12:39:44 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.75	152	105933	40.00	UG	-0.02
23) Naphthalene-d8	4.52	136	381437	40.00	UG	-0.02
43) Acenaphthene-d10	5.57	164	212532	40.00	UG	-0.02
66) Phenanthrene-d10	6.47	188	301876	40.00	UG	-0.02
82) Chrysene-d12	8.06	240	255778	40.00	UG	-0.08
92) Perylene-d12	9.47	264	155835	40.00	UG	-0.10
System Monitoring Compounds						
4) 2-Fluorophenol	2.94	112	168547	58.22	UG	-0.01
Spiked Amount 100.000	Range 10 - 100		Recovery = 58.22%			
6) Phenol-d5	3.51	99	233861	61.14	UG	-0.02
Spiked Amount 100.000	Range 10 - 102		Recovery = 61.14%			
24) Nitrobenzene-d5	4.09	82	158596	37.43	UG	-0.02
Spiked Amount 50.000	Range 27 - 102		Recovery = 74.86%			
47) 2-Fluorobiphenyl	5.14	172	262152	47.53	UG	-0.01
Spiked Amount 50.000	Range 26 - 101		Recovery = 95.06%			
70) 2,4,6-Tribromophenol	6.09	330	87661	77.56	UG	-0.02
Spiked Amount 100.000	Range 22 - 115		Recovery = 77.56%			
84) Terphenyl-d14	7.35	244	264279	48.20	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 96.40%			

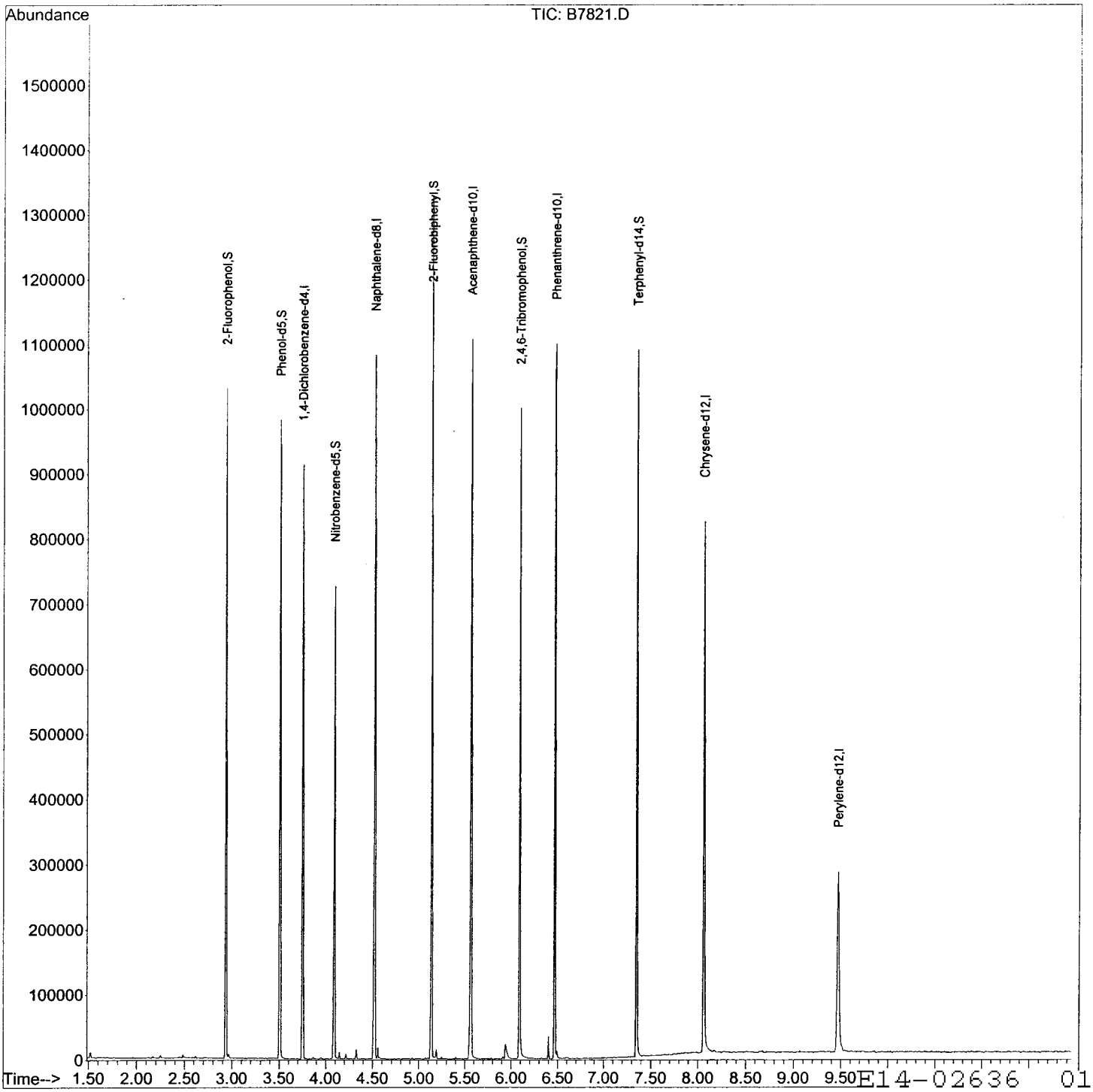
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\04-02-14\
Data File : B7821.D
Acq On : 2 Apr 2014 22:20
Operator : DANA
Sample : .,BLKA140401-02,A,1000ml,100,1
Misc : 140401-02,04/01/14,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 03 07:51:11 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Apr 01 12:39:44 2014
Response via : Initial Calibration



E14-02636 0196

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\04-02-14\
Data File : B7821.D
Acq On : 2 Apr 2014 22:20
Operator : DANA
Sample : .,BLKA140401-02,A,1000ml,100,1
Misc : 140401-02,04/01/14,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\BW0514.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

BW0514.M Thu Apr 03 07:51:16 2014 MSD_B

SAMPLE TRACKING

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO

Company:	GET
Address:	18000 Horizon Way, Suite 200
	Mount Laurel, NJ 08054
Telephone #:	856-608-6866
Fax #:	856-608-6864
Project Manager:	Chris Dailey
EMAIL Address:	cdailey@geiconsultants.com
Sampler:	Brian Mannino
Project Name:	Sea Isle City
Project Location (State):	NJ
Bottle Order #:	
Quote # :	

REPORTING INFO

REPORT TO:	GET
Address:	18000 Horizon Way, Suite 200
	Mount Laurel, NJ 08054
Attn:	Brian Mannino
FAX #	856-608-6864
INVOICE TO:	GET
Address:	18000 Horizon Way, Suite 200
	Mount Laurel, NJ 08054
Attn:	Brian Mannino
PO #	

Turnaround Time (starts the following day if samples rec'd at lab > 5PM)

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) | NJ EPH Fractionated (5 day TAT)

NJ EPH - C40 (5 day TAT)

DRO-8015 (3-5 day TAT) | QAM025 (5 day TAT)

Verbal/Fax: Std 2 wk unless otherwise specified

24 hr** | 48 hr** | 72 hr** | 96 hr** | 1 wk**

Other** (specify): _____

Hard Copy: Std 3 week * | Other - call for price

Rush TAT Charge **

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix

DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
B-476	2.5-3	3/27	15:00	S	1	1	X							1	
B-476	11.5-12	3/27	15:15	S	1	2	X							1	
(H) B-476	14.5-15	3/27	15:20	S	1	3	X							1	
B-477	3-3.5	3/27	14:30	S	1	4	X							1	
B-477	8-8.5	3/27	14:30	S	1	5	X							1	
~~(H)~~ B-477	9-9.5	3/27	14:45	S	1	6	X							1	
(H) B-477	11.5-12	3/27	14:45	S	1	7	X							1	
B-478	3-3.5	3/27	14:00	S	1	8	X							1	

Known Hazard: Yes or No Describe: | Conc. Expected: Low Med High | MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

	Signature/Company	Date	Time		Signature/Company	Date	Time
Relinquished by:	Brian Mannino / GET	3/28		Received by:		3/25/14	11:00
Relinquished by:		3/28/14	8:00	Received by:	GAS	3/28/14	2000
Relinquished by:				Received by:			
Relinquished by:				Received by:			
Relinquished by:				Received by:			

Comments:
(H) = Extract & Hold

Lab Case # 2636

PAGE: 1 of 5

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01/2012 rev

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO	REPORTING INFO
Company: GEI	REPORT TO: GEI
Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054	Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Telephone #: 856-608-6600	Attn: Brian Mannino
Fax #: 856-608-6664	FAX # 856 608 6664
Project Manager: Chris Bailey	INVOICE TO: GEI
EMAIL Address: cdailey@geiconsultants.com	Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Sampler: Brian Mannino	
Project Name: Sea Isle City	Attn: Brian Mannino
Project Location (State): NJ	PO #
Bottle Order #:	
Quote # :	

Turnaround Time (starts the following day if samples rec'd at lab > 5PM)

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) NJ EPH Fractionated (5 day TAT)

NJ EPH - C40 (5 day TAT)

DRO-8015 (3-5 day TAT) QAM025 (5 day TAT)

Verbal/Fax: Std 2 wk unless otherwise specified

24 hr** 48 hr** 72 hr** 96 hr** 1 wk**

Other** (specify): _____

Hard Copy: Std 3 week * Other - call for price

Rush TAT Charge **
24 hr - 100%....
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix

DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
B-478	8.5-9	3/27	14:08	S	1	9	X							1	
B-478	9-9.5	3/27	14:25	S	1	10	X							1	
B-478	11.5-12	3/27	14:07	S	1	11	X							1	
B-479	2.5-3	3/27	13:27	S	1	12	X							1	
B-479	3.5-4	3/27	13:27	S	1	13	X							1	
B-479	8-8.5	3/27	13:30	S	1	14	X							1	
B-480	4-4.5	3/27	13:03	S	1	15	X							1	
B-480	6-6.5	3/27	13:05	S	1	16	X							1	

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

	Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by:	Brian Mannino / GEI	3/28		Received by:	3/28/14	11:00
Relinquished by:		3/28/14	8:00	Received by:	3/28/14	8:00
Relinquished by:				Received by:		
Relinquished by:				Received by:		
Relinquished by:				Received by:		

Comments: (H) - Extend 4 Hold

Lab Case # 2636

PAGE: 2 of 5

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Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO	REPORTING INFO
Company: GEI	REPORT TO: GEI
Address: 18000 Horizon Way, Suite 200	Address: 18000 Horizon Way, Suite 200
Mount Laurel, NJ 08054	Mount Laurel, NJ 08054
Telephone #: 856-608-6860	Attn: Brian Manaine
Fax #: 856-608-6864	FAX # 856-608-6864
Project Manager: Chris Bailey	**INVOICE TO:** GEI
EMAIL Address: cbailey@geiconsultants.com	Address: 18000 Horizon Way, Suite 200
Sampler: Brian Manaine	Mount Laurel, NJ
Project Name: Sea Isle City	
Project Location (State): NJ	Attn: Brian Manaine
Bottle Order #:	PO #
Quote # :	

Turnaround Time (starts the following day if samples rec'd at lab > 5PM)

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) NJ EPH Fractionated (5 day TAT)
NJ EPH - C40 (5 day TAT)
DRO-8015 (3-5 day TAT) QAM025 (5 day TAT)

Verbal/Fax: Std 2 wk unless otherwise specified
24 hr** 48 hr** 72 hr** 96 hr** 1 wk**
Other** (specify): _____

Hard Copy: Std 3 week * Other - call for price

Rush TAT Charge **
24 hr - 100%....
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix
DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
B-4B	0.5-1	3/27	13:05	S	1	17	X							1	
(H) B-4B1	2.5-3	3/27	8:00	S	1	18	X							1	
B-4B1	3.5-4	3/27	9:46	S	1	19	X							1	
B-4B1	8-8.5	3/27	9:42	S	1	20	X							1	
(N) B-4B1	11.5-12	3/27	9:50	S	1	21	X							1	
(H) B-4B2	2.5-3	3/27	9:08	S	1	22	X							1	
B-4B2	3.5-4	3/27	10:01	S	1	23	X							1	
B-4B2	8-8.5	3/27	10:05	S	1	24	X							1	

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

	Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by:	Brian Manaine / GEI	3/28		Received by:	3/28/14	11:00
Relinquished by:		3/28/14	8:00	Received by: (TAT)	3/28/14	2000
Relinquished by:				Received by:		
Relinquished by:				Received by:		
Relinquished by:				Received by:		

Comments:
(N) = Extract & Hold

Lab Case # 2636

PAGE: 3 of 5

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Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO		REPORTING INFO	
Company:	GEI	REPORT TO:	GEI
Address:	18000 Horizon Way, Suite 200 Mount Laurel, NJ	Address:	18000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Telephone #:	856-608-6860	Attn:	Brian Mannino
Fax #:	856-608-6864	FAX #	856-608-6864
Project Manager:	Chris Dailey	INVOICE TO:	GEI
EMAIL Address:	cdailey@geiconsultants.com	Address:	18000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Sampler:	BCM		
Project Name:	Sea Isle City	Attn:	Brian Mannino
Project Location (State):	NJ	PO #	
Bottle Order #:			
Quote # :			

Turnaround Time *(starts the following day if samples rec'd at lab > 5PM)*

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) NJ EPH Fractionated (5 day TAT)

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Verbal/Fax: Std 2 wk unless otherwise specified

24 hr** 48 hr** 72 hr** 96 hr** 1 wk**

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Hard Copy: Std 3 week * Other - call for price

Rush TAT Charge **
24 hr - 100%...
48 hr - 75%....
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96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix

DW - Drinking Water AQ - Aqueous WW - Waste Water
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S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

	Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PH 4	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
(H)	B-4B2	11.5-12	3/27	10:10	S	1	25	X							1	
	B-4B3	6-6.5	3/27	10:25	S	1	26	X							1	
	B-4B3	8.5-9	3/27	10:27	S	1	27	X							1	
	B-4B3	12-12.5	3/27	10:31	S	1	28	X							1	
	B-4B4	6.5-7	3/27	10:53	S	1	29	X							1	
	B-4B4	9-9.5	3/27	11:05	S	1	30	X							1	
	B-4B4	12.5-13	3/27	11:10	S	1	31	X							1	
	B-4B5	4-4.5	3/27	11:17	S	1	32	X							1	

Known Hazard: Yes or No Describe: | Conc. Expected: Low Med High | MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

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	Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by:	Brian Mannino / GEI	3/28		Received by:	3/28/14	11:00
Relinquished by:		3/28/14	8:00	Received by:	3/28/14	2000
Relinquished by:				Received by:		
Relinquished by:				Received by:		
Relinquished by:				Received by:		

Comments:
(H) - Extract & Hold

Lab Case # 2636

PAGE: 4 of 5

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Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO	REPORTING INFO
Company: GEI	REPORT TO: GEI
Address: 18000 Horizon Way, Suite 206 Mount Laurel, NJ 08054	Address: 18000 Horizon Way, Suite 206 Mount Laurel, NJ 08054
Telephone #: 856-608-6866	Attn: Brian Manning
Fax #: 856-608-6864	FAX # 856-608-6864
Project Manager: Chris Bailey	INVOICE TO: GEI
EMAIL Address: cbailey@geiconsultants.com	Address: 18000 Horizon Way, Suite 206 Mount Laurel, NJ 08054
Sampler: Brian Manning	
Project Name: Sea Isle City	Attn: Brian Manning
Project Location (State): NJ	PO #
Bottle Order #:	
Quote # :	

Turnaround Time *(starts the following day if samples received at lab > 3PM)*

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) NJ EPH Fractionated (5 day TAT)
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S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

 # BOTTLES & PRESERVATIVES

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
B-4DS	5-5.5	3/27	11:15	S	1	33	X							1	
B-4DS	13.5-14	3/27	11:25	S	1	34	X							1	
Field Blank		3/27	15:20	AQ	2	35	X							2	

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

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	Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by:	Bryan Manning/GEI	3/28		Received by:	3/28/14	11:00
Relinquished by:		3/28/14	8:00	Received by: IAL	3/28/14	2000
Relinquished by:				Received by:		
Relinquished by:				Received by:		
Relinquished by:				Received by:		

Comments:
① - Extract + Hold

Lab Case # 2636

PAGE: of

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PROJECT INFORMATION

E14-02636: SEA ISLE CITY

To: Brian Mannino
GEI Consultants, Inc.
Fax: 1(856) 608-6864
EMail: bmannino@geiconsultants.com;data

Report To

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054
Attn: Brian Mannino

Bill To

GEI Consultants, Inc.
PO Box 3

Hooksett, NH 03106
Attn: Brian Mannino

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Reduced		Mar 28, 2014 @ 20:00	NA	May 07, 2014	May 28, 2014 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. SRP TXT, Equis GEI

**** QC Requirement (must meet):** NJ IGW

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
02636-001	B-476 (2.5-3)	2.5/3	03/27/14@15:00	Soil	mg/Kg (ppm)	
02636-002	B-476 (11.5-12)	11.5/12	03/27/14@15:15	Soil	mg/Kg (ppm)	
02636-003	B-476 (14.5-15)	14.5/15	03/27/14@15:20	Soil	mg/Kg (ppm)	
02636-004	B-475 (3-3.5)	3/3.5	03/27/14@14:36	Soil	mg/Kg (ppm)	
02636-005	B-475 (8-8.5)	8/8.5	03/27/14@14:36	Soil	mg/Kg (ppm)	
02636-006	B-475 (9-9.5)	9/9.5	03/27/14@14:45	Soil	mg/Kg (ppm)	
02636-007	B-475 (11.5-12)	11.5/12	03/27/14@14:45	Soil	mg/Kg (ppm)	
02636-008	B-478 (3-3.5)	3/3.5	03/27/14@14:06	Soil	mg/Kg (ppm)	
02636-009	B-478 (8.5-9)	8.5/9	03/27/14@14:08	Soil	mg/Kg (ppm)	
02636-010	B-478 (9-9.5)	9/9.5	03/27/14@14:25	Soil	mg/Kg (ppm)	
02636-011	B-478 (11.5-12)	11.5/12	03/27/14@14:27	Soil	mg/Kg (ppm)	
02636-012	B-479 (2.5-3)	2.5/3	03/27/14@13:23	Soil	mg/Kg (ppm)	
02636-013	B-479 (3.5-4)	3.5/4	03/27/14@13:27	Soil	mg/Kg (ppm)	
02636-014	B-479 (8-8.5)	8/8.5	03/27/14@13:00	Soil	mg/Kg (ppm)	
02636-015	B-480 (4-4.5)	4/4.5	03/27/14@13:03	Soil	mg/Kg (ppm)	
02636-016	B-480 (6-6.5)	6/6.5	03/27/14@13:05	Soil	mg/Kg (ppm)	
02636-017	B-480 (8.5-9)	8.5/9	03/27/14@13:05	Soil	mg/Kg (ppm)	
02636-018	B-481 (2.5-3)	2.5/3	03/27/14@08:00	Soil	mg/Kg (ppm)	
02636-019	B-481 (3.5-4)	3.5/4	03/27/14@09:40	Soil	mg/Kg (ppm)	
02636-020	B-481 (8-8.5)	8/8.5	03/27/14@09:42	Soil	mg/Kg (ppm)	
02636-021	B-481 (11.5-12)	11.5/12	03/27/14@09:50	Soil	mg/Kg (ppm)	
02636-022	B-482 (2.5-3)	2.5/3	03/27/14@09:00	Soil	mg/Kg (ppm)	
02636-023	B-482 (3.5-4)	3.5/4	03/27/14@10:01	Soil	mg/Kg (ppm)	
02636-024	B-482 (8-8.5)	8/8.5	03/27/14@10:05	Soil	mg/Kg (ppm)	
02636-025	B-482 (11.5-12)	11.5/12	03/27/14@10:10	Soil	mg/Kg (ppm)	
02636-026	B-483 (6-6.5)	6/6.5	03/27/14@10:25	Soil	mg/Kg (ppm)	
02636-027	B-483 (8.5-9)	8.5/9	03/27/14@10:27	Soil	mg/Kg (ppm)	

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

E14-02636 0204

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PROJECT INFORMATION

E14-02636: SEA ISLE CITY

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
02636-028	B-483 (12-12.5)	12/12.5	03/27/14@10:31	Soil	mg/Kg (ppm)	
02636-029	B-484 (6.5-7)	6.5/7	03/27/14@10:53	Soil	mg/Kg (ppm)	
02636-030	B-484 (9-9.5)	9/9.5	03/27/14@11:05	Soil	mg/Kg (ppm)	
02636-031	B-484 (12.5-13)	12.5/13	03/27/14@11:10	Soil	mg/Kg (ppm)	
02636-032	B-485 (4-4.5)	4/4.5	03/27/14@11:17	Soil	mg/Kg (ppm)	
02636-033	B-485 (5-5.5)	5/5.5	03/27/14@11:15	Soil	mg/Kg (ppm)	
02636-034	B-485 (13.5-14)	13.5/14	03/27/14@11:25	Soil	mg/Kg (ppm)	
02636-035	FIELD BLANK	NA	03/27/14@15:26	Aqueous	mg/L (ppm)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
002	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
003	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
004	SVOC Project Revision	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
005	SVOC Project Revision	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
006	SVOC Project Revision	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
007	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
008	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
009	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
010	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
011	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
012	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
013	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
014	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
015	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
016	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
017	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
018	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
019	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
020	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
021	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
022	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
023	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

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Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E14-02636: SEA ISLE CITY

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
024	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
025	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/10/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/10/2014
026	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
027	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
028	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
029	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
030	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
031	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
032	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
033	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
034	TCL/PAH	Analyze	8270D	STD/2 WKS	4/10/2014
035	TCL/PAH	Analyze	8270D	STD/2 WKS	4/3/2014

Project Notes:

REV 1 taken by kim on 04/23/2014 05:45

REV 01 DUE 5/7

PER BRIAN MANNINO, ACTIVATE SAMPLE 003 FOR PAH, STANDARD TURNAROUND.

SAMPLE WAS PREVIOUSLY EXTRACTED.

SAMPLES 010 & 011 REMAIN ON HOLD.

OTHERS ON HOLD CANCELED.

CHANGE SAMPLE IDs ON SAMPLES 004, 005, 006, 007 FROM B-477 TO B-475.

ORIGINAL RESULTS SENT 4/15

REV 2 taken by kim on 05/20/2014 11:27

As per Brian Mannino, cancel TCL/PAH for sample # 10,11

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 14** **02636** CLIENT: GLT

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

Comments

COC: (COMPLETE) / INCOMPLETE

KEY

✓ = YES/NA
✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol
(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✓	no-Extra Bottles	
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✓	pH Check (exclude VOs)[1]	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✓	**Chain of Custody is Clear**	

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [initials] DATE 3/28/14

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ☐

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [initials] DATE 4/1/14

E14-02636 0207

REV 03/2013

Laboratory Custody Chronicle

IAL Case No.

E14-02636

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 3/28/2014@20:00

Department: Semivolatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL/PAH	02636-001	Soil	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-002	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-003	"	3/31/14	Kou-Liang	4/ 1/14	JC
"	-004	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-005	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-006	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-008	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-009	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-013	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-014	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-015	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-016	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-017	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-019	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-020	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-023	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-024	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-026	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-027	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-028	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-029	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-030	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-031	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-032	"	3/31/14	Kou-Liang	4/ 1/14	Eleanor
"	-033	"	4/ 1/14	Kou-Liang	4/ 2/14	JC
"	-034	"	4/ 1/14	Kou-Liang	4/ 2/14	JC
"	-035	Aqueous	4/ 1/14	Kou-Liang	4/ 2/14	Dana

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054

Project Name: **SEA ISLE CITY**
IAL Case Number: **E14-02878**

These data have been reviewed and accepted by:

Michael H. Leftin, Ph.D.
Laboratory Director

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

Sample Summary

IAL Case No.

E14-02878

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 4/ 3/2014@18:30

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
02878-001	B-474 (4-4.5)	4/4.5	4/ 2/2014@08:52	Soil	1
02878-002	B-474 (6-6.5)	6/6.5	4/ 2/2014@08:50	Soil	1
02878-003	B-474 (8.5-9)	8.5/9	4/ 2/2014@08:56	Soil	1
02878-004	B-477 (2.5-3)	2.5/3	4/ 2/2014@08:00	Soil	1
02878-005	B-477 (3.5-4)	3.5/4	4/ 2/2014@08:20	Soil	1
02878-006	B-477 (8.5-9)	8.5/9	4/ 2/2014@08:15	Soil	1
02878-007	B-477 (11.5-12)	11.5/12	4/ 2/2014@08:20	Soil	1
02878-008	DS-9A (4-4.5)	4/14.5	4/ 2/2014@11:30	Soil	1
02878-009	DS-9A (8-8.5)	8/8.5	4/ 2/2014@11:31	Soil	1
02878-010	DS-9A (9-9.5)	9/9.5	4/ 2/2014@11:35	Soil	1
02878-011	DS-9A (10.5-11)	10.5/11	4/ 2/2014@11:36	Soil	1
02878-012	B-338 (3-3.5)	3/3.5	4/ 2/2014@13:40	Soil	1
02878-013	B-338 (6-6.5)	6/6.5	4/ 2/2014@13:42	Soil	1
02878-014	B-338 (10-10.5)	10/10.5	4/ 2/2014@13:43	Soil	1
02878-015	B-338 (11.5-12)	11.5/12	4/ 2/2014@13:44	Soil	1
02878-016	B-339 (4-4.5)	4/4.5	4/ 2/2014@11:06	Soil	1
02878-017	B-339 (6.5-7)	6.5/7	4/ 2/2014@11:07	Soil	1
02878-018	B-339 (9.5-10)	9.5/10	4/ 2/2014@11:14	Soil	1
02878-019	B-339 (11-11.5)	11/11.5	4/ 2/2014@11:15	Soil	1
02878-020	B-340 (3.5-4)	3.5/4	4/ 2/2014@13:15	Soil	1
02878-021	B-340 (8.5-9)	8.5/9	4/ 2/2014@13:16	Soil	1
02878-022	B-340 (9-9.5)	9/9.5	4/ 2/2014@13:25	Soil	1
02878-023	B-340 (11.5-12)	11.5/12	4/ 2/2014@13:26	Soil	1
02878-024	B-341 (4.5-5)	4.5/5	4/ 2/2014@10:27	Soil	1
02878-025	B-341 (6-6.5)	6/6.5	4/ 2/2014@10:29	Soil	1
02878-026	B-342 (4-4.5)	4/4.5	4/ 2/2014@12:53	Soil	1
02878-027	B-342 (7.5-8)	7.5/8	4/ 2/2014@12:56	Soil	1
02878-028	B-342 (9-9.5)	9/9.5	4/ 2/2014@13:00	Soil	1
02878-029	B-342 (10-10.5)	10/10.5	4/ 2/2014@13:01	Soil	1
02878-030	B-343 (4-4.5)	4/4.5	4/ 2/2014@10:45	Soil	1
02878-031	B-343 (9-9.5)	9/9.5	4/ 2/2014@10:52	Soil	1
02878-032	B-344 (5-5.5)	5/5.5	4/ 2/2014@14:20	Soil	1
02878-033	B-344 (8.5-9)	8.5/9	4/ 2/2014@14:21	Soil	1
02878-034	B-345 (4.5-5)	4.5/5	4/ 2/2014@13:58	Soil	1
02878-035	B-345 (8-8.5)	8/8.5	4/ 2/2014@14:00	Soil	1
02878-036	B-345 (9-9.5)	9/9.5	4/ 2/2014@14:10	Soil	1
02878-037	B-345 (10.5-11)	10.5/11	4/ 2/2014@14:11	Soil	1
02878-038	FIELD BLANK	n/a	4/ 2/2014@15:00	Aqueous	2

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

This report was finalized on April 30, 2014

* Methodology is included in the IAL Project Information Page

INTEGRATED ANALYTICAL LABORATORIES, LLC.

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

CONFORMANCE / NON-CONFORMANCE SUMMARIES

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received one (1) aqueous and thirty-seven (37) soil sample(s) from GEI Consultants, Inc. (IAL SDG # E14-02878, Project: SEA ISLE CITY) on April 3, 2014 for the analysis of:

(11) TCL/PAH

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

4/29/14
Date

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-02878

Semivolatiles By **8270D/625**

Batch ID: 140407-01	**Matrix:** Aqueous

QC
- Calibration Curve met criteria.
- Internal standard recovery met criteria.
- Surrogate recovery met criteria.
- Method blank met criteria.
- Laboratory control sample recovery met criteria.
- Matrix Spike / Matrix Spike Duplicate recoveries met criteria.

E14-02878
- 8270D
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- All samples were analyzed as a straight run and no further dilutions were required.

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-diphenylhydrazine will be directly compared to the applicable criteria for azobenzene and/or 1,2-diphenylhydrazine.

4/8/2014

Signature Date

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E14-02878

Semivolatiles By **8270D/625**

Batch ID: 140404-01	**Matrix:** Soil

QC

- Calibration Curve met criteria.
- Internal standard recovery met criteria.
- Surrogate recovery met criteria.
- Method blank met criteria.
- Laboratory control sample recovery met criteria.
- Matrix Spike / Matrix Spike Duplicate recoveries met criteria.

E14-02878

- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- 02878-010 performed 3x dilution because of high target compounds; 02878-008 performed 5x dilution because of high target compounds;
- The following samples were analyzed as a straight run and no further dilutions were required: 001, 011, 002, 003, 004, 005, 006, 007, 009

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-diphenylhydrazine will be directly compared to the applicable criteria for azobenzene and/or 1,2-diphenylhydrazine.

Signature 4/8/2014 Date

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02878

Lab ID:	02878-038		
Client ID:	FIELD BLANK		
Matrix:	Aqueous		
Sampled Date	4/2/14		
PARAMETER(Units)	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/L)*		
Naphthalene	ND		0.000273
2-Methylnaphthalene	ND		0.000433
Acenaphthylene	ND		0.000316
Acenaphthene	ND		0.000261
Fluorene	ND		0.000447
Phenanthrene	ND		0.000372
Anthracene	ND		0.000322
Fluoranthene	ND		0.000362
Pyrene	ND		0.000308
Benzo[a]anthracene	ND		0.000243
Chrysene	ND		0.000243
Benzo[b]fluoranthene	ND		0.000716
Benzo[k]fluoranthene	ND		0.000683
Benzo[a]pyrene	ND		0.000381
Indeno[1,2,3-cd]pyrene	ND		0.000509
Dibenz[a,h]anthracene	ND		0.000514
Benzo[g,h,i]perylene	ND		0.000468

Lab ID:	02878-001			02878-002			02878-003			02878-004		
Client ID:	B-474 (4-4.5)			B-474 (6-6.5)			B-474 (8.5-9)			B-477 (2.5-3)		
Depth:	4/4.5			6/6.5			8.5/9			2.5/3		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	4/2/14			4/2/14			4/2/14			4/2/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.024	ND		0.024	0.294		0.027	~		~
2-Methylnaphthalene	ND		0.030	ND		0.029	ND		0.034	~		~
Acenaphthylene	ND		0.024	ND		0.024	ND		0.027	~		~
Acenaphthene	ND		0.037	ND		0.037	ND		0.042	~		~
Fluorene	ND		0.024	ND		0.024	ND		0.027	~		~
Phenanthrene	ND		0.024	ND		0.024	ND		0.027	~		~
Anthracene	ND		0.024	ND		0.024	ND		0.027	~		~
Fluoranthene	ND		0.024	ND		0.024	ND		0.027	~		~
Pyrene	ND		0.024	ND		0.024	ND		0.027	~		~
Benzo[a]anthracene	ND		0.024	ND		0.024	ND		0.027	~		~
Chrysene	ND		0.024	ND		0.024	ND		0.027	~		~
Benzo[b]fluoranthene	ND		0.024	ND		0.024	ND		0.027	~		~
Benzo[k]fluoranthene	ND		0.024	ND		0.024	ND		0.027	~		~
Benzo[a]pyrene	ND		0.024	ND		0.024	ND		0.027	~		~
Indeno[1,2,3-cd]pyrene	ND		0.024	ND		0.024	ND		0.027	~		~
Dibenz[a,h]anthracene	ND		0.024	ND		0.024	ND		0.027	~		~
Benzo[g,h,i]perylene	ND		0.024	ND		0.024	ND		0.027	~		~

ND = Analyzed for but Not Detected at the MDL
~ Sample not analyzed for

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02878

Lab ID:	02878-005			02878-006			02878-007			02878-008		
Client ID:	B-477 (3.5-4)			B-477 (8.5-9)			B-477 (11.5-12)			DS-9A (4-4.5)		
Depth:	3.5/4			8.5/9			11.5/12			4/14.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	4/2/14			4/2/14			4/2/14			4/2/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.023	1.53		0.025	0.056		0.024	1.58		0.029
2-Methylnaphthalene	ND		0.029	0.470		0.030	ND		0.030	0.346		0.036
Acenaphthylene	ND		0.023	0.055		0.025	ND		0.024	3.14		0.029
Acenaphthene	ND		0.036	0.313		0.038	ND		0.037	20.3	D	0.224
Fluorene	ND		0.023	0.237		0.025	ND		0.024	6.82	D	0.146
Phenanthrene	ND		0.023	0.738		0.025	0.066		0.024	19.1	D	0.146
Anthracene	ND		0.023	0.275		0.025	ND		0.024	13.9	D	0.146
Fluoranthene	ND		0.023	0.255		0.025	ND		0.024	16.0	D	0.146
Pyrene	ND		0.023	0.387		0.025	0.034	J	0.024	16.1	D	0.146
Benzo[a]anthracene	ND		0.023	0.146		0.025	ND		0.024	3.84		0.029
Chrysene	ND		0.023	0.159		0.025	ND		0.024	2.24		0.029
Benzo[b]fluoranthene	ND		0.023	0.081		0.025	ND		0.024	8.23	D	0.146
Benzo[k]fluoranthene	ND		0.023	0.084		0.025	ND		0.024	7.60	D	0.146
Benzo[a]pyrene	ND		0.023	0.134		0.025	ND		0.024	12.5	D	0.146
Indeno[1,2,3-cd]pyrene	ND		0.023	0.044		0.025	ND		0.024	3.74	D	0.146
Dibenz[a,h]anthracene	ND		0.023	ND		0.025	ND		0.024	4.57		0.029
Benzo[g,h,i]perylene	ND		0.023	0.054		0.025	ND		0.024	3.94		0.029

Lab ID:	02878-009			02878-010			02878-011			02878-012		
Client ID:	DS-9A (8-8.5)			DS-9A (9-9.5)			DS-9A (10.5-11)			B-338 (3-3.5)		
Depth:	8/8.5			9/9.5			10.5/11			3/3.5		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	4/2/14			4/2/14			4/2/14			4/2/14		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.024	0.384	D	0.079	ND		0.024	~		~
2-Methylnaphthalene	0.031	J	0.030	0.167	D	0.097	0.034	J	0.029	~		~
Acenaphthylene	ND		0.024	1.16	D	0.079	ND		0.024	~		~
Acenaphthene	0.074		0.037	8.67	D	0.120	0.216		0.036	~		~
Fluorene	ND		0.024	2.34	D	0.079	0.039	J	0.024	~		~
Phenanthrene	0.042		0.024	7.00	D	0.079	0.142		0.024	~		~
Anthracene	ND		0.024	4.75	D	0.079	0.070		0.024	~		~
Fluoranthene	0.025	J	0.024	5.43	D	0.079	0.059		0.024	~		~
Pyrene	0.036	J	0.024	7.48	D	0.079	0.093		0.024	~		~
Benzo[a]anthracene	0.026	J	0.024	3.18	D	0.079	0.050		0.024	~		~
Chrysene	ND		0.024	4.00	D	0.079	0.060		0.024	~		~
Benzo[b]fluoranthene	ND		0.024	2.29	D	0.079	ND		0.024	~		~
Benzo[k]fluoranthene	ND		0.024	2.13	D	0.079	ND		0.024	~		~
Benzo[a]pyrene	ND		0.024	3.30	D	0.079	0.034	J	0.024	~		~
Indeno[1,2,3-cd]pyrene	ND		0.024	0.912	D	0.079	ND		0.024	~		~
Dibenz[a,h]anthracene	ND		0.024	0.399	D	0.079	ND		0.024	~		~
Benzo[g,h,i]perylene	ND		0.024	1.15	D	0.079	ND		0.024	~		~

ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
D = The compound was reported from the Diluted analysis
~ = Sample not analyzed for

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E14-02878

Lab ID:	**02878-013**	**02878-014**	**02878-015**	**02878-016**
Client ID:	**B-338 (6-6.5)**	**B-338 (10-10.5)**	**B-338 (11.5-12)**	**B-339 (4-4.5)**
Depth:	**6/6.5**	**10/10.5**	**11.5/12**	**4/4.5**
Matrix:	**Soil**	**Soil**	**Soil**	**Soil**
Sampled Date	**4/2/14**	**4/2/14**	**4/2/14**	**4/2/14**
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Semivolatiles - PAH (Units)	~	~	~	~

Lab ID:	**02878-017**	**02878-018**	**02878-019**	**02878-020**
Client ID:	**B-339 (6.5-7)**	**B-339 (9.5-10)**	**B-339 (11-11.5)**	**B-340 (3.5-4)**
Depth:	**6.5/7**	**9.5/10**	**11/11.5**	**3.5/4**
Matrix:	**Soil**	**Soil**	**Soil**	**Soil**
Sampled Date	**4/2/14**	**4/2/14**	**4/2/14**	**4/2/14**
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Semivolatiles - PAH (Units)	~	~	~	~

Lab ID:	**02878-021**	**02878-022**	**02878-023**	**02878-024**
Client ID:	**B-340 (8.5-9)**	**B-340 (9-9.5)**	**B-340 (11.5-12)**	**B-341 (4.5-5)**
Depth:	**8.5/9**	**9/9.5**	**11.5/12**	**4.5/5**
Matrix:	**Soil**	**Soil**	**Soil**	**Soil**
Sampled Date	**4/2/14**	**4/2/14**	**4/2/14**	**4/2/14**
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Semivolatiles - PAH (Units)	~	~	~	~

Lab ID:	**02878-025**	**02878-026**	**02878-027**	**02878-028**
Client ID:	**B-341 (6-6.5)**	**B-342 (4-4.5)**	**B-342 (7.5-8)**	**B-342 (9-9.5)**
Depth:	**6/6.5**	**4/4.5**	**7.5/8**	**9/9.5**
Matrix:	**Soil**	**Soil**	**Soil**	**Soil**
Sampled Date	**4/2/14**	**4/2/14**	**4/2/14**	**4/2/14**
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Semivolatiles - PAH (Units)	~	~	~	~

Lab ID:	**02878-029**	**02878-030**	**02878-031**	**02878-032**
Client ID:	**B-342 (10-10.5)**	**B-343 (4-4.5)**	**B-343 (9-9.5)**	**B-344 (5-5.5)**
Depth:	**10/10.5**	**4/4.5**	**9/9.5**	**5/5.5**
Matrix:	**Soil**	**Soil**	**Soil**	**Soil**
Sampled Date	**4/2/14**	**4/2/14**	**4/2/14**	**4/2/14**
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Semivolatiles - PAH (Units)	~	~	~	~

Lab ID:	**02878-033**	**02878-034**	**02878-035**	**02878-036**
Client ID:	**B-344 (8.5-9)**	**B-345 (4.5-5)**	**B-345 (8-8.5)**	**B-345 (9-9.5)**
Depth:	**8.5/9**	**4.5/5**	**8/8.5**	**9/9.5**
Matrix:	**Soil**	**Soil**	**Soil**	**Soil**
Sampled Date	**4/2/14**	**4/2/14**	**4/2/14**	**4/2/14**
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Semivolatiles - PAH (Units)	~	~	~	~

Lab ID:	**02878-037**
Client ID:	**B-345 (10.5-11)**
Depth:	**10.5/11**
Matrix:	**Soil**
Sampled Date	**4/2/14**
PARAMETER(Units)	Conc Q MDL
Semivolatiles - PAH (Units)	~

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

D = The compound was reported from the Diluted analysis

~ = Sample not analyzed for

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-001
Client ID: B-474_(4
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5340.D

GC/MS Column: DB-5
Sample wt/vol: 15.13g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.3

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.030
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	ND		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	ND		0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-002
Client ID: B-474_(6
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5341.D

GC/MS Column: DB-5
Sample wt/vol: 15.05g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 16.6

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.029
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	ND		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	ND		0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-003
Client ID: B-474_(8
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5342.D

GC/MS Column: DB-5
Sample wt/vol: 15.29g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 28.0

Compound	Concentration	Q	RL	MDL
Naphthalene	0.294		0.045	0.027
2-Methylnaphthalene	ND		0.045	0.034
Acenaphthylene	ND		0.045	0.027
Acenaphthene	ND		0.045	0.042
Fluorene	ND		0.045	0.027
Phenanthrene	ND		0.045	0.027
Anthracene	ND		0.045	0.027
Fluoranthene	ND		0.045	0.027
Pyrene	ND		0.045	0.027
Benzo[a]anthracene	ND		0.045	0.027
Chrysene	ND		0.045	0.027
Benzo[b]fluoranthene	ND		0.045	0.027
Benzo[k]fluoranthene	ND		0.045	0.027
Benzo[a]pyrene	ND		0.045	0.027
Indeno[1,2,3-cd]pyrene	ND		0.045	0.027
Dibenz[a,h]anthracene	ND		0.045	0.027
Benzo[g,h,i]perylene	ND		0.045	0.027

Total Target Compounds (17): 0.294

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-005
Client ID: B-477_(3
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5344.D

GC/MS Column: DB-5
Sample wt/vol: 15.22g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.3

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.023
2-Methylnaphthalene	ND		0.039	0.029
Acenaphthylene	ND		0.039	0.023
Acenaphthene	ND		0.039	0.036
Fluorene	ND		0.039	0.023
Phenanthrene	ND		0.039	0.023
Anthracene	ND		0.039	0.023
Fluoranthene	ND		0.039	0.023
Pyrene	ND		0.039	0.023
Benzo[a]anthracene	ND		0.039	0.023
Chrysene	ND		0.039	0.023
Benzo[b]fluoranthene	ND		0.039	0.023
Benzo[k]fluoranthene	ND		0.039	0.023
Benzo[a]pyrene	ND		0.039	0.023
Indeno[1,2,3-cd]pyrene	ND		0.039	0.023
Dibenz[a,h]anthracene	ND		0.039	0.023
Benzo[g,h,i]perylene	ND		0.039	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-006
Client ID: B-477_(8
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5345.D

GC/MS Column: DB-5
Sample wt/vol: 15.04g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.7

Compound	Concentration	Q	RL	MDL
Naphthalene	1.53		0.041	0.025
2-Methylnaphthalene	0.470		0.041	0.030
Acenaphthylene	0.055		0.041	0.025
Acenaphthene	0.313		0.041	0.038
Fluorene	0.237		0.041	0.025
Phenanthrene	0.738		0.041	0.025
Anthracene	0.275		0.041	0.025
Fluoranthene	0.255		0.041	0.025
Pyrene	0.387		0.041	0.025
Benzo[a]anthracene	0.146		0.041	0.025
Chrysene	0.159		0.041	0.025
Benzo[b]fluoranthene	0.081		0.041	0.025
Benzo[k]fluoranthene	0.084		0.041	0.025
Benzo[a]pyrene	0.134		0.041	0.025
Indeno[1,2,3-cd]pyrene	0.044		0.041	0.025
Dibenz[a,h]anthracene	ND		0.041	0.025
Benzo[g,h,i]perylene	0.054		0.041	0.025

Total Target Compounds (17): 4.96

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-007
Client ID: B-477_(1
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5346.D

GC/MS Column: DB-5
Sample wt/vol: 15.42g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 19.4

Compound	Concentration	Q	RL	MDL
Naphthalene	0.056		0.040	0.024
2-Methylnaphthalene	ND		0.040	0.030
Acenaphthylene	ND		0.040	0.024
Acenaphthene	ND		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	0.066		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	ND		0.040	0.024
Pyrene	0.034	J	0.040	0.024
Benzo[a]anthracene	ND		0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024
Total Target Compounds (17):	0.156	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-008
Client ID: DS-9A_(4
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
Data file: C5295.D

GC/MS Column: DB-5
Sample wt/vol: 15.35g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 33.2

Compound	Concentration	Q	RL	MDL
Naphthalene	1.58		0.049	0.029
2-Methylnaphthalene	0.346		0.049	0.036
Acenaphthylene	3.14		0.049	0.029
Acenaphthene	8.22	E	0.049	0.045
Fluorene	5.99	E	0.049	0.029
Phenanthrene	13.1	E	0.049	0.029
Anthracene	7.41	E	0.049	0.029
Fluoranthene	11.7	E	0.049	0.029
Pyrene	10.8	E	0.049	0.029
Benzo[a]anthracene	3.84		0.049	0.029
Chrysene	2.24		0.049	0.029
Benzo[b]fluoranthene	7.93	E	0.049	0.029
Benzo[k]fluoranthene	6.95	E	0.049	0.029
Benzo[a]pyrene	26.4	E	0.049	0.029
Indeno[1,2,3-cd]pyrene	5.97	E	0.049	0.029
Dibenz[a,h]anthracene	4.57		0.049	0.029
Benzo[g,h,i]perylene	3.94		0.049	0.029
Total Target Compounds (17):	124	E		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-008DL
Client ID: DS-9A_(4
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5335.D

GC/MS Column: DB-5
Sample wt/vol: 15.35g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 5
% Moisture: 33.2

Compound	Concentration	Q	RL	MDL
Naphthalene	1.42	D	0.244	0.146
2-Methylnaphthalene	0.323	D	0.244	0.180
Acenaphthylene	4.41	D	0.244	0.146
Acenaphthene	20.3	D	0.244	0.224
Fluorene	6.82	D	0.244	0.146
Phenanthrene	19.1	D	0.244	0.146
Anthracene	13.9	D	0.244	0.146
Fluoranthene	16.0	D	0.244	0.146
Pyrene	16.1	D	0.244	0.146
Benzo[a]anthracene	11.5	D	0.244	0.146
Chrysene	15.1	D	0.244	0.146
Benzo[b]fluoranthene	8.23	D	0.244	0.146
Benzo[k]fluoranthene	7.60	D	0.244	0.146
Benzo[a]pyrene	12.5	D	0.244	0.146
Indeno[1,2,3-cd]pyrene	3.74	D	0.244	0.146
Dibenz[a,h]anthracene	1.57	D	0.244	0.147
Benzo[g,h,i]perylene	5.07	D	0.244	0.146
Total Target Compounds (17):	164	D		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-009
Client ID: DS-9A_(8
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5336.D

GC/MS Column: DB-5
Sample wt/vol: 15.30g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.8

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.040	0.024
2-Methylnaphthalene	0.031	J	0.040	0.030
Acenaphthylene	ND		0.040	0.024
Acenaphthene	0.074		0.040	0.037
Fluorene	ND		0.040	0.024
Phenanthrene	0.042		0.040	0.024
Anthracene	ND		0.040	0.024
Fluoranthene	0.025	J	0.040	0.024
Pyrene	0.036	J	0.040	0.024
Benzo[a]anthracene	0.026	J	0.040	0.024
Chrysene	ND		0.040	0.024
Benzo[b]fluoranthene	ND		0.040	0.024
Benzo[k]fluoranthene	ND		0.040	0.024
Benzo[a]pyrene	ND		0.040	0.024
Indeno[1,2,3-cd]pyrene	ND		0.040	0.024
Dibenz[a,h]anthracene	ND		0.040	0.024
Benzo[g,h,i]perylene	ND		0.040	0.024
Total Target Compounds (17):	0.234	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-010
Client ID: DS-9A_(9
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5337.D

GC/MS Column: DB-5
Sample wt/vol: 15.27g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 3
% Moisture: 25.0

Compound	Concentration	Q	RL	MDL
Naphthalene	0.384	D	0.131	0.079
2-Methylnaphthalene	0.167	D	0.131	0.097
Acenaphthylene	1.16	D	0.131	0.079
Acenaphthene	8.67	D	0.131	0.120
Fluorene	2.34	D	0.131	0.079
Phenanthrene	7.00	D	0.131	0.079
Anthracene	4.75	D	0.131	0.079
Fluoranthene	5.43	D	0.131	0.079
Pyrene	7.48	D	0.131	0.079
Benzo[a]anthracene	3.18	D	0.131	0.079
Chrysene	4.00	D	0.131	0.079
Benzo[b]fluoranthene	2.29	D	0.131	0.079
Benzo[k]fluoranthene	2.13	D	0.131	0.079
Benzo[a]pyrene	3.30	D	0.131	0.079
Indeno[1,2,3-cd]pyrene	0.912	D	0.131	0.079
Dibenz[a,h]anthracene	0.399	D	0.131	0.079
Benzo[g,h,i]perylene	1.15	D	0.131	0.079
Total Target Compounds (17):	54.7	D		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-011
Client ID: DS-9A_(1
Date Received: 04/03/2014
Date Extracted: 04/04/2014
Date Analyzed: 04/07/2014
Data file: C5338.D

GC/MS Column: DB-5
Sample wt/vol: 15.31g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 17.2

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.024
2-Methylnaphthalene	0.034	J	0.039	0.029
Acenaphthylene	ND		0.039	0.024
Acenaphthene	0.216		0.039	0.036
Fluorene	0.039	J	0.039	0.024
Phenanthrene	0.142		0.039	0.024
Anthracene	0.070		0.039	0.024
Fluoranthene	0.059		0.039	0.024
Pyrene	0.093		0.039	0.024
Benzo[a]anthracene	0.050		0.039	0.024
Chrysene	0.060		0.039	0.024
Benzo[b]fluoranthene	ND		0.039	0.024
Benzo[k]fluoranthene	ND		0.039	0.024
Benzo[a]pyrene	0.034	J	0.039	0.024
Indeno[1,2,3-cd]pyrene	ND		0.039	0.024
Dibenz[a,h]anthracene	ND		0.039	0.024
Benzo[g,h,i]perylene	ND		0.039	0.024
Total Target Compounds (17):	0.797	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E14-02878-038
Client ID: FIELD_BL
Date Received: 04/03/2014
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
Data file: B8002.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-mg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.001	0.000273
2-Methylnaphthalene	ND		0.001	0.000433
Acenaphthylene	ND		0.001	0.000316
Acenaphthene	ND		0.001	0.000261
Fluorene	ND		0.001	0.000447
Phenanthrene	ND		0.001	0.000372
Anthracene	ND		0.001	0.000322
Fluoranthene	ND		0.001	0.000362
Pyrene	ND		0.001	0.000308
Benzo[a]anthracene	ND		0.001	0.000243
Chrysene	ND		0.001	0.000243
Benzo[b]fluoranthene	ND		0.001	0.000716
Benzo[k]fluoranthene	ND		0.001	0.000683
Benzo[a]pyrene	ND		0.001	0.000381
Indeno[1,2,3-cd]pyrene	ND		0.001	0.000509
Dibenz[a,h]anthracene	ND		0.001	0.000514
Benzo[g,h,i]perylene	ND		0.001	0.000468

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS QC SUMMARY

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/04/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
CCVBNA2		C5252.D	N/A	N/A	N/A	N/A	N/A	N/A
LCSS140403-02	SOIL	C5253.D	54	59	60	68	62	75
E14-02765-001MS	SOIL	C5254.D	55	64	67	76	65	79
E14-02765-001MSD	SOIL	C5255.D	64	67	79	87	73	80
E14-02798-006	SOIL	C5256.D	N/A	N/A	87	79	N/A	83
E14-02798-001	SOIL	C5257.D	53	59	44	66	60	75
E14-02798-003	SOIL	C5258.D	47	54	40	62	60	72
E14-02798-004	SOIL	C5259.D	57	64	61	77	73	85
E14-02357-005	SOIL	C5260.D	N/A	N/A	61	87	N/A	69
BLKS140403-04	SOIL	C5261.D	73	80	70	91	89	118
LCSS140403-04	SOIL	C5262.D	76	84	77	89	87	109
E14-02771-031MS	SOIL	C5263.D	74	82	72	88	87	112
E14-02771-031MSD	SOIL	C5264.D	74	82	83	79	88	108
E14-02771-031	SOIL	C5265.D	55	64	49	79	72	86
E14-02771-033	SOIL	C5266.D	49	55	43	70	64	83
E14-02771-035	SOIL	C5267.D	40	61	49	79	38	85
E14-02771-037	SOIL	C5268.D	54	63	59	76	72	95
E14-02771-039	SOIL	C5269.D	53	60	47	76	69	91
E14-02771-001	SOIL	C5270.D	57	66	70	82	76	96
E14-02771-003	SOIL	C5271.D	58	67	55	84	68	92
E14-02771-005	SOIL	C5272.D	59	66	49	74	65	86
E14-02771-007	SOIL	C5273.D	52	59	43	68	67	84

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	45-104	25-100
S2 (PHL) = Phenol-d5	52-106	25-108
S3 (NBZ) = Nitrobenzene-d5	57-107	24-91
S4 (FBP) = 2-Fluorobiphenyl	57-126	33-91
S5 (TBP) = 2,4,6-Tribromophenol	30-147	37-115
S6 (TPH) = Terphenyl-d14	68-133	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/04/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
E14-02771-009	SOIL	C5274.D	53	61	45	70	64	83
E14-02771-011	SOIL	C5275.D	60	71	57	89	73	92
E14-02771-013	SOIL	C5276.D	32	53	36	85	79	96
E14-02771-015	SOIL	C5277.D	61	68	51	82	73	82
E14-02771-017	SOIL	C5278.D	46	60	44	75	69	78
E14-02771-019	SOIL	C5279.D	47	57	45	75	72	84
E14-02771-021	SOIL	C5280.D	38	54	53	88	72	103
E14-02771-023	SOIL	C5281.D	54	64	46	77	69	75
E14-02771-025	SOIL	C5282.D	53	60	43	70	69	74
E14-02771-027	SOIL	C5283.D	57	65	48	77	73	84
E14-02771-029	SOIL	C5284.D	50	56	41	68	62	76
BLKS140404-01	SOIL	C5285.D	70	80	60	88	84	101
LCSS140404-01	SOIL	C5286.D	64	70	69	91	74	89
E14-02847-001MS	SOIL	C5287.D	60	67	64	88	52	69
E14-02847-001MSD	SOIL	C5288.D	58	65	87	85	54	69
E14-02847-001	SOIL	C5289.D	N/A	N/A	86	88	N/A	76
E14-02847-002	SOIL	C5290.D	N/A	N/A	72	72	N/A	76
E14-02847-003	SOIL	C5291.D	N/A	N/A	76	66	N/A	67
E14-02847-004	SOIL	C5292.D	N/A	N/A	77	71	N/A	78
E14-02847-005	SOIL	C5293.D	N/A	N/A	88	83	N/A	73
E14-02492-001	SOIL	C5294.D	N/A	N/A	77	67	N/A	78
E14-02878-008	SOIL	C5295.D	N/A	N/A	75	89	N/A	41

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	45-104	25-100
S2 (PHL) = Phenol-d5	52-106	25-108
S3 (NBZ) = Nitrobenzene-d5	57-107	24-91
S4 (FBP) = 2-Fluorobiphenyl	57-126	33-91
S5 (TBP) = 2,4,6-Tribromophenol	30-147	37-115
S6 (TPH) = Terphenyl-d14	68-133	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/07/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
CCVBNA2		C5309.D	N/A	N/A	N/A	N/A	N/A	N/A
BLKS140404-04	SOIL	C5310.D	78	81	64	90	79	116
LCSS140404-04	SOIL	C5311.D	55	69	80	73	86	103
E14-02851-021MS	SOIL	C5312.D	48	56	74	73	70	91
E14-02851-021MSD	SOIL	C5313.D	49	58	76	74	78	94
E14-02851-021	SOIL	C5314.D	42	46	42	68	59	86
E14-02851-023	SOIL	C5315.D	40	50	45	76	67	91
E14-02851-025	SOIL	C5316.D	50	58	51	85	70	96
E14-02851-027	SOIL	C5317.D	50	57	45	74	65	89
E14-02851-029	SOIL	C5318.D	48	54	46	77	66	86
E14-02851-031	SOIL	C5319.D	38	48	44	71	61	82
E14-02851-033	SOIL	C5320.D	48	58	50	85	69	88
E14-02851-035	SOIL	C5321.D	57	65	53	88	68	83
E14-02851-037	SOIL	C5322.D	50	57	52	84	65	72
E14-02851-039	SOIL	C5323.D	53	54	49	82	67	74
E14-02851-041	SOIL	C5324.D	59	63	52	84	66	71
E14-02851-043	SOIL	C5325.D	59	63	55	87	70	75
E14-02851-045	SOIL	C5326.D	53	57	48	78	64	73
E14-02851-047	SOIL	C5327.D	51	56	52	87	69	79
E14-02851-049	SOIL	C5328.D	51	55	48	79	64	76
E14-02851-051	SOIL	C5329.D	49	52	45	80	62	70
E14-02851-053	SOIL	C5330.D	53	55	45	73	61	74

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	45-104	25-100
S2 (PHL) = Phenol-d5	52-106	25-108
S3 (NBZ) = Nitrobenzene-d5	57-107	24-91
S4 (FBP) = 2-Fluorobiphenyl	57-126	33-91
S5 (TBP) = 2,4,6-Tribromophenol	30-147	37-115
S6 (TPH) = Terphenyl-d14	68-133	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/07/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
E14-02535-003	SOIL	C5331.D	N/A	N/A	52	76	N/A	73
E14-02535-005	SOIL	C5332.D	N/A	N/A	55	90	N/A	70
E14-02535-006	SOIL	C5333.D	N/A	N/A	48	80	N/A	72
E14-02492-001DL	SOIL	C5334.D	N/A	N/A	58	78	N/A	84
E14-02878-008DL	SOIL	C5335.D	N/A	N/A	55	80	N/A	66
E14-02878-009	SOIL	C5336.D	N/A	N/A	49	81	N/A	68
E14-02878-010	SOIL	C5337.D	N/A	N/A	36	89	N/A	72
E14-02878-011	SOIL	C5338.D	N/A	N/A	55	90	N/A	73
E14-02541-003	SOIL	C5339.D	N/A	N/A	75	81	N/A	74
E14-02878-001	SOIL	C5340.D	N/A	N/A	54	88	N/A	85
E14-02878-002	SOIL	C5341.D	N/A	N/A	44	69	N/A	69
E14-02878-003	SOIL	C5342.D	N/A	N/A	48	79	N/A	72
E14-02878-004	SOIL	C5343.D	N/A	N/A	49	83	N/A	78
E14-02878-005	SOIL	C5344.D	N/A	N/A	47	79	N/A	72
E14-02878-006	SOIL	C5345.D	N/A	N/A	52	82	N/A	72
E14-02878-007	SOIL	C5346.D	N/A	N/A	52	85	N/A	73

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	45-104	25-100
S2 (PHL) = Phenol-d5	52-106	25-108
S3 (NBZ) = Nitrobenzene-d5	57-107	24-91
S4 (FBP) = 2-Fluorobiphenyl	57-126	33-91
S5 (TBP) = 2,4,6-Tribromophenol	30-147	37-115
S6 (TPH) = Terphenyl-d14	68-133	15-122

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/08/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
CCV040BNA2	AQUEOUS	B7967.D	N/A	N/A	N/A	N/A	N/A	N/A
BLKA140407-01	AQUEOUS	B7984.D	50	49	58	76	57	78
LCSA140407-01	AQUEOUS	B7985.D	62	62	77	91	78	98
E14-02821-001MS	AQUEOUS	B7986.D	27	16	65	82	84	102
E14-02821-001MSD	AQUEOUS	B7987.D	25	16	61	79	80	52
E14-02801-001	AQUEOUS	B7988.D	N/A	N/A	42	61	N/A	65
E14-02797-001	AQUEOUS	B7989.D	N/A	N/A	58	81	N/A	85
E14-02797-005	AQUEOUS	B7990.D	N/A	N/A	51	81	N/A	85
E14-02860-001	AQUEOUS	B7991.D	N/A	N/A	64	86	N/A	91
E14-02861-001	AQUEOUS	B7992.D	N/A	N/A	49	80	N/A	88
E14-02902-001	AQUEOUS	B7993.D	N/A	N/A	48	72	N/A	85
E14-02901-001	AQUEOUS	B7994.D	N/A	N/A	47	66	N/A	86
E14-02919-001	AQUEOUS	B7995.D	N/A	N/A	66	90	N/A	99
E14-02931-001	AQUEOUS	B7996.D	N/A	N/A	62	89	N/A	93
E14-02935-002	AQUEOUS	B7997.D	N/A	N/A	56	75	N/A	100
E14-02935-003	AQUEOUS	B7998.D	N/A	N/A	59	84	N/A	88
E14-02968-001	AQUEOUS	B7999.D	29	19	65	91	80	93
E14-02969-001	AQUEOUS	B8000.D	31	20	65	89	87	95
E14-02970-001	AQUEOUS	B8001.D	25	15	60	90	75	90
E14-02878-038	AQUEOUS	B8002.D	N/A	N/A	59	82	N/A	96
E14-02928-001	AQUEOUS	B8003.D	N/A	N/A	63	87	N/A	101
E14-02928-002	AQUEOUS	B8004.D	N/A	N/A	64	89	N/A	109

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	10-100	28-108
S2 (PHL) = Phenol-d5	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	22-115	35-126
S6 (TPH) = Terphenyl-d14	23-124	32-135

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/07/2014

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
E14-02810-001	AQUEOUS	B8005.D	64	53	94	44	49	118
E14-02821-001	AQUEOUS	B8006.D	N/A	N/A	44	66	N/A	82
E14-02821-002	AQUEOUS	B8007.D	N/A	N/A	59	83	N/A	91

	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	10-100	28-108
S2 (PHL) = Phenol-d5	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	22-115	35-126
S6 (TPH) = Terphenyl-d14	23-124	32-135

* Column to be used to flag recovery values

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140404-01
Date Received: NA
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
Data file: C5286.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
N-Nitrosodimethylamine	50.0	35.3	71		40 - 140
Pyridine	50.0	21.5	43		20 - 120
Benzaldehyde	50.0	6.4	13		10 - 110
Phenol	50.0	37.8	76		30 - 140
Aniline	50.0	35.7	71		40 - 140
Bis(2-chloroethyl) ether	50.0	33.4	67		40 - 140
2-Chlorophenol	50.0	36.0	72		30 - 140
1,3-Dichlorobenzene	50.0	35.8	72		40 - 140
1,4-Dichlorobenzene	50.0	35.2	70		40 - 140
Benzyl alcohol	50.0	35.1	70		40 - 140
1,2-Dichlorobenzene	50.0	34.7	69		40 - 140
2-Methylphenol	50.0	39.1	78		30 - 140
Bis(2-chloroisopropyl) ether	50.0	37.3	75		40 - 140
4-Methylphenol	50.0	39.5	79		30 - 140
N-Nitrosodi-n-propylamine	50.0	33.8	68		40 - 140
Acetophenone	50.0	39.5	79		40 - 140
3-Methylphenol	50.0	39.5	79		30 - 140
Hexachloroethane	50.0	30.9	62		40 - 140
Nitrobenzene	50.0	39.2	78		40 - 140
Isophorone	50.0	33.3	67		40 - 140
2-Nitrophenol	50.0	50.0	100		30 - 140
2,4-Dimethylphenol	50.0	32.1	64		30 - 140
Bis(2-chloroethoxy) methane	50.0	33.6	67		40 - 140
Benzoic acid	50.0	51.0	102		30 - 140
2,4-Dimethylaniline	50.0	25.1	50		40 - 140
2,4-Dichlorophenol	50.0	33.5	67		30 - 140
1,2,4-Trichlorobenzene	50.0	29.6	59		40 - 140
Naphthalene	50.0	40.6	81		40 - 140
4-Chloroaniline	50.0	33.2	66		40 - 140
Hexachlorobutadiene	50.0	29.6	59		40 - 140
Caprolactam	50.0	36.7	73		40 - 140
4-Chloro-3-methylphenol	50.0	33.4	67		30 - 140
2-Methylnaphthalene	50.0	34.2	68		40 - 140
Hexachlorocyclopentadiene	50.0	10.9	22		5 - 105
2,4,6-Trichlorophenol	50.0	42.7	85		30 - 140
2,4,5-Trichlorophenol	50.0	39.9	80		30 - 140
1,1'-Biphenyl	50.0	36.2	72		40 - 140
2-Chloronaphthalene	50.0	42.8	86		40 - 140
2-Nitroaniline	50.0	51.5	103		40 - 140
Dimethyl phthalate	50.0	47.4	95		40 - 140
2,6-Dinitrotoluene	50.0	53.7	107		40 - 140
Acenaphthylene	50.0	38.3	77		40 - 140
3-Nitroaniline	50.0	67.9	136		40 - 140
Acenaphthene	50.0	44.2	88		40 - 140
2,4-Dinitrophenol	50.0	33.9	68		5 - 105

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS140404-01
Date Received: NA
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
Data file: C5286.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
4-Nitrophenol	50.0	40.9	82		30 - 140
2,4-Dinitrotoluene	50.0	60.5	121		40 - 140
Dibenzofuran	50.0	43.4	87		40 - 140
Diethyl phthalate	50.0	46.2	92		40 - 140
Fluorene	50.0	46.7	93		40 - 140
4-Chlorophenyl phenyl ether	50.0	44.4	89		40 - 140
4-Nitroaniline	50.0	54.7	109		40 - 140
1,2,4,5-Tetrachlorobenzene	50.0	32.9	66		40 - 140
2,3,4,6-Tetrachlorophenol	50.0	46.7	93		40 - 140
4,6-Dinitro-2-methylphenol	50.0	37.8	76		10 - 110
N-Nitrosodiphenylamine	50.0	43.9	88		40 - 140
1,2-Diphenylhydrazine	50.0	34.0	68		40 - 140
4-Bromophenyl phenyl ether	50.0	39.5	79		40 - 140
Hexachlorobenzene	50.0	40.7	81		40 - 140
Atrazine	50.0	41.8	84		20 - 120
Pentachlorophenol	50.0	41.6	83		30 - 140
Phenanthrene	50.0	44.2	88		40 - 140
Anthracene	50.0	47.5	95		40 - 140
Carbazole	50.0	42.7	85		40 - 140
Di-n-butyl phthalate	50.0	41.6	83		40 - 140
Fluoranthene	50.0	40.0	80		40 - 140
Benzidine	50.0	11.7	23		5 - 105
Pyrene	50.0	53.0	106		40 - 140
3,3'-Dimethylbenzidine	50.0	20.5	41		5 - 105
Butyl benzyl phthalate	50.0	52.9	106		40 - 140
3,3'-Dichlorobenzidine	50.0	61.4	123		40 - 140
Benzo[a]anthracene	50.0	52.5	105		40 - 140
Chrysene	50.0	60.0	120		40 - 140
Bis(2-ethylhexyl) phthalate	50.0	53.3	107		40 - 140
Di-n-octyl phthalate	50.0	56.3	113		40 - 140
Benzo[b]fluoranthene	50.0	54.5	109		40 - 140
Benzo[k]fluoranthene	50.0	59.8	120		40 - 140
Benzo[a]pyrene	50.0	61.5	123		40 - 140
Indeno[1,2,3-cd]pyrene	50.0	62.2	124		40 - 140
Dibenz[a,h]anthracene	50.0	65.9	132		40 - 140
Benzo[g,h,i]perylene	50.0	64.0	128		40 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA140407-01
Date Received: NA
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
Data file: B7985.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
N-Nitrosodimethylamine	30.0	18.3	61		40 - 140
Pyridine	30.0	15.5	52		20 - 120
Benzaldehyde	30.0	24.5	82		10 - 110
Phenol	30.0	20.7	69		30 - 140
Aniline	30.0	19.9	66		40 - 140
Bis(2-chloroethyl) ether	30.0	19.5	65		40 - 140
2-Chlorophenol	30.0	19.5	65		30 - 140
1,3-Dichlorobenzene	30.0	20.4	68		40 - 140
1,4-Dichlorobenzene	30.0	20.2	67		40 - 140
Benzyl alcohol	30.0	20.5	68		40 - 140
1,2-Dichlorobenzene	30.0	21.3	71		40 - 140
2-Methylphenol	30.0	21.6	72		30 - 140
Bis(2-chloroisopropyl) ether	30.0	19.2	64		40 - 140
4-Methylphenol	30.0	22.0	73		30 - 140
N-Nitrosodi-n-propylamine	30.0	18.7	62		40 - 140
Acetophenone	30.0	22.4	75		40 - 140
3-Methylphenol	30.0	22.0	73		30 - 140
Hexachloroethane	30.0	20.4	68		40 - 140
Nitrobenzene	30.0	19.5	65		40 - 140
Isophorone	30.0	19.7	66		40 - 140
2-Nitrophenol	30.0	23.0	77		30 - 140
2,4-Dimethylphenol	30.0	22.5	75		30 - 140
Bis(2-chloroethoxy) methane	30.0	21.5	72		40 - 140
Benzoic acid	30.0	25.4	85		30 - 140
2,4-Dimethylaniline	30.0	21.3	71		40 - 140
2,4-Dichlorophenol	30.0	22.4	75		30 - 140
1,2,4-Trichlorobenzene	30.0	22.1	74		40 - 140
Naphthalene	30.0	22.0	73		40 - 140
4-Chloroaniline	30.0	20.8	69		40 - 140
Hexachlorobutadiene	30.0	23.0	77		40 - 140
Caprolactam	30.0	21.3	71		40 - 140
4-Chloro-3-methylphenol	30.0	20.5	68		30 - 140
2-Methylnaphthalene	30.0	24.1	80		40 - 140
Hexachlorocyclopentadiene	30.0	27.3	91		5 - 105
2,4,6-Trichlorophenol	30.0	23.5	78		30 - 140
2,4,5-Trichlorophenol	30.0	22.5	75		30 - 140
1,1'-Biphenyl	30.0	23.8	79		40 - 140
2-Chloronaphthalene	30.0	21.9	73		40 - 140
2-Nitroaniline	30.0	21.2	71		40 - 140
Dimethyl phthalate	30.0	23.5	78		40 - 140
2,6-Dinitrotoluene	30.0	21.0	70		40 - 140
Acenaphthylene	30.0	21.9	73		40 - 140
3-Nitroaniline	30.0	22.7	76		40 - 140
Acenaphthene	30.0	22.9	76		40 - 140
2,4-Dinitrophenol	30.0	27.5	92		5 - 105

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA140407-01
Date Received: NA
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
Data file: B7985.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Limits Rec
4-Nitrophenol	30.0	20.1	67		30 - 140
2,4-Dinitrotoluene	30.0	23.7	79		40 - 140
Dibenzofuran	30.0	23.6	79		40 - 140
Diethyl phthalate	30.0	26.2	87		40 - 140
Fluorene	30.0	27.0	90		40 - 140
4-Chlorophenyl phenyl ether	30.0	28.6	95		40 - 140
4-Nitroaniline	30.0	23.5	78		40 - 140
1,2,4,5-Tetrachlorobenzene	30.0	23.7	79		40 - 140
2,3,4,6-Tetrachlorophenol	30.0	25.3	84		40 - 140
4,6-Dinitro-2-methylphenol	30.0	27.3	91		10 - 110
N-Nitrosodiphenylamine	30.0	25.5	85		40 - 140
1,2-Diphenylhydrazine	30.0	18.7	62		40 - 140
4-Bromophenyl phenyl ether	30.0	26.8	89		40 - 140
Hexachlorobenzene	30.0	26.2	87		40 - 140
Atrazine	30.0	26.4	88		20 - 120
Pentachlorophenol	30.0	26.8	89		30 - 140
Phenanthrene	30.0	23.1	77		40 - 140
Anthracene	30.0	25.3	84		40 - 140
Carbazole	30.0	24.3	81		40 - 140
Di-n-butyl phthalate	30.0	26.7	89		40 - 140
Fluoranthene	30.0	22.3	74		40 - 140
Benzidine	30.0	15.9	53		5 - 105
Pyrene	30.0	25.5	85		40 - 140
3,3'-Dimethylbenzidine	30.0	12.5	42		5 - 105
Butyl benzyl phthalate	30.0	27.4	91		40 - 140
3,3'-Dichlorobenzidine	30.0	30.9	103		40 - 140
Benzo[a]anthracene	30.0	26.8	89		40 - 140
Chrysene	30.0	27.9	93		40 - 140
Bis(2-ethylhexyl) phthalate	30.0	28.9	96		40 - 140
Di-n-octyl phthalate	30.0	33.3	111		40 - 140
Benzo[b]fluoranthene	30.0	29.8	99		40 - 140
Benzo[k]fluoranthene	30.0	31.8	106		40 - 140
Benzo[a]pyrene	30.0	33.1	110		40 - 140
Indeno[1,2,3-cd]pyrene	30.0	30.2	101		40 - 140
Dibenz[a,h]anthracene	30.0	31.8	106		40 - 140
Benzo[g,h,i]perylene	30.0	29.9	100		40 - 140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02847-001
Date Received: NA
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
MS Data file: C5287.D
MSD Data file: C5288.D

GC/MS Column: DB-5
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
N-Nitrosodimethylamine	50.0	0.0	31.5	63		31.3	63		1		40-140/30
Pyridine	50.0	0.0	17.6	35		15.6	31		12		20-120/30
Benzaldehyde	50.0	0.0	16.0	32		20.4	41		24		10-110/30
Phenol	50.0	0.0	28.6	57		27.6	55		4		30-140/30
Aniline	50.0	0.0	27.7	55		27.0	54		3		40-140/30
Bis(2-chloroethyl) ether	50.0	0.0	30.6	61		30.3	61		1		40-140/30
2-Chlorophenol	50.0	0.0	32.2	64		31.5	63		2		30-140/30
1,3-Dichlorobenzene	50.0	0.0	31.6	63		31.5	63		0		40-140/30
1,4-Dichlorobenzene	50.0	0.0	32.5	65		32.4	65		0		40-140/30
Benzyl alcohol	50.0	0.0	32.2	64		31.5	63		2		40-140/30
1,2-Dichlorobenzene	50.0	0.0	31.9	64		32.5	65		2		40-140/30
2-Methylphenol	50.0	0.0	35.4	71		34.0	68		4		30-140/30
Bis(2-chloroisopropyl) ether	50.0	0.0	32.8	66		32.7	65		0		40-140/30
4-Methylphenol	50.0	0.0	35.9	72		35.5	71		1		30-140/30
N-Nitrosodi-n-propylamine	50.0	0.0	36.8	74		44.4	89		19		40-140/30
Acetophenone	50.0	0.0	42.2	84		54.9	110		26		40-140/30
3-Methylphenol	50.0	0.0	35.9	72		35.5	71		1		30-140/30
Hexachloroethane	50.0	0.0	58.6	117		61.2	122		4		40-140/30
Nitrobenzene	50.0	0.0	38.5	77		31.0	62		22		40-140/30
Isophorone	50.0	0.0	38.9	78		36.4	73		7		40-140/30
2-Nitrophenol	50.0	0.0	56.0	112		50.0	100		11		30-140/30
2,4-Dimethylphenol	50.0	0.0	32.8	66		28.0	56		16		30-140/30
Bis(2-chloroethoxy) methane	50.0	0.0	32.1	64		27.9	56		14		40-140/30
Benzoic acid	50.0	0.0	51.3	103		46.5	93		10		30-140/30
2,4-Dimethylaniline	50.0	0.0	20.8	42		20.9	42		0		40-140/30
2,4-Dichlorophenol	50.0	0.0	33.1	66		28.4	57		15		30-140/30
1,2,4-Trichlorobenzene	50.0	0.0	27.9	56		23.3	47		18		40-140/30
Naphthalene	50.0	46.9	69.1	44		70.6	47		2		40-140/30
4-Chloroaniline	50.0	0.0	46.4	93		42.5	85		9		40-140/30
Hexachlorobutadiene	50.0	0.0	28.5	57		24.4	49		16		40-140/30
Caprolactam	50.0	0.0	39.3	79		42.6	85		8		40-140/30
4-Chloro-3-methylphenol	50.0	0.0	35.2	70		31.9	64		10		30-140/30
2-Methylnaphthalene	50.0	85.3	143.8	117		121.9	73		16		40-140/30
Hexachlorocyclopentadiene	50.0	0.0	9.2	18		10.4	21		12		5-105/30
2,4,6-Trichlorophenol	50.0	0.0	35.1	70		34.8	70		1		30-140/30
2,4,5-Trichlorophenol	50.0	0.0	45.0	90		43.7	87		3		30-140/30
1,1'-Biphenyl	50.0	0.0	43.6	87		49.3	99		12		40-140/30
2-Chloronaphthalene	50.0	0.0	40.9	82		41.9	84		2		40-140/30
2-Nitroaniline	50.0	0.0	47.3	95		51.1	102		8		40-140/30
Dimethyl phthalate	50.0	0.0	40.4	81		38.1	76		6		40-140/30
2,6-Dinitrotoluene	50.0	0.0	51.5	103		49.3	99		4		40-140/30
Acenaphthylene	50.0	5.3	34.6	59		37.5	64		8		40-140/30
3-Nitroaniline	50.0	0.0	51.1	102		50.4	101		1		40-140/30
Acenaphthene	50.0	16.7	71.5	110		61.3	89		15		40-140/30
2,4-Dinitrophenol	50.0	0.0	29.5	59		28.8	58		2		5-105/30

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02847-001
Date Received: NA
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
MS Data file: C5287.D
MSD Data file: C5288.D

GC/MS Column: DB-5
Sample wt/vol: 15.03g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
4-Nitrophenol	50.0	0.0	50.7	101		53.1	106		5		30-140/30
2,4-Dinitrotoluene	50.0	0.0	59.9	120		48.7	97		21		40-140/30
Dibenzofuran	50.0	0.0	42.8	86		49.0	98		14		40-140/30
Diethyl phthalate	50.0	0.0	39.1	78		40.5	81		4		40-140/30
Fluorene	50.0	26.2	59.9	67		61.0	70		2		40-140/30
4-Chlorophenyl phenyl ether	50.0	0.0	36.4	73		36.5	73		0		40-140/30
4-Nitroaniline	50.0	0.0	56.2	112		51.0	102		10		40-140/30
1,2,4,5-Tetrachlorobenzene	50.0	0.0	29.1	58		28.4	57		2		40-140/30
2,3,4,6-Tetrachlorophenol	50.0	0.0	42.2	84		41.9	84		1		40-140/30
4,6-Dinitro-2-methylphenol	50.0	0.0	32.2	64		29.0	58		10		10-110/30
N-Nitrosodiphenylamine	50.0	0.0	35.3	71		45.0	90		24		40-140/30
1,2-Diphenylhydrazine	50.0	0.0	29.8	60		35.6	71		18		40-140/30
4-Bromophenyl phenyl ether	50.0	0.0	30.5	61		31.9	64		4		40-140/30
Hexachlorobenzene	50.0	0.0	28.9	58		31.6	63		9		40-140/30
Atrazine	50.0	0.0	43.1	86		50.2	100		15		20-120/30
Pentachlorophenol	50.0	0.0	30.2	60		33.6	67		11		30-140/30
Phenanthrene	50.0	44.6	93.6	98		97.6	106		4		40-140/30
Anthracene	50.0	0.0	39.2	78		43.7	87		11		40-140/30
Carbazole	50.0	0.0	36.9	74		40.9	82		10		40-140/30
Di-n-butyl phthalate	50.0	0.0	35.5	71		47.4	95		29		40-140/30
Fluoranthene	50.0	1.6	35.9	69		38.8	74		8		40-140/30
Benzidine	50.0	0.0	34.1	68		32.3	65		5		5-105/30
Pyrene	50.0	8.7	50.8	84		52.3	87		3		40-140/30
3,3'-Dimethylbenzidine	50.0	0.0	33.1	66		34.3	69		4		5-105/30
Butyl benzyl phthalate	50.0	0.0	44.0	88		44.7	89		2		40-140/30
3,3'-Dichlorobenzidine	50.0	0.0	55.4	111		55.5	111		0		40-140/30
Benzo[a]anthracene	50.0	0.0	46.1	92		46.6	93		1		40-140/30
Chrysene	50.0	0.0	53.1	106		53.3	107		0		40-140/30
Bis(2-ethylhexyl) phthalate	50.0	0.0	48.0	96		49.0	98		2		40-140/30
Di-n-octyl phthalate	50.0	0.0	60.1	120		61.0	122		1		40-140/30
Benzo[b]fluoranthene	50.0	0.0	54.5	109		47.6	95		14		40-140/30
Benzo[k]fluoranthene	50.0	0.0	54.2	108		63.6	127		16		40-140/30
Benzo[a]pyrene	50.0	0.0	59.3	119		60.5	121		2		40-140/30
Indeno[1,2,3-cd]pyrene	50.0	0.0	60.8	122		59.1	118		3		40-140/30
Dibenz[a,h]anthracene	50.0	0.0	62.2	124		61.8	124		1		40-140/30
Benzo[g,h,i]perylene	50.0	0.0	56.7	113		57.0	114		1		40-140/30

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02821-001
Date Received: 04/03/2014
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
MS Data file: B7986.D
MSD Data file: B7987.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
N-Nitrosodimethylamine	40.0	0.0	25.2	63		24.2	61		4		40-140/20
Pyridine	40.0	0.0	16.6	42		16.0	40		4		20-120/20
Benzaldehyde	40.0	0.0	33.5	84		34.3	86		2		10-110/20
Phenol	40.0	0.0	35.1	88		33.9	85		3		30-140/20
Aniline	40.0	0.0	19.3	48		18.8	47		3		40-140/20
Bis(2-chloroethyl) ether	40.0	0.0	27.7	69		26.9	67		3		40-140/20
2-Chlorophenol	40.0	0.0	28.1	70		26.8	67		5		30-140/20
1,3-Dichlorobenzene	40.0	0.0	27.1	68		25.7	64		5		40-140/20
1,4-Dichlorobenzene	40.0	0.0	27.2	68		25.6	64		6		40-140/20
Benzyl alcohol	40.0	0.0	30.7	77		29.2	73		5		40-140/20
1,2-Dichlorobenzene	40.0	0.0	28.4	71		26.7	67		6		40-140/20
2-Methylphenol	40.0	0.0	31.8	80		31.0	78		3		30-140/20
Bis(2-chloroisopropyl) ether	40.0	0.0	27.4	69		25.8	65		6		40-140/20
4-Methylphenol	40.0	0.0	34.3	86		32.8	82		4		30-140/20
N-Nitrosodi-n-propylamine	40.0	0.0	27.5	69		25.8	65		6		40-140/20
Acetophenone	40.0	0.0	34.8	87		32.7	82		6		40-140/20
3-Methylphenol	40.0	0.0	34.3	86		32.8	82		4		30-140/20
Hexachloroethane	40.0	0.0	30.1	75		28.8	72		4		40-140/20
Nitrobenzene	40.0	0.0	29.7	74		28.2	71		5		40-140/20
Isophorone	40.0	0.0	30.8	77		29.0	73		6		40-140/20
2-Nitrophenol	40.0	0.0	32.6	82		30.5	76		7		30-140/20
2,4-Dimethylphenol	40.0	0.0	34.0	85		32.7	82		4		30-140/20
Bis(2-chloroethoxy) methane	40.0	0.0	31.6	79		29.8	75		6		40-140/20
Benzoic acid	40.0	0.0	43.2	108		41.1	103		5		30-140/20
2,4-Dimethylaniline	40.0	0.0	26.4	66		25.2	63		5		40-140/20
2,4-Dichlorophenol	40.0	0.0	33.2	83		30.8	77		8		30-140/20
1,2,4-Trichlorobenzene	40.0	0.0	30.6	77		28.8	72		6		40-140/20
Naphthalene	40.0	0.0	31.4	79		30.3	76		4		40-140/20
4-Chloroaniline	40.0	0.0	29.4	74		27.8	70		6		40-140/20
Hexachlorobutadiene	40.0	0.0	30.3	76		29.3	73		3		40-140/20
Caprolactam	40.0	0.0	39.0	98		34.5	86		12		40-140/20
4-Chloro-3-methylphenol	40.0	0.0	33.0	83		30.6	77		8		30-140/20
2-Methylnaphthalene	40.0	0.0	33.8	85		31.8	80		6		40-140/20
Hexachlorocyclopentadiene	40.0	0.0	36.8	92		39.4	99		7		5-105/20
2,4,6-Trichlorophenol	40.0	0.0	37.7	94		36.4	91		4		30-140/20
2,4,5-Trichlorophenol	40.0	0.0	36.2	91		34.7	87		4		30-140/20
1,1'-Biphenyl	40.0	0.0	35.5	89		33.3	83		6		40-140/20
2-Chloronaphthalene	40.0	0.0	32.7	82		30.8	77		6		40-140/20
2-Nitroaniline	40.0	0.0	37.2	93		35.5	89		5		40-140/20
Dimethyl phthalate	40.0	0.0	38.3	96		36.7	92		4		40-140/20
2,6-Dinitrotoluene	40.0	0.0	37.3	93		34.8	87		7		40-140/20
Acenaphthylene	40.0	0.0	33.6	84		31.8	80		6		40-140/20
3-Nitroaniline	40.0	0.0	38.3	96		36.7	92		4		40-140/20
Acenaphthene	40.0	0.0	33.8	85		32.1	80		5		40-140/20
2,4-Dinitrophenol	40.0	0.0	36.7	92		36.8	92		0		5-105/20

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E14-02821-001
Date Received: 04/03/2014
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
MS Data file: B7986.D
MSD Data file: B7987.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#	Limits Rec/RPD
4-Nitrophenol	40.0	0.0	36.3	91		37.0	93		2		30-140/20
2,4-Dinitrotoluene	40.0	0.0	39.4	99		38.0	95		4		40-140/20
Dibenzofuran	40.0	0.0	34.7	87		33.0	83		5		40-140/20
Diethyl phthalate	40.0	0.0	39.1	98		37.7	94		4		40-140/20
Fluorene	40.0	0.0	38.2	96		35.9	90		6		40-140/20
4-Chlorophenyl phenyl ether	40.0	0.0	39.7	99		37.1	93		7		40-140/20
4-Nitroaniline	40.0	0.0	31.7	79		31.7	79		0		40-140/20
1,2,4,5-Tetrachlorobenzene	40.0	0.0	36.0	90		34.4	86		5		40-140/20
2,3,4,6-Tetrachlorophenol	40.0	0.0	38.7	97		36.3	91		6		40-140/20
4,6-Dinitro-2-methylphenol	40.0	0.0	38.7	97		36.9	92		5		10-110/20
N-Nitrosodiphenylamine	40.0	0.0	40.2	101		38.6	97		4		40-140/20
1,2-Diphenylhydrazine	40.0	0.0	29.9	75		28.7	72		4		40-140/20
4-Bromophenyl phenyl ether	40.0	0.0	42.8	107		39.9	100		7		40-140/20
Hexachlorobenzene	40.0	0.0	43.6	109		40.7	102		7		40-140/20
Atrazine	40.0	0.0	41.8	105		40.3	101		4		20-120/20
Pentachlorophenol	40.0	0.0	49.0	123		46.0	115		6		30-140/20
Phenanthrene	40.0	0.0	39.0	98		36.3	91		7		40-140/20
Anthracene	40.0	0.0	40.9	102		38.9	97		5		40-140/20
Carbazole	40.0	0.0	40.5	101		38.0	95		6		40-140/20
Di-n-butyl phthalate	40.0	0.0	46.1	115		43.6	109		6		40-140/20
Fluoranthene	40.0	0.0	26.5	66		29.6	74		11		40-140/20
Benzidine	40.0	0.0	2.6	7		2.2	6		17		5-105/20
Pyrene	40.0	0.0	26.2	66		25.0	63		5		40-140/20
3,3'-Dimethylbenzidine	40.0	0.0	2.4	6		2.1	5		13		5-105/20
Butyl benzyl phthalate	40.0	0.0	39.3	98		36.0	90		9		40-140/20
3,3'-Dichlorobenzidine	40.0	0.0	38.4	96		37.1	93		3		40-140/20
Benzo[a]anthracene	40.0	0.0	48.5	121		45.5	114		6		40-140/20
Chrysene	40.0	0.0	49.6	124		47.5	119		4		40-140/20
Bis(2-ethylhexyl) phthalate	40.0	0.0	51.7	129		48.3	121		7		40-140/20
Di-n-octyl phthalate	40.0	0.0	51.6	129		52.7	132		2		40-140/20
Benzo[b]fluoranthene	40.0	0.0	48.2	121		52.5	131		9		40-140/20
Benzo[k]fluoranthene	40.0	0.0	49.4	124		48.5	121		2		40-140/20
Benzo[a]pyrene	40.0	0.0	44.4	111		50.0	125		12		40-140/20
Indeno[1,2,3-cd]pyrene	40.0	0.0	52.9	132		51.3	128		3		40-140/20
Dibenz[a,h]anthracene	40.0	0.0	51.0	128		47.1	118		8		40-140/20
Benzo[g,h,i]perylene	40.0	0.0	53.5	134		52.9	132		1		40-140/20

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C5285.D

Instrument ID: MSDC

Date Extracted: 04/04/14

Matrix: SOIL

Date Analyzed: 04/07/2014

Time Analyzed: 20:29

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSS140404-01	04/04/2014	20:44
.	E14-02847-001MS	04/04/2014	21:00
.	E14-02847-001MSD	04/04/2014	21:15
040214-1	E14-02847-001	04/04/2014	21:30
040214-2	E14-02847-002	04/04/2014	21:46
040214-3	E14-02847-003	04/04/2014	22:01
040214-4	E14-02847-004	04/04/2014	22:16
040214-5	E14-02847-005	04/04/2014	22:31
TR-1/6.2	E14-02492-001	04/04/2014	22:47
DS-9A_(4	E14-02878-008	04/04/2014	23:02
TR-1/6.2	E14-02492-001DL	04/07/2014	15:14
DS-9A_(4	E14-02878-008DL	04/07/2014	15:30
DS-9A_(8	E14-02878-009	04/07/2014	15:45
DS-9A_(9	E14-02878-010	04/07/2014	16:00
DS-9A_(1	E14-02878-011	04/07/2014	16:16
DR-B3B/1	E14-02541-003	04/07/2014	16:31
B-474_(4	E14-02878-001	04/07/2014	16:47
B-474_(6	E14-02878-002	04/07/2014	17:02
B-474_(8	E14-02878-003	04/07/2014	17:18
B-477_(2	E14-02878-004	04/07/2014	17:33
B-477_(3	E14-02878-005	04/07/2014	17:48
B-477_(8	E14-02878-006	04/07/2014	18:04
B-477_(1	E14-02878-007	04/07/2014	18:19

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B7984.D

Instrument ID: MSDB

Date Extracted: 04/07/14

Matrix: AQUEOUS

Date Analyzed: 04/07/2014

Time Analyzed: 00:25

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSA140407-01	04/08/2014	00:42
.	E14-02821-001MS	04/08/2014	00:59
.	E14-02821-001MSD	04/08/2014	01:16
MW-1/3.5	E14-02801-001	04/08/2014	01:33
FB_&_FB	E14-02797-001	04/08/2014	01:50
MW-6_&_M	E14-02797-005	04/08/2014	02:07
FRAC_TAN	E14-02860-001	04/08/2014	02:24
MW-1	E14-02861-001	04/08/2014	02:41
PZ-1	E14-02902-001	04/08/2014	02:57
PZ-1	E14-02901-001	04/08/2014	03:14
MW-1/6.0	E14-02919-001	04/08/2014	03:31
MW-1/11.	E14-02931-001	04/08/2014	03:48
FIELD_BL	E14-02935-002	04/08/2014	04:05
MW_3/14	E14-02935-003	04/08/2014	04:22
TANK-1	E14-02968-001	04/08/2014	04:39
TANK-2/3	E14-02969-001	04/08/2014	04:56
OIL-1	E14-02970-001	04/08/2014	05:13
FIELD_BL	E14-02878-038	04/08/2014	05:30
KO1	E14-02928-001	04/08/2014	05:47
KO2	E14-02928-002	04/08/2014	06:04
T-190	E14-02810-001	04/08/2014	06:21
INFLUENT	E14-02821-001	04/08/2014	06:38
EFFLUENT	E14-02821-002	04/08/2014	06:55

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C4753.D DFTPP Injection Date: 03/24/2014

Inst ID: MSDC DFTPP Injection Time: 05:58

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	41.7	
70	Less than 2.0% of mass 69	0.5	(1.1)1
127	40.0 - 60.0% of mass 198	51.5	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	25.0	
365	Greater than 1.0% of mass 198	3.0	
441	Present, but less than mass 443	14.09	(84.7)3
442	40.0 - 100.0% of mass 198	90.9	
443	17.0 - 23.0% of mass 442	16.6	(18.3)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN015-14	ICC001BNA1	C4754.D	03/24/2014	09:18
ABN016-14	ICC010BNA1	C4755.D	03/24/2014	09:33
ABN017-14	ICC020BNA1	C4756.D	03/24/2014	09:48
ABN018-14	ICC040BNA1	C4757.D	03/24/2014	10:19
ABN019-14	ICC080BNA1	C4758.D	03/24/2014	10:34
ABN020-14	ICC120BNA1	C4759.D	03/24/2014	10:50
ABN027-14	ICV040BNA1	C4760.D	03/24/2014	11:05
ABN026-14	ICC120BNA2	C4761.D	03/24/2014	11:21
ABN025-14	ICC080BNA2	C4762.D	03/24/2014	11:36
ABN024-14	ICC040BNA2	C4763.D	03/24/2014	11:51
ABN023-14	ICC020BNA2	C4764.D	03/24/2014	12:07
ABN022-14	ICC010BNA2	C4765.D	03/24/2014	12:22
ABN021-14	ICC001BNA2	C4766.D	03/24/2014	12:37
ABN028-14	ICV040BNA2	C4767.D	03/24/2014	12:53

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5250.D

DFTPP Injection Date : 04/04/2014

Inst ID: MSDC

DFTPP Injection Time: 11:29

m/z	Ion Abudance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	43.7		
68	Less than 2.0% of mass 69	0.0	(0.0	)1
69	Mass 69 relative abundance	46.3		
70	Less than 2.0% of mass 69	0.3	(0.7	)1
127	40.0 - 60.0% of mass 198	54.9		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.6		
275	10.0 - 30.0% of mass 198	25.0		
365	Greater than 1.0% of mass 198	3.0		
441	Present, but less than mass 443	14.67	(84.9	)3
442	40.0 - 100.0% of mass 198	91.9		
443	17.0 - 23.0% of mass 442	17.3	(18.8	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN027-14	CCVBNA1	C5251.D	04/04/2014	11:54
ABN028-14	CCVBNA2	C5252.D	04/04/2014	12:09
.	LCSS140403-02	C5253.D	04/04/2014	12:15
.	E14-02765-001MS	C5254.D	04/04/2014	12:31
.	E14-02765-001MSD	C5255.D	04/04/2014	12:46
AOC2-1/1	E14-02798-006	C5256.D	04/04/2014	13:01
AOC5-3	E14-02798-001	C5257.D	04/04/2014	13:16
AOC8-1	E14-02798-003	C5258.D	04/04/2014	13:32
AOC10-1	E14-02798-004	C5259.D	04/04/2014	13:47
SB-11/14	E14-02357-005	C5260.D	04/04/2014	14:03
.	BLKS140403-04	C5261.D	04/04/2014	14:18
.	LCSS140403-04	C5262.D	04/04/2014	14:33
.	E14-02771-031MS	C5263.D	04/04/2014	14:52
.	E14-02771-031MSD	C5264.D	04/04/2014	15:07
E4_(10-1	E14-02771-031	C5265.D	04/04/2014	15:22
E4_(15-2	E14-02771-033	C5266.D	04/04/2014	15:38
C4_(0-5)	E14-02771-035	C5267.D	04/04/2014	15:53
C4_(5-10	E14-02771-037	C5268.D	04/04/2014	16:08
C4_(10-1	E14-02771-039	C5269.D	04/04/2014	16:24
E5_(0-5)	E14-02771-001	C5270.D	04/04/2014	16:39
E5_(5-10	E14-02771-003	C5271.D	04/04/2014	16:54
E5_(10-1	E14-02771-005	C5272.D	04/04/2014	17:09
E5_(15-2	E14-02771-007	C5273.D	04/04/2014	17:25

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5250.D

DFTPP Injection Date : 04/04/2014

Inst ID: MSDC

DFTPP Injection Time: 11:29

m/z	Ion Abudance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	43.7		
68	Less than 2.0% of mass 69	0.0	(0.0	)1
69	Mass 69 relative abundance	46.3		
70	Less than 2.0% of mass 69	0.3	(0.7	)1
127	40.0 - 60.0% of mass 198	54.9		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.6		
275	10.0 - 30.0% of mass 198	25.0		
365	Greater than 1.0% of mass 198	3.0		
441	Present, but less than mass 443	14.67	(84.9	)3
442	40.0 - 100.0% of mass 198	91.9		
443	17.0 - 23.0% of mass 442	17.3	(18.8	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
D5_(0-5)	E14-02771-009	C5274.D	04/04/2014	17:40
D5_(5-10	E14-02771-011	C5275.D	04/04/2014	17:56
D5_(10-1	E14-02771-013	C5276.D	04/04/2014	18:11
D5_(15-2	E14-02771-015	C5277.D	04/04/2014	18:26
C5_(0-5)	E14-02771-017	C5278.D	04/04/2014	18:42
C5_(5-10	E14-02771-019	C5279.D	04/04/2014	18:57
C5_(10-1	E14-02771-021	C5280.D	04/04/2014	19:12
C5_(15-2	E14-02771-023	C5281.D	04/04/2014	19:28
C5_(20-2	E14-02771-025	C5282.D	04/04/2014	19:43
E4_(0-5)	E14-02771-027	C5283.D	04/04/2014	19:58
E4_(5-10	E14-02771-029	C5284.D	04/04/2014	20:14
.	BLKS140404-01	C5285.D	04/04/2014	20:29
.	LCSS140404-01	C5286.D	04/04/2014	20:44
.	E14-02847-001MS	C5287.D	04/04/2014	21:00
.	E14-02847-001MSD	C5288.D	04/04/2014	21:15
040214-1	E14-02847-001	C5289.D	04/04/2014	21:30
040214-2	E14-02847-002	C5290.D	04/04/2014	21:46
040214-3	E14-02847-003	C5291.D	04/04/2014	22:01
040214-4	E14-02847-004	C5292.D	04/04/2014	22:16
040214-5	E14-02847-005	C5293.D	04/04/2014	22:31
TR-1/6.2	E14-02492-001	C5294.D	04/04/2014	22:47
DS-9A_(4	E14-02878-008	C5295.D	04/04/2014	23:02

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5307.D

DFTPP Injection Date : 04/07/2014

Inst ID: MSDC

DFTPP Injection Time: 08:19

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	42.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	46.6	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	56.1	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	22.1	
365	Greater than 1.0% of mass 198	1.7	
441	Present, but less than mass 443	8.45	(72.5)3
442	40.0 - 100.0% of mass 198	56.6	
443	17.0 - 23.0% of mass 442	11.7	(20.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN027-14	CCVBNA1	C5308.D	04/07/2014	08:29
ABN028-14	CCVBNA2	C5309.D	04/07/2014	08:45
.	BLKS140404-04	C5310.D	04/07/2014	09:07
.	LCSS140404-04	C5311.D	04/07/2014	09:22
.	E14-02851-021MS	C5312.D	04/07/2014	09:37
.	E14-02851-021MSD	C5313.D	04/07/2014	09:52
A-4_(5-1	E14-02851-021	C5314.D	04/07/2014	10:08
A-4_(10-	E14-02851-023	C5315.D	04/07/2014	10:23
A-4_(15-	E14-02851-025	C5316.D	04/07/2014	10:38
A-4_(20-	E14-02851-027	C5317.D	04/07/2014	10:54
A-4_(25-	E14-02851-029	C5318.D	04/07/2014	11:09
A-4_(30-	E14-02851-031	C5319.D	04/07/2014	11:24
A-4_(35-	E14-02851-033	C5320.D	04/07/2014	11:39
A-4_(40-	E14-02851-035	C5321.D	04/07/2014	11:55
A-5_(0-5	E14-02851-037	C5322.D	04/07/2014	12:10
A-5_(5-1	E14-02851-039	C5323.D	04/07/2014	12:25
A-5_(10-	E14-02851-041	C5324.D	04/07/2014	12:41
A-5_(15-	E14-02851-043	C5325.D	04/07/2014	12:56
A-5_(20-	E14-02851-045	C5326.D	04/07/2014	13:11
A-5_(25-	E14-02851-047	C5327.D	04/07/2014	13:27
A-5_(30-	E14-02851-049	C5328.D	04/07/2014	13:42
A-5_(35-	E14-02851-051	C5329.D	04/07/2014	13:57
A-5_(40-	E14-02851-053	C5330.D	04/07/2014	14:13

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5307.D

DFTPP Injection Date : 04/07/2014

Inst ID: MSDC

DFTPP Injection Time: 08:19

m/z	Ion Abudance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	42.3		
68	Less than 2.0% of mass 69	0.0	(0.0	)1
69	Mass 69 relative abundance	46.6		
70	Less than 2.0% of mass 69	0.3	(0.7	)1
127	40.0 - 60.0% of mass 198	56.1		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.7		
275	10.0 - 30.0% of mass 198	22.1		
365	Greater than 1.0% of mass 198	1.7		
441	Present, but less than mass 443	8.45	(72.5	)3
442	40.0 - 100.0% of mass 198	56.6		
443	17.0 - 23.0% of mass 442	11.7	(20.6	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
E1-12(A)	E14-02535-003	C5331.D	04/07/2014	14:28
E1-13(A)	E14-02535-005	C5332.D	04/07/2014	14:44
E1-13(B)	E14-02535-006	C5333.D	04/07/2014	14:59
TR-1/6.2	E14-02492-001DL	C5334.D	04/07/2014	15:14
DS-9A_(4	E14-02878-008DL	C5335.D	04/07/2014	15:30
DS-9A_(8	E14-02878-009	C5336.D	04/07/2014	15:45
DS-9A_(9	E14-02878-010	C5337.D	04/07/2014	16:00
DS-9A_(1	E14-02878-011	C5338.D	04/07/2014	16:16
DR-B3B/1	E14-02541-003	C5339.D	04/07/2014	16:31
B-474_(4	E14-02878-001	C5340.D	04/07/2014	16:47
B-474_(6	E14-02878-002	C5341.D	04/07/2014	17:02
B-474_(8	E14-02878-003	C5342.D	04/07/2014	17:18
B-477_(2	E14-02878-004	C5343.D	04/07/2014	17:33
B-477_(3	E14-02878-005	C5344.D	04/07/2014	17:48
B-477_(8	E14-02878-006	C5345.D	04/07/2014	18:04
B-477_(1	E14-02878-007	C5346.D	04/07/2014	18:19

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B7925.D DFTPP Injection Date : 04/07/2014

Inst ID: MSDB DFTPP Injection Time: 08:03

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	39.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	42.3	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	40.0 - 60.0% of mass 198	45.7	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.4	
275	10.0 - 30.0% of mass 198	28.2	
365	Greater than 1.0% of mass 198	3.4	
441	Present, but less than mass 443	14.02	(67.2)3
442	40.0 - 100.0% of mass 198	92.7	
443	17.0 - 23.0% of mass 442	20.9	(22.5)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN061-13	ICC040BNA1	B7926.D	04/07/2014	08:36
ABN058-13	ICC001BNA1	B7927.D	04/07/2014	08:53
ABN059-13	ICC010BNA1	B7928.D	04/07/2014	09:10
ABN060-13	ICC020BNA1	B7929.D	04/07/2014	09:27
ABN062-13	ICC080BNA1	B7930.D	04/07/2014	09:44
ABN063-13	ICC120BNA1	B7931.D	04/07/2014	10:08
ABN069-13	ICC120BNA2	B7932.D	04/07/2014	10:25
ABN068-13	ICC080BNA2	B7933.D	04/07/2014	10:42
ABN067-13	ICC040BNA2	B7934.D	04/07/2014	10:59
ABN066-13	ICC020BNA2	B7935.D	04/07/2014	11:15
ABN065-13	ICC010BNA2	B7936.D	04/07/2014	11:32
ABN064-13	ICC001BNA2	B7937.D	04/07/2014	11:49
ABN070-13	ICV040BNA1	B7943.D	04/07/2014	13:25
ABN071-13	ICV040BNA2	B7944.D	04/07/2014	13:42

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B7965.D

DFTPP Injection Date : 04/07/2014

Inst ID: MSDB

DFTPP Injection Time: 19:28

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	55.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	55.4	
70	Less than 2.0% of mass 69	0.7	(1.2)1
127	40.0 - 60.0% of mass 198	59.9	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.0	
275	10.0 - 30.0% of mass 198	23.4	
365	Greater than 1.0% of mass 198	1.5	
441	Present, but less than mass 443	7.66	(56.4)3
442	40.0 - 100.0% of mass 198	59.8	
443	17.0 - 23.0% of mass 442	13.6	(22.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN070-13	CCV040BNA1	B7966.D	04/07/2014	19:39
ABN071-13	CCV040BNA2	B7967.D	04/07/2014	19:56
.	BLKA140407-01	B7984.D	04/08/2014	00:25
.	LCSA140407-01	B7985.D	04/08/2014	00:42
.	E14-02821-001MS	B7986.D	04/08/2014	00:59
.	E14-02821-001MSD	B7987.D	04/08/2014	01:16
MW-1/3.5	E14-02801-001	B7988.D	04/08/2014	01:33
FB_&_FB	E14-02797-001	B7989.D	04/08/2014	01:50
MW-6_&_M	E14-02797-005	B7990.D	04/08/2014	02:07
FRAC_TAN	E14-02860-001	B7991.D	04/08/2014	02:24
MW-1	E14-02861-001	B7992.D	04/08/2014	02:41
PZ-1	E14-02902-001	B7993.D	04/08/2014	02:57
PZ-1	E14-02901-001	B7994.D	04/08/2014	03:14
MW-1/6.0	E14-02919-001	B7995.D	04/08/2014	03:31
MW-1/11.	E14-02931-001	B7996.D	04/08/2014	03:48
FIELD_BL	E14-02935-002	B7997.D	04/08/2014	04:05
MW_3/14	E14-02935-003	B7998.D	04/08/2014	04:22
TANK-1	E14-02968-001	B7999.D	04/08/2014	04:39
TANK-2/3	E14-02969-001	B8000.D	04/08/2014	04:56
OIL-1	E14-02970-001	B8001.D	04/08/2014	05:13
FIELD_BL	E14-02878-038	B8002.D	04/08/2014	05:30
KO1	E14-02928-001	B8003.D	04/08/2014	05:47
KO2	E14-02928-002	B8004.D	04/08/2014	06:04

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B7965.D

DFTPP Injection Date : 04/07/2014

Inst ID: MSDB

DFTPP Injection Time: 19:28

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	55.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	55.4	
70	Less than 2.0% of mass 69	0.7	(1.2)1
127	40.0 - 60.0% of mass 198	59.9	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.0	
275	10.0 - 30.0% of mass 198	23.4	
365	Greater than 1.0% of mass 198	1.5	
441	Present, but less than mass 443	7.66	(56.4)3
442	40.0 - 100.0% of mass 198	59.8	
443	17.0 - 23.0% of mass 442	13.6	(22.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
T-190	E14-02810-001	B8005.D	04/08/2014	06:21
INFLUENT	E14-02821-001	B8006.D	04/08/2014	06:38
EFFLUENT	E14-02821-002	B8007.D	04/08/2014	06:55

Response Factor Report MSD_C

Method Path : C:\MSDCHEM\1\METHODS\
Method File : CS0514.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Mar 27 12:25:08 2014
Response Via : Initial Calibration

Calibration Files
1 =C4754.D 10 =C4755.D 20 =C4756.D
40 =C4757.D 80 =C4758.D 120 =C4759.D =

		Compound	1	10	20	40	80	120	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)	T	N-Nitrosodimethyl	0.781	0.730	0.749	0.688	0.760	0.766	0.746	4.43
3)	T	Pyridine	1.268	1.544	1.460	1.112	1.057	0.973	1.236	18.53
4)	S	2-Fluorophenol	0.941	1.247	1.162	1.342	1.294	1.420	1.234	13.61
5)	T	Benzaldehyde	0.831	0.697	0.671	0.748	0.721	0.733	0.733	7.53
6)	S	Phenol-d5	1.236	1.442	1.456	1.545	1.656	1.792	1.521	12.61
7)	MC	Phenol	0.261	0.196	0.195	0.189	0.200	0.188	0.205	13.62
8)	T	Aniline	0.727	0.726	0.726	0.710	0.763	0.694	0.725	3.17
9)	T	Bis(2-chloroethyl	0.956	0.936	0.976	0.946	0.985	0.941	0.957	2.06
10)	M	2-Chlorophenol	1.401	1.262	1.286	1.348	1.237	1.158	1.282	6.66
11)	T	1,3-Dichlorobenze	1.495	1.378	1.409	1.400	1.286	1.304	1.379	5.52
12)	MC	1,4-Dichlorobenze	1.356	1.471	1.470	1.420	1.368	1.198	1.380	7.38
13)	T	Benzyl alcohol	0.855	0.842	0.907	0.871	1.009	0.933	0.903	6.85
14)	T	1,2-Dichlorobenze	1.371	1.355	1.345	1.304	1.382	1.317	1.346	2.25
15)	T	2-Methylphenol	1.138	1.109	1.161	1.135	1.247	0.934	1.121	9.18
16)	T	Bis(2-chloroisopr	1.742	1.644	1.662	1.687	1.328	1.195	1.543	14.56
17)	T	4-Methylphenol	1.170	1.208	1.167	1.283	1.307	1.029	1.194	8.32
18)	MP	N-Nitrosodi-n-pro	0.784	1.001	0.971	1.035	1.074	0.933	0.966	10.56
19)	T	Acetophenone	1.875	1.713	1.770	1.780	1.622	1.366	1.688	10.56
20)	T	3-Methylphenol	1.175	1.216	1.176	1.291	1.315	1.028	1.200	8.55
21)	T	Hexachloroethane	0.528	0.491	0.503	0.495	0.535	0.501	0.509	3.56
22)	T	2,6-Dimethylpheno							0.000	-1.00
23)	I	Naphthalene-d8	----------ISTD----------							
24)	S	Nitrobenzene-d5	0.358	0.316	0.321	0.335	0.396	0.399	0.354	10.37
25)	T	Nitrobenzene	0.265	0.313	0.311	0.342	0.341	0.314	0.314	8.93
26)	T	Isophorone	0.877	0.848	0.935	0.868	0.704	0.594	0.804	15.97
27)	TC	2-Nitrophenol	0.121	0.097	0.114	0.125	0.163	0.113	0.122	18.10
28)	T	2,4-Dimethylpheno	0.383	0.405	0.442	0.411	0.427	0.392	0.410	5.36
29)	T	Bis(2-chloroethox	0.516	0.487	0.533	0.508	0.504	0.399	0.491	9.65
30)	T	Benzoic acid	0.077	0.079	0.103	0.109	0.122	0.107	0.100	17.79
31)	T	2,4-Dimethylanili	0.606	0.736	0.786	0.599	0.542	0.451	0.620	19.90
32)	TC	2,4-Dichloropheno	0.296	0.295	0.306	0.315	0.310	0.297	0.303	2.81
33)	M	1,2,4-Trichlorobe	0.400	0.368	0.382	0.353	0.366	0.312	0.363	8.23
34)	T	Naphthalene	1.033	1.004	1.199	0.839	0.871	0.668	0.936	19.61
35)	T	4-Chloroaniline	0.746	0.729	0.766	0.731	0.574	0.543	0.681	14.21
36)	T	4-Aminotoluene	0.867	0.866	0.676	0.894	0.545	0.889	0.790	18.36
37)	TC	Hexachlorobutadie	0.188	0.182	0.188	0.171	0.174	0.160	0.177	6.13
38)	T	Caprolactam	0.153	0.161	0.170	0.168	0.159	0.154	0.161	4.43
39)	T	2-Aminotoluene	0.867	0.866	0.678	0.894	0.545	0.889	0.790	18.32
40)	MC	4-Chloro-3-methyl	0.324	0.319	0.353	0.366	0.359	0.341	0.344	5.53
41)	T	2-Methylnaphthale	0.916	0.861	0.922	0.842	0.582	0.795	0.820	15.36
42)	T	2,5-Dimethylpheno							0.000	-1.00
43)	I	Acenaphthene-d10	----------ISTD----------							
44)	TP	Hexachlorocyclope	0.150	0.163	0.171	0.176	0.199	0.185	0.174	9.85
45)	TC	2,4,6-Trichloroph	0.232	0.239	0.268	0.273	0.291	0.287	0.265	9.23
46)	T	2,4,5-Trichloroph	0.232	0.269	0.271	0.304	0.324	0.304	0.284	11.66
47)	S	2-Fluorobiphenyl	0.844	1.063	1.012	0.924	1.054	1.250	1.024	13.53
48)	T	1,1'-Biphenyl	1.441	1.486	1.437	1.113	1.683	1.402	1.427	12.87
49)	T	2-Chloronaphthale	0.994	1.070	1.057	1.027	0.843	0.634	0.938	18.12
50)	T	2-Nitroaniline	0.173	0.236	0.153	0.165	0.231	0.173	0.188	18.98
51)	T	Dimethyl phthalat	1.058	1.152	1.120	1.083	0.822	0.757	0.999	16.68

52)	T	2,6-Dinitrotoluen	0.148	0.138	0.100	0.130	0.172	0.173		0.143	19.14
53)	T	Acenaphthylene	1.550	1.705	1.757	1.503	1.348	1.654		1.586	9.47
54)	T	3-Nitroaniline	0.114	0.149	0.144	0.172	0.189	0.160		0.155	16.67
55)	MC	Acenaphthene	1.071	1.115	1.090	1.032	0.812	0.681		0.967	18.35
56)	TP	2,4-Dinitrophenol	0.062	0.053	0.053	0.054	0.051	0.056		0.055	7.16
57)	MP	4-Nitrophenol	0.160	0.125	0.112	0.131	0.156	0.180		0.144	17.80
58)	M	2,4-Dinitrotoluen	0.118	0.083	0.097	0.138	0.118	0.139		0.116	19.44
59)	T	Dibenzofuran	1.418	1.503	1.482	1.315	0.885	1.499		1.350	17.68
60)	T	Diethyl phthalate	1.099	1.162	1.120	1.104	0.851	0.723		1.010	17.67
61)	T	Fluorene	1.090	1.200	1.189	1.156	0.867	0.738		1.040	18.51
62)	T	4-Chlorophenyl ph	0.502	0.522	0.524	0.508	0.487	0.461		0.501	4.76
63)	T	4-Nitroaniline	0.142	0.139	0.158	0.183	0.228	0.194		0.174	19.72
64)		1,2,4,5-Tetrachlo	0.526	0.695	0.669	0.546	0.490	0.461		0.565	16.95
65)	T	2,3,4,6-Tetrachlo	0.176	0.164	0.169	0.184	0.193	0.202		0.181	7.99
66)	I	Phenanthrene-d10	----------ISTD----------								
67)	T	4,6-Dinitro-2-met	0.057	0.055	0.061	0.058	0.066	0.072		0.061	10.38
68)	TC	N-Nitrosodiphenyl	0.637	0.637	0.651	0.566	0.476	0.573		0.590	11.26
69)	T	1,2-Diphenylhydra	1.144	1.142	1.157	0.864	1.071	0.670		1.008	19.74
70)	S	2,4,6-Tribromophe	0.105	0.097	0.103	0.094	0.100	0.125		0.104	10.82
71)	T	4-Bromophenyl phe	0.239	0.211	0.217	0.185	0.201	0.248		0.217	10.90
72)	T	Hexachlorobenzene	0.237	0.221	0.222	0.191	0.200	0.247		0.220	9.73
73)	T	Atrazine	0.205	0.215	0.220	0.187	0.197	0.240		0.211	8.87
74)	MC	Pentachlorophenol	0.097	0.079	0.088	0.087	0.102	0.101		0.092	9.97
75)	T	Phenanthrene	1.114	1.198	1.031	0.883	0.654	1.109		0.998	19.94
76)	T	Anthracene	0.998	1.170	0.987	0.908	0.708	0.711		0.914	19.66
77)	T	Carbazole	1.138	1.130	1.146	0.980	0.680	0.908		0.997	18.43
78)	T	Di-n-butyl phthal	1.202	1.264	1.122	0.917	1.166	0.969		1.107	12.29
79)	TC	Fluoranthene	1.178	1.086	1.117	0.934	0.752	0.891		0.993	16.25
80)	T	Benzidine	0.406	0.363	0.379	0.426	0.369	0.533		0.413	15.37
81)		4-Aminoaniline								0.000	-1.00
82)	I	Chrysene-d12	----------ISTD----------								
83)	M	Pyrene	1.208	1.135	1.172	1.143	0.927	0.752		1.056	16.90
84)	S	Terphenyl-d14	0.918	0.898	0.895	0.975	0.978	0.889		0.926	4.38
85)	T	3,3'-Dimethylbenz	0.433	0.496	0.531	0.694	0.546	0.499		0.533	16.50
86)	T	Butyl benzyl phth	0.459	0.457	0.486	0.488	0.558	0.518		0.494	7.75
87)	T	3,3'-Dichlorobenz	0.252	0.275	0.278	0.271	0.254	0.246		0.263	5.20
88)	T	Benzo[a]anthracen	0.963	0.862	0.867	0.838	0.894	0.784		0.868	6.84
89)	T	Chrysene	0.845	0.764	0.772	0.756	0.804	0.646		0.765	8.72
90)	T	Bis(2-ethylhexyl)	0.666	0.647	0.651	0.664	0.718	0.626		0.662	4.71
91)	T	3,3'-Dimethoxyben								0.000	-1.00
92)	I	Perylene-d12	----------ISTD----------								
93)	TC	Di-n-octyl phthal	1.279	1.456	1.427	1.278	1.396	1.280		1.353	6.13
94)	T	Benzo[b]fluoranth	1.086	1.193	1.091	1.149	1.340	1.285		1.191	8.71
95)	T	Benzo[k]fluoranth	1.261	1.126	1.180	1.075	1.074	1.120		1.139	6.26
96)	TC	Benzo[a]pyrene	0.933	0.978	0.992	1.018	1.136	1.120		1.030	7.89
97)	T	Indeno[1,2,3-cd]p	0.843	1.031	1.160	1.229	1.379	1.346		1.165	17.36
98)	T	Dibenz[a,h]anthra	0.646	0.831	0.908	0.974	1.081	1.058		0.917	17.67
99)	T	Benzo[g,h,i]peryl	0.792	0.919	0.974	1.025	1.136	1.137		0.997	13.33

(#) = Out of Range

CS0514.M Thu Mar 27 15:17:11 2014 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\C_Mar-14\03-24-14\
Data File : C4760.D
Acq On : 24 Mar 2014 11:05
Operator : EDM
Sample : ABN027-14,ICV040BNA1
Misc : NA,03/24/14,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Mar 27 15:18:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Mar 24 11:36:32 2014
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	105	0.00
2	T	N-Nitrosodimethylamine	0.746	0.699	6.3	107	0.00
3	T	Pyridine	1.236	1.129	8.7	107	0.00
4	S	2-Fluorophenol	1.234	1.325	-7.4	104	0.00
5	T	Benzaldehyde	0.733	0.636	13.2	100	0.00
6	S	Phenol-d5	1.521	1.478	2.8	101	0.00
7	MC	Phenol	0.205	0.189	7.8	106	0.00
8	T	Aniline	0.725	0.709	2.2	105	0.00
9	T	Bis(2-chloroethyl) ether	0.957	0.944	1.4	105	0.00
10	M	2-Chlorophenol	1.282	1.365	-6.5	107	0.00
11	T	1,3-Dichlorobenzene	1.379	1.394	-1.1	105	0.00
12	MC	1,4-Dichlorobenzene	1.380	1.390	-0.7	103	0.00
13	T	Benzyl alcohol	0.903	0.872	3.4	106	0.00
14	T	1,2-Dichlorobenzene	1.346	1.308	2.8	106	0.00
15	T	2-Methylphenol	1.121	1.153	-2.9	107	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.543	1.698	-10.0	106	0.00
17	T	4-Methylphenol	1.194	1.317	-10.3	108	0.00
18	MP	N-Nitrosodi-n-propylamine	0.966	1.034	-7.0	105	0.00
19	T	Acetophenone	1.688	1.778	-5.3	105	0.00
20	T	3-Methylphenol	1.200	1.315	-9.6	107	0.00
21	T	Hexachloroethane	0.509	0.495	2.8	105	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	103	0.00
24	S	Nitrobenzene-d5	0.354	0.386	-9.0	119	0.00
25	T	Nitrobenzene	0.314	0.395	-25.8	119	0.00
26	T	Isophorone	0.804	0.859	-6.8	102	0.00
27	TC	2-Nitrophenol	0.122	0.151	-23.8	124	0.00
28	T	2,4-Dimethylphenol	0.410	0.434	-5.9	109	0.00
29	T	Bis(2-chloroethoxy) methane	0.491	0.506	-3.1	102	0.00
30	T	Benzoic acid	0.100	0.107	-7.0	101	-0.02
31	T	2,4-Dimethylaniline	0.620	0.610	1.6	105	0.00
32	TC	2,4-Dichlorophenol	0.303	0.329	-8.6	107	0.00
33	M	1,2,4-Trichlorobenzene	0.363	0.367	-1.1	107	0.00
34	T	Naphthalene	0.936	0.830	11.3	102	0.00
35	T	4-Chloroaniline	0.681	0.737	-8.2	104	0.00
36	T	4-Aminotoluene	0.790	0.917	-16.1	105	0.00
37	TC	Hexachlorobutadiene	0.177	0.176	0.6	105	0.00
38	T	Caprolactam	0.161	0.167	-3.7	102	-0.01
39	T	2-Aminotoluene	0.790	0.917	-16.1	105	0.00
40	MC	4-Chloro-3-methylphenol	0.344	0.375	-9.0	105	0.00
41	T	2-Methylnaphthalene	0.820	0.891	-8.7	109	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	104	0.00
44	TP	Hexachlorocyclopentadiene	0.174	0.176	-1.1	104	0.00
45	TC	2,4,6-Trichlorophenol	0.265	0.281	-6.0	107	0.00

46	T	2,4,5-Trichlorophenol	0.284	0.309	-8.8	106	0.00
47	S	2-Fluorobiphenyl	1.024	0.945	7.7	107	0.00
48	T	1,1'-Biphenyl	1.427	1.172	17.9	110	0.00
49	T	2-Chloronaphthalene	0.938	1.042	-11.1	106	0.00
50	T	2-Nitroaniline	0.188	0.196	-4.3	124	0.00
51	T	Dimethyl phthalate	0.999	1.059	-6.0	102	0.00
52	T	2,6-Dinitrotoluene	0.143	0.160	-11.9	128	0.00
53	T	Acenaphthylene	1.586	1.385	12.7	96	0.00
54	T	3-Nitroaniline	0.155	0.198	-27.7	120	0.00
55	MC	Acenaphthene	0.967	0.987	-2.1	100	0.00
56	TP	2,4-Dinitrophenol	0.055	0.051	7.3	98	0.00
57	MP	4-Nitrophenol	0.144	0.147	-2.1	117	0.00
58	M	2,4-Dinitrotoluene	0.116	0.113	2.6	85	0.00
59	T	Dibenzofuran	1.350	1.151	14.7	91	0.00
60	T	Diethyl phthalate	1.010	1.099	-8.8	104	0.01
61	T	Fluorene	1.040	1.096	-5.4	99	0.00
62	T	4-Chlorophenyl phenyl ether	0.501	0.489	2.4	100	0.00
63	T	4-Nitroaniline	0.174	0.208	-19.5	118	0.00
64		1,2,4,5-Tetrachlorobenzene	0.565	0.549	2.8	105	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.181	0.193	-6.6	109	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	98	0.01
67	T	4,6-Dinitro-2-methylphenol	0.061	0.066	-8.2	113	0.00
68	TC	N-Nitrosodiphenylamine	0.590	0.611	-3.6	106	0.00
69	T	1,2-Diphenylhydrazine	1.008	0.930	7.7	106	0.01
70	S	2,4,6-Tribromophenol	0.104	0.101	2.9	105	0.00
71	T	4-Bromophenyl phenyl ether	0.217	0.191	12.0	101	0.00
72	T	Hexachlorobenzene	0.220	0.201	8.6	103	0.01
73	T	Atrazine	0.211	0.195	7.6	102	0.00
74	MC	Pentachlorophenol	0.092	0.096	-4.3	108	0.00
75	T	Phenanthrene	0.998	1.072	-7.4	119	0.01
76	T	Anthracene	0.914	0.909	0.5	98	0.01
77	T	Carbazole	0.997	1.016	-1.9	102	0.01
78	T	Di-n-butyl phthalate	1.107	0.960	13.3	103	0.02
79	TC	Fluoranthene	0.993	0.994	-0.1	104	0.02
80	T	Benzidine	0.413	0.296	28.3	74	-0.04
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	101	0.00
83	M	Pyrene	1.056	1.158	-9.7	102	0.02
84	S	Terphenyl-d14	0.926	0.960	-3.7	99	0.02
85	T	3,3'-Dimethylbenzidine	0.533	0.432	18.9	81	-0.07
86	T	Butyl benzyl phthalate	0.494	0.502	-1.6	104	0.01
87	T	3,3'-Dichlorobenzidine	0.263	0.278	-5.7	104	0.00
88	T	Benzo[a]anthracene	0.868	0.852	1.8	103	0.00
89	T	Chrysene	0.765	0.770	-0.7	103	0.00
90	T	Bis(2-ethylhexyl) phthalate	0.662	0.684	-3.3	104	-0.04
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	101	0.04
93	TC	Di-n-octyl phthalate	1.353	1.351	0.1	107	0.02
94	T	Benzo[b]fluoranthene	1.191	1.075	9.7	94	0.02
95	T	Benzo[k]fluoranthene	1.139	1.163	-2.1	109	0.03
96	TC	Benzo[a]pyrene	1.030	1.026	0.4	102	0.03
97	T	Indeno[1,2,3-cd]pyrene	1.165	1.214	-4.2	100	0.05
98	T	Dibenz[a,h]anthracene	0.917	0.968	-5.6	100	0.05
99	T	Benzo[g,h,i]perylene	0.997	1.023	-2.6	101	0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS0514.M Thu Mar 27 15:18:45 2014 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\04-04-14\
Data File : C5251.D
Acq On : 4 Apr 2014 11:54
Operator : EDM
Sample : ABN027-14,CCVBNA1
Misc : NA,04/04/14,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Apr 04 12:11:46 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	69	0.00
2	T	N-Nitrosodimethylamine	0.746	0.721	3.4	72	0.00
3	T	Pyridine	1.236	1.065	13.8	66	0.00
4	S	2-Fluorophenol	1.234	1.449	-17.4	74	0.00
5	T	Benzaldehyde	0.733	0.585	20.2	75	0.00
6	S	Phenol-d5	1.521	1.839	-20.9	82	0.00
7	MC	Phenol	0.205	0.187	8.8	68	0.00
8	T	Aniline	0.725	0.657	9.4	64	0.00
9	T	Bis(2-chloroethyl) ether	0.957	0.843	11.9	61	0.00
10	M	2-Chlorophenol	1.282	1.332	-3.9	68	0.00
11	T	1,3-Dichlorobenzene	1.379	1.405	-1.9	69	0.00
12	MC	1,4-Dichlorobenzene	1.380	1.381	-0.1	67	0.00
13	T	Benzyl alcohol	0.903	0.855	5.3	67	0.00
14	T	1,2-Dichlorobenzene	1.346	1.310	2.7	69	0.00
15	T	2-Methylphenol	1.121	1.114	0.6	67	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.543	1.553	-0.6	63	0.00
17	T	4-Methylphenol	1.194	1.192	0.2	64	0.00
18	MP	N-Nitrosodi-n-propylamine	0.966	0.900	6.8	60	0.00
19	T	Acetophenone	1.688	1.658	1.8	64	0.00
20	T	3-Methylphenol	1.200	1.195	0.4	64	0.00
21	T	Hexachloroethane	0.509	0.486	4.5	67	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	80	0.00
24	S	Nitrobenzene-d5	0.354	0.373	-5.4	89	0.00
25	T	Nitrobenzene	0.314	0.335	-6.7	79	0.00
26	T	Isophorone	0.804	0.693	13.8	64	0.00
27	TC	2-Nitrophenol	0.122	0.146	-19.7	94	0.00
28	T	2,4-Dimethylphenol	0.410	0.352	14.1	69	0.00
29	T	Bis(2-chloroethoxy) methane	0.491	0.412	16.1	65	0.00
30	T	Benzoic acid	0.100	0.122	-22.0	89	-0.01
31	T	2,4-Dimethylaniline	0.620	0.469	24.4	63	0.00
32	TC	2,4-Dichlorophenol	0.303	0.260	14.2	66	0.00
33	M	1,2,4-Trichlorobenzene	0.363	0.288	20.7	65	0.00
34	T	Naphthalene	0.936	1.092	-16.7	104	0.00
35	T	4-Chloroaniline	0.681	0.581	14.7	64	0.00
36	T	4-Aminotoluene	0.790	0.749	5.2	67	0.00
37	TC	Hexachlorobutadiene	0.177	0.147	16.9	69	0.00
38	T	Caprolactam	0.161	0.135	16.1	64	-0.02
39	T	2-Aminotoluene	0.790	0.749	5.2	67	0.00
40	MC	4-Chloro-3-methylphenol	0.344	0.301	12.5	66	0.00
41	T	2-Methylnaphthalene	0.820	0.719	12.3	68	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	67	-0.01
44	TP	Hexachlorocyclopentadiene	0.174	0.137	21.3	52	0.00

45	TC	2,4,6-Trichlorophenol	0.265	0.278	-4.9	69	0.00
46	T	2,4,5-Trichlorophenol	0.284	0.318	-12.0	71	0.00
47	S	2-Fluorobiphenyl	1.024	1.214	-18.6	89	0.00
48	T	1,1'-Biphenyl	1.427	1.378	3.4	84	0.00
49	T	2-Chloronaphthalene	0.938	0.992	-5.8	65	0.00
50	T	2-Nitroaniline	0.188	0.229	-21.8	94	0.00
51	T	Dimethyl phthalate	0.999	1.083	-8.4	68	-0.01
52	T	2,6-Dinitrotoluene	0.143	0.110	23.1	57	-0.01
53	T	Acenaphthylene	1.586	1.627	-2.6	73	0.00
54	T	3-Nitroaniline	0.155	0.170	-9.7	66	-0.01
55	MC	Acenaphthene	0.967	1.047	-8.3	68	-0.01
56	TP	2,4-Dinitrophenol	0.055	0.053	3.6	67	0.00
57	MP	4-Nitrophenol	0.144	0.172	-19.4	88	0.00
58	M	2,4-Dinitrotoluene	0.116	0.144	-24.1	70	-0.01
59	T	Dibenzofuran	1.350	1.399	-3.6	72	-0.01
60	T	Diethyl phthalate	1.010	1.072	-6.1	66	-0.02
61	T	Fluorene	1.040	1.115	-7.2	65	-0.02
62	T	4-Chlorophenyl phenyl ether	0.501	0.474	5.4	63	-0.02
63	T	4-Nitroaniline	0.174	0.222	-27.6	82	-0.02
64		1,2,4,5-Tetrachlorobenzene	0.565	0.536	5.1	66	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.181	0.210	-16.0	77	-0.01
66	I	Phenanthrene-d10	1.000	1.000	0.0	72	-0.02
67	T	4,6-Dinitro-2-methylphenol	0.061	0.062	-1.6	78	-0.02
68	TC	N-Nitrosodiphenylamine	0.590	0.544	7.8	69	-0.02
69	T	1,2-Diphenylhydrazine	1.008	0.892	11.5	74	-0.02
70	S	2,4,6-Tribromophenol	0.104	0.103	1.0	79	-0.02
71	T	4-Bromophenyl phenyl ether	0.217	0.174	19.8	68	-0.02
72	T	Hexachlorobenzene	0.220	0.183	16.8	69	-0.02
73	T	Atrazine	0.211	0.170	19.4	66	-0.03
74	MC	Pentachlorophenol	0.092	0.100	-8.7	83	-0.02
75	T	Phenanthrene	0.998	1.009	-1.1	82	-0.02
76	T	Anthracene	0.914	1.011	-10.6	80	-0.02
77	T	Carbazole	0.997	0.985	1.2	72	-0.02
78	T	Di-n-butyl phthalate	1.107	1.146	-3.5	90	-0.03
79	TC	Fluoranthene	0.993	1.024	-3.1	79	-0.03
80	T	Benzidine	0.413	0.429	-3.9	105	-0.02
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	89	-0.03
83	M	Pyrene	1.056	1.018	3.6	79	-0.03
84	S	Terphenyl-d14	0.926	0.801	13.5	73	-0.03
85	T	3,3'-Dimethylbenzidine	0.533	0.531	0.4	100	-0.04
86	T	Butyl benzyl phthalate	0.494	0.480	2.8	87	-0.05
87	T	3,3'-Dichlorobenzidine	0.263	0.295	-12.2	96	-0.03
88	T	Benzo[a]anthracene	0.868	0.855	1.5	90	-0.02
89	T	Chrysene	0.765	0.760	0.7	89	-0.03
90	T	Bis(2-ethylhexyl) phthalate	0.662	0.695	-5.0	93	-0.07
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	91	0.00
93	TC	Di-n-octyl phthalate	1.353	1.441	-6.5	103	-0.03
94	T	Benzo[b]fluoranthene	1.191	1.217	-2.2	97	-0.02
95	T	Benzo[k]fluoranthene	1.139	1.095	3.9	93	-0.02
96	TC	Benzo[a]pyrene	1.030	1.050	-1.9	94	-0.01
97	T	Indeno[1,2,3-cd]pyrene	1.165	1.253	-7.6	93	0.00
98	T	Dibenz[a,h]anthracene	0.917	0.997	-8.7	93	0.00
99	T	Benzo[g,h,i]perylene	0.997	1.013	-1.6	90	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS0514.M Fri Apr 04 12:20:34 2014 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\04-07-14\
Data File : C5308.D
Acq On : 7 Apr 2014 8:29
Operator : JC
Sample : ABN027-14,CCVBNA1
Misc : NA,04/07/14,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Apr 07 12:21:55 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	155	0.00
2	T	N-Nitrosodimethylamine	0.746	0.726	2.7	164	0.01
3	T	Pyridine	1.236	1.038	16.0	145	0.01
4	S	2-Fluorophenol	1.234	1.060	14.1	123	0.00
5	T	Benzaldehyde	0.733	0.584	20.3	123	0.00
6	S	Phenol-d5	1.521	1.203	20.9	121	0.00
7	MC	Phenol	0.205	0.178	13.2	146	0.00
8	T	Aniline	0.725	0.604	16.7	132	0.00
9	T	Bis(2-chloroethyl) ether	0.957	0.811	15.3	133	0.00
10	M	2-Chlorophenol	1.282	1.297	-1.2	150	0.00
11	T	1,3-Dichlorobenzene	1.379	1.524	-10.5	169	0.00
12	MC	1,4-Dichlorobenzene	1.380	1.232	10.7	135	0.00
13	T	Benzyl alcohol	0.903	0.806	10.7	144	0.00
14	T	1,2-Dichlorobenzene	1.346	1.289	4.2	154	0.00
15	T	2-Methylphenol	1.121	1.037	7.5	142	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.543	1.475	4.4	136	0.00
17	T	4-Methylphenol	1.194	1.134	5.0	137	0.00
18	MP	N-Nitrosodi-n-propylamine	0.966	0.836	13.5	126	0.00
19	T	Acetophenone	1.688	1.549	8.2	135	0.00
20	T	3-Methylphenol	1.200	1.130	5.8	136	0.00
21	T	Hexachloroethane	0.509	0.480	5.7	151	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	138	0.00
24	S	Nitrobenzene-d5	0.354	0.398	-12.4	164	0.00
25	T	Nitrobenzene	0.314	0.355	-13.1	144	0.00
26	T	Isophorone	0.804	0.804	0.0	128	0.00
27	TC	2-Nitrophenol	0.122	0.139	-13.9	153	0.00
28	T	2,4-Dimethylphenol	0.410	0.422	-2.9	142	0.00
29	T	Bis(2-chloroethoxy) methane	0.491	0.516	-5.1	140	0.00
30	T	Benzoic acid	0.100	0.109	-9.0	138	-0.01
31	T	2,4-Dimethylaniline	0.620	0.547	11.8	126	0.00
32	TC	2,4-Dichlorophenol	0.303	0.314	-3.6	138	0.00
33	M	1,2,4-Trichlorobenzene	0.363	0.372	-2.5	146	0.00
34	T	Naphthalene	0.936	0.810	13.5	133	0.00
35	T	4-Chloroaniline	0.681	0.684	-0.4	129	0.00
36	T	4-Aminotoluene	0.790	0.771	2.4	119	0.00
37	TC	Hexachlorobutadiene	0.177	0.186	-5.1	150	0.00
38	T	Caprolactam	0.161	0.138	14.3	113	-0.01
39	T	2-Aminotoluene	0.790	0.771	2.4	119	0.00
40	MC	4-Chloro-3-methylphenol	0.344	0.333	3.2	126	0.00
41	T	2-Methylnaphthalene	0.820	0.702	14.4	115	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	118	0.00
44	TP	Hexachlorocyclopentadiene	0.174	0.173	0.6	116	0.00
45	TC	2,4,6-Trichlorophenol	0.265	0.304	-14.7	131	0.01
46	T	2,4,5-Trichlorophenol	0.284	0.336	-18.3	131	0.00

47	S	2-Fluorobiphenyl	1.024	1.034	-1.0	132	0.00
48	T	1,1'-Biphenyl	1.427	1.186	16.9	126	0.00
49	T	2-Chloronaphthalene	0.938	0.983	-4.8	113	0.00
50	T	2-Nitroaniline	0.188	0.176	6.4	126	0.00
51	T	Dimethyl phthalate	0.999	0.959	4.0	105	0.00
52	T	2,6-Dinitrotoluene	0.143	0.158	-10.5	143	0.00
53	T	Acenaphthylene	1.586	1.414	10.8	111	0.00
54	T	3-Nitroaniline	0.155	0.171	-10.3	117	0.00
55	MC	Acenaphthene	0.967	0.962	0.5	110	0.00
56	TP	2,4-Dinitrophenol	0.055	0.052	5.5	114	0.02
57	MP	4-Nitrophenol	0.144	0.130	9.7	117	0.01
58	M	2,4-Dinitrotoluene	0.116	0.129	-11.2	110	0.01
59	T	Dibenzofuran	1.350	1.398	-3.6	126	0.00
60	T	Diethyl phthalate	1.010	0.957	5.2	102	0.00
61	T	Fluorene	1.040	1.114	-7.1	114	0.00
62	T	4-Chlorophenyl phenyl ether	0.501	0.500	0.2	116	0.00
63	T	4-Nitroaniline	0.174	0.225	-29.3	145	0.00
64		1,2,4,5-Tetrachlorobenzene	0.565	0.635	-12.4	138	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.181	0.210	-16.0	135	0.01
66	I	Phenanthrene-d10	1.000	1.000	0.0	104	0.02
67	T	4,6-Dinitro-2-methylphenol	0.061	0.057	6.6	103	0.01
68	TC	N-Nitrosodiphenylamine	0.590	0.613	-3.9	113	0.00
69	T	1,2-Diphenylhydrazine	1.008	0.817	18.9	99	0.01
70	S	2,4,6-Tribromophenol	0.104	0.113	-8.7	126	0.00
71	T	4-Bromophenyl phenyl ether	0.217	0.208	4.1	118	0.01
72	T	Hexachlorobenzene	0.220	0.219	0.5	120	0.02
73	T	Atrazine	0.211	0.179	15.2	100	0.00
74	MC	Pentachlorophenol	0.092	0.094	-2.2	112	0.02
75	T	Phenanthrene	0.998	0.960	3.8	114	0.02
76	T	Anthracene	0.914	1.029	-12.6	118	0.02
77	T	Carbazole	0.997	0.924	7.3	99	0.03
78	T	Di-n-butyl phthalate	1.107	1.042	5.9	119	0.02
79	TC	Fluoranthene	0.993	0.900	9.4	101	0.03
80	T	Benzidine	0.413	0.319	22.8	101	0.04
82	I	Chrysene-d12	1.000	1.000	0.0	99	0.03
83	M	Pyrene	1.056	1.119	-6.0	97	0.03
84	S	Terphenyl-d14	0.926	0.951	-2.7	97	0.03
85	T	3,3'-Dimethylbenzidine	0.533	0.496	6.9	87	0.05
86	T	Butyl benzyl phthalate	0.494	0.466	5.7	95	0.03
87	T	3,3'-Dichlorobenzidine	0.263	0.295	-12.2	108	0.03
88	T	Benzo[a]anthracene	0.868	0.820	5.5	97	0.03
89	T	Chrysene	0.765	0.767	-0.3	101	0.03
90	T	Bis(2-ethylhexyl) phthalate	0.662	0.621	6.2	93	-0.02
92	I	Perylene-d12	1.000	1.000	0.0	107	0.05
93	TC	Di-n-octyl phthalate	1.353	1.285	5.0	108	0.03
94	T	Benzo[b]fluoranthene	1.191	1.205	-1.2	112	0.04
95	T	Benzo[k]fluoranthene	1.139	1.199	-5.3	120	0.04
96	TC	Benzo[a]pyrene	1.030	1.018	1.2	107	0.05
97	T	Indeno[1,2,3-cd]pyrene	1.165	1.369	-17.5	119	0.07
98	T	Dibenz[a,h]anthracene	0.917	1.083	-18.1	119	0.06
99	T	Benzo[g,h,i]perylene	0.997	1.095	-9.8	115	0.08

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS0514.M Mon Apr 07 12:43:04 2014 RPT1

Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BW0614.M
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 07 12:04:02 2014
Response Via : Initial Calibration

Calibration Files
1 =B7927.D 10 =B7928.D 20 =B7929.D
40 =B7926.D 80 =B7930.D 120 =B7931.D =

		Compound	1	10	20	40	80	120	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD							
2)	T	N-Nitrosodimethyl	0.813	0.858	0.802	0.781	0.750	0.860	0.811	5.35
3)	T	Pyridine	1.188	1.224	1.367	1.077	0.944	0.959	1.126	14.59
4)	S	2-Fluorophenol	1.041	1.032	1.037	1.045	1.087	0.944	1.031	4.56
5)	T	Benzaldehyde	0.676	0.548	0.595	0.485	0.469	0.481	0.542	15.06
6)	S	Phenol-d5	1.318	1.300	1.310	1.317	1.375	1.278	1.316	2.45
7)	MC	Phenol	1.394	1.259	1.181	1.163	1.099	1.315	1.235	8.78
8)	T	Aniline	0.828	0.776	0.727	0.667	0.614	0.550	0.694	14.95
9)	T	Bis(2-chloroethyl	1.158	0.896	0.830	0.900	0.801	0.878	0.910	13.98
10)	M	2-Chlorophenol	1.769	1.567	1.464	1.373	1.199	1.327	1.450	13.79
11)	T	1,3-Dichlorobenze	2.107	1.802	1.633	1.511	1.328	1.619	1.667	15.98
12)	MC	1,4-Dichlorobenze	1.656	1.564	1.472	1.357	1.198	1.176	1.404	13.91
13)	T	Benzyl alcohol	0.959	0.979	0.877	0.830	0.720	0.812	0.863	11.22
14)	T	1,2-Dichlorobenze	1.776	1.665	1.540	1.397	1.218	1.293	1.481	14.65
15)	T	2-Methylphenol	1.324	1.180	1.087	1.016	0.865	0.924	1.066	15.85
16)	T	Bis(2-chloroisopr	1.866	1.735	1.649	1.596	1.389	1.468	1.617	10.75
17)	T	4-Methylphenol	1.394	1.322	1.242	1.134	0.960	0.968	1.170	15.52
18)	MP	N-Nitrosodi-n-pro	1.050	0.971	0.878	0.811	0.699	0.941	0.892	13.96
19)	T	Acetophenone	2.011	1.764	1.643	1.526	1.226	1.333	1.584	18.14
20)	T	3-Methylphenol	1.394	1.322	1.242	1.134	0.960	0.969	1.170	15.49
21)	T	Hexachloroethane	0.611	0.617	0.581	0.568	0.488	0.559	0.571	8.15
23)	I	Naphthalene-d8	ISTD							
24)	S	Nitrobenzene-d5	0.365	0.373	0.363	0.393	0.421	0.471	0.398	10.50
25)	T	Nitrobenzene	0.497	0.388	0.355	0.359	0.328	0.327	0.375	16.94
26)	T	Isophorone	0.790	0.762	0.694	0.656	0.607	0.632	0.690	10.58
27)	TC	2-Nitrophenol	0.192	0.203	0.178	0.166	0.143	0.151	0.172	13.50
28)	T	2,4-Dimethylpheno	0.343	0.373	0.339	0.307	0.267	0.247	0.313	15.45
29)	T	Bis(2-chloroethox	0.466	0.447	0.399	0.361	0.308	0.339	0.387	16.03
30)	T	Benzoic acid	0.266	0.232	0.201	0.247	0.244	0.227	0.236	9.41
31)	T	2,4-Dimethylanili	0.417	0.381	0.540	0.393	0.349	0.323	0.401	18.95
32)	TC	2,4-Dichloropheno	0.370	0.361	0.320	0.309	0.255	0.230	0.308	18.18
33)	M	1,2,4-Trichlorobe	0.465	0.456	0.400	0.368	0.317	0.299	0.384	18.07
34)	T	Naphthalene	0.856	1.147	1.009	0.941	0.766	0.711	0.905	17.84
35)	T	4-Chloroaniline	0.713	0.647	0.598	0.541	0.445	0.437	0.564	19.57
36)	T	4-Aminotoluene	0.550	0.553	0.517	0.547	0.473	0.413	0.509	11.02
37)	TC	Hexachlorobutadie	0.275	0.278	0.257	0.240	0.205	0.191	0.241	15.06
38)	T	Caprolactam	0.141	0.128	0.121	0.139	0.124	0.141	0.132	6.97
39)	T	2-Aminotoluene	0.518	0.600	0.516	0.547	0.473	0.412	0.511	12.52
40)	MC	4-Chloro-3-methyl	0.338	0.328	0.297	0.295	0.250	0.232	0.290	14.50
41)	T	2-Methylnaphthale	0.594	0.812	0.711	0.653	0.530	0.499	0.633	18.48
43)	I	Acenaphthene-d10	ISTD							
44)	TP	Hexachlorocyclope	0.372	0.371	0.377	0.349	0.310	0.258	0.339	13.83
45)	TC	2,4,6-Trichloroph	0.491	0.472	0.445	0.422	0.364	0.338	0.422	14.28
46)	T	2,4,5-Trichloroph	0.498	0.531	0.495	0.463	0.407	0.377	0.462	12.79
47)	S	2-Fluorobiphenyl	1.316	1.273	1.325	1.279	1.316	1.149	1.276	5.16
48)	T	1,1'-Biphenyl	1.490	1.827	1.637	1.390	1.135	1.377	1.476	16.10
49)	T	2-Chloronaphthale	1.494	1.427	1.291	1.117	0.916	1.084	1.222	18.09
50)	T	2-Nitroaniline	0.300	0.326	0.325	0.322	0.305	0.273	0.308	6.64
51)	T	Dimethyl phthalat	1.471	1.456	1.359	1.216	1.092	0.994	1.265	15.54
52)	T	2,6-Dinitrotoluen	0.321	0.334	0.329	0.311	0.282	0.289	0.311	6.94
53)	T	Acenaphthylene	2.053	2.033	1.916	1.663	1.366	1.646	1.780	15.08

54)	T	3-Nitroaniline	0.269	0.340	0.319	0.314	0.281	0.264	0.298	10.31
55)	MC	Acenaphthene	0.855	1.083	1.086	0.873	0.643	1.030	0.928	18.60
56)	TP	2,4-Dinitrophenol	0.051	0.053	0.049	0.059	0.045	0.050	0.051	9.00
57)	MP	4-Nitrophenol	0.184	0.198	0.184	0.190	0.166	0.170	0.182	6.55
58)	M	2,4-Dinitrotoluen	0.341	0.410	0.404	0.385	0.334	0.331	0.367	9.91
59)	T	Dibenzofuran	1.645	1.634	1.849	1.480	1.130	1.292	1.505	17.35
60)	T	Diethyl phthalate	0.913	1.150	1.277	1.063	0.944	0.822	1.028	16.33
61)	T	Fluorene	0.823	1.147	1.072	0.974	0.698	0.765	0.913	19.57
62)	T	4-Chlorophenyl ph	0.593	0.714	0.665	0.663	0.521	0.420	0.596	18.32
63)	T	4-Nitroaniline	0.259	0.322	0.313	0.264	0.188	0.229	0.263	19.20
64)		1,2,4,5-Tetrachlo	0.881	0.744	0.799	0.698	0.614	0.533	0.712	17.67
65)	T	2,3,4,6-Tetrachlo	0.344	0.426	0.406	0.345	0.301	0.279	0.350	16.34
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met	0.100	0.111	0.105	0.122	0.119	0.103	0.110	8.11
68)	TC	N-Nitrosodiphenyl	0.602	0.630	0.695	0.572	0.441	0.411	0.558	19.86
69)	T	1,2-Diphenylhydra	0.995	1.065	0.929	0.799	0.679	0.803	0.878	16.32
70)	S	2,4,6-Tribromophe	0.180	0.189	0.195	0.180	0.183	0.172	0.183	4.24
71)	T	4-Bromophenyl phe	0.299	0.298	0.332	0.291	0.239	0.197	0.276	17.74
72)	T	Hexachlorobenzene	0.334	0.372	0.391	0.344	0.289	0.237	0.328	17.33
73)	T	Atrazine	0.199	0.260	0.242	0.217	0.181	0.172	0.212	16.33
74)	MC	Pentachlorophenol	0.175	0.191	0.185	0.198	0.187	0.163	0.183	6.78
75)	T	Phenanthrene	0.902	1.191	1.076	0.913	0.784	0.688	0.926	19.92
76)	T	Anthracene	1.057	1.131	1.056	0.990	0.818	0.644	0.949	19.32
77)	T	Carbazole	0.918	0.992	1.004	0.897	0.749	0.596	0.859	18.39
78)	T	Di-n-butyl phthal	0.826	1.066	1.076	0.986	0.860	0.664	0.913	17.51
79)	TC	Fluoranthene	1.058	1.141	1.092	0.997	0.861	0.689	0.973	17.40
80)	T	Benzidine	0.537	0.423	0.585	0.559	0.562	0.407	0.512	15.02
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.422	1.362	1.236	1.119	1.023	0.860	1.170	18.13
84)	S	Terphenyl-d14	0.949	0.988	0.990	0.964	1.086	1.091	1.011	6.10
85)	T	3,3'-Dimethylbenz	0.746	0.639	0.656	0.663	0.752	0.468	0.654	15.74
86)	T	Butyl benzyl phth	0.407	0.419	0.385	0.384	0.387	0.341	0.387	6.92
87)	T	3,3'-Dichlorobenz	0.309	0.286	0.338	0.362	0.256	0.222	0.296	17.56
88)	T	Benzo[a]anthracen	1.049	1.018	0.995	0.954	0.898	0.795	0.952	9.76
89)	T	Chrysene	0.973	0.901	0.868	0.818	0.777	0.665	0.834	12.82
90)	T	Bis(2-ethylhexyl)	0.501	0.513	0.475	0.458	0.438	0.376	0.460	10.71
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	0.893	1.027	0.903	0.844	0.751	0.740	0.860	12.47
94)	T	Benzo[b]fluoranth	1.149	1.169	1.157	1.168	1.061	0.904	1.101	9.51
95)	T	Benzo[k]fluoranth	1.182	1.239	1.112	0.961	1.028	0.944	1.078	11.14
96)	TC	Benzo[a]pyrene	1.059	1.041	1.047	1.036	0.966	0.877	1.004	7.01
97)	T	Indeno[1,2,3-cd]p	1.496	1.487	1.537	1.488	1.364	1.189	1.427	9.12
98)	T	Dibenz[a,h]anthra	1.158	1.216	1.290	1.221	1.109	0.971	1.161	9.61
99)	T	Benzo[g,h,i]peryl	1.291	1.322	1.373	1.377	1.302	1.180	1.307	5.49

(#) = Out of Range

BW0614.M Mon Apr 07 12:21:59 2014 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\04-07-14\
Data File : B7943.D
Acq On : 7 Apr 2014 13:25
Operator : DANA
Sample : ABN070-13,ICV040BNAI,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 07 13:44:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0614.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Apr 07 12:04:02 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	135	-0.01
2	T	N-Nitrosodimethylamine	0.811	0.903	-11.3	156	0.03
3	T	Pyridine	1.126	1.095	2.8	137	0.02
4	S	2-Fluorophenol	1.031	1.038	-0.7	134	0.00
5	T	Benzaldehyde	0.542	0.485	10.5	152	-0.15
6	S	Phenol-d5	1.316	1.420	-7.9	146	0.00
7	MC	Phenol	1.235	1.235	0.0	144	0.00
8	T	Aniline	0.694	0.698	-0.6	142	-0.01
9	T	Bis(2-chloroethyl) ether	0.910	0.959	-5.4	144	0.00
10	M	2-Chlorophenol	1.450	1.496	-3.2	147	0.00
11	T	1,3-Dichlorobenzene	1.667	1.716	-2.9	154	-0.01
12	MC	1,4-Dichlorobenzene	1.404	1.370	2.4	137	-0.01
13	T	Benzyl alcohol	0.863	0.855	0.9	139	-0.01
14	T	1,2-Dichlorobenzene	1.481	1.450	2.1	140	-0.01
15	T	2-Methylphenol	1.066	1.039	2.5	138	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.617	1.628	-0.7	138	0.00
17	T	4-Methylphenol	1.170	1.171	-0.1	140	-0.01
18	MP	N-Nitrosodi-n-propylamine	0.892	0.801	10.2	134	0.00
19	T	Acetophenone	1.584	1.445	8.8	128	-0.01
20	T	3-Methylphenol	1.170	1.171	-0.1	140	-0.01
21	T	Hexachloroethane	0.571	0.598	-4.7	142	-0.01
23	I	Naphthalene-d8	1.000	1.000	0.0	132	-0.01
24	S	Nitrobenzene-d5	0.398	0.396	0.5	133	0.00
25	T	Nitrobenzene	0.375	0.370	1.3	137	-0.01
26	T	Isophorone	0.690	0.694	-0.6	140	0.00
27	TC	2-Nitrophenol	0.172	0.170	1.2	136	-0.01
28	T	2,4-Dimethylphenol	0.313	0.318	-1.6	137	-0.01
29	T	Bis(2-chloroethoxy) methane	0.387	0.360	7.0	132	0.00
30	T	Benzoic acid	0.236	0.271	-14.8	145	0.00
31	T	2,4-Dimethylaniline	0.401	0.395	1.5	133	-0.01
32	TC	2,4-Dichlorophenol	0.308	0.308	0.0	132	-0.01
33	M	1,2,4-Trichlorobenzene	0.384	0.393	-2.3	142	0.00
34	T	Naphthalene	0.905	0.881	2.7	124	-0.01
35	T	4-Chloroaniline	0.564	0.511	9.4	125	-0.01
36	T	4-Aminotoluene	0.509	0.566	-11.2	137	0.00
37	TC	Hexachlorobutadiene	0.241	0.257	-6.6	142	-0.01
38	T	Caprolactam	0.132	0.128	3.0	122	0.00
39	T	2-Aminotoluene	0.511	0.566	-10.8	137	0.00
40	MC	4-Chloro-3-methylphenol	0.290	0.291	-0.3	131	-0.01
41	T	2-Methylnaphthalene	0.633	0.652	-3.0	132	-0.01
43	I	Acenaphthene-d10	1.000	1.000	0.0	118	-0.01
44	TP	Hexachlorocyclopentadiene	0.339	0.400	-18.0	135	-0.01
45	TC	2,4,6-Trichlorophenol	0.422	0.499	-18.2	139	-0.02
46	T	2,4,5-Trichlorophenol	0.462	0.452	2.2	115	-0.01

47	S	2-Fluorobiphenyl	1.276	1.340	-5.0	123	-0.01
48	T	1,1'-Biphenyl	1.476	1.499	-1.6	127	-0.01
49	T	2-Chloronaphthalene	1.222	1.191	2.5	125	-0.01
50	T	2-Nitroaniline	0.308	0.361	-17.2	132	-0.01
51	T	Dimethyl phthalate	1.265	1.320	-4.3	128	-0.01
52	T	2,6-Dinitrotoluene	0.311	0.331	-6.4	125	-0.01
53	T	Acenaphthylene	1.780	1.769	0.6	125	-0.02
54	T	3-Nitroaniline	0.298	0.329	-10.4	123	-0.01
55	MC	Acenaphthene	0.928	0.824	11.2	111	-0.01
56	TP	2,4-Dinitrophenol	0.051	0.054	-5.9	108	-0.02
57	MP	4-Nitrophenol	0.182	0.188	-3.3	117	-0.01
58	M	2,4-Dinitrotoluene	0.367	0.395	-7.6	121	-0.02
59	T	Dibenzofuran	1.505	1.437	4.5	114	-0.01
60	T	Diethyl phthalate	1.028	1.137	-10.6	126	-0.01
61	T	Fluorene	0.913	0.852	6.7	103	-0.01
62	T	4-Chlorophenyl phenyl ether	0.596	0.646	-8.4	115	-0.01
63	T	4-Nitroaniline	0.263	0.234	11.0	104	0.00
64		1,2,4,5-Tetrachlorobenzene	0.712	0.803	-12.8	135	-0.01
65	T	2,3,4,6-Tetrachlorophenol	0.350	0.364	-4.0	124	-0.01
66	I	Phenanthrene-d10	1.000	1.000	0.0	118	-0.01
67	T	4,6-Dinitro-2-methylphenol	0.110	0.129	-17.3	124	0.00
68	TC	N-Nitrosodiphenylamine	0.558	0.542	2.9	111	-0.01
69	T	1,2-Diphenylhydrazine	0.878	0.805	8.3	118	-0.01
70	S	2,4,6-Tribromophenol	0.183	0.163	10.9	107	-0.01
71	T	4-Bromophenyl phenyl ether	0.276	0.297	-7.6	120	-0.01
72	T	Hexachlorobenzene	0.328	0.352	-7.3	120	0.00
73	T	Atrazine	0.212	0.219	-3.3	118	-0.01
74	MC	Pentachlorophenol	0.183	0.215	-17.5	128	-0.01
75	T	Phenanthrene	0.926	0.906	2.2	117	-0.02
76	T	Anthracene	0.949	0.995	-4.8	118	-0.02
77	T	Carbazole	0.859	0.905	-5.4	119	-0.02
78	T	Di-n-butyl phthalate	0.913	1.007	-10.3	120	-0.03
79	TC	Fluoranthene	0.973	1.052	-8.1	124	-0.05
80	T	Benzidine	0.512	0.478	6.6	122	-0.16
82	I	Chrysene-d12	1.000	1.000	0.0	123	-0.09
83	M	Pyrene	1.170	1.093	6.6	120	-0.05
84	S	Terphenyl-d14	1.011	0.936	7.4	119	-0.06
85	T	3,3'-Dimethylbenzidine	0.654	0.556	15.0	114	-0.16
86	T	Butyl benzyl phthalate	0.387	0.404	-4.4	129	-0.07
87	T	3,3'-Dichlorobenzidine	0.296	0.319	-7.8	108	-0.09
88	T	Benzo[a]anthracene	0.952	1.006	-5.7	130	-0.09
89	T	Chrysene	0.834	0.840	-0.7	126	-0.09
90	T	Bis(2-ethylhexyl) phthalate	0.460	0.460	0.0	123	-0.10
92	I	Perylene-d12	1.000	1.000	0.0	121	-0.13
93	TC	Di-n-octyl phthalate	0.860	0.871	-1.3	125	-0.10
94	T	Benzo[b]fluoranthene	1.101	1.098	0.3	114	-0.12
95	T	Benzo[k]fluoranthene	1.078	1.035	4.0	130	-0.12
96	TC	Benzo[a]pyrene	1.004	1.036	-3.2	121	-0.12
97	T	Indeno[1,2,3-cd]pyrene	1.427	1.314	7.9	107	-0.17
98	T	Dibenz[a,h]anthracene	1.161	1.077	7.2	107	-0.17
99	T	Benzo[g,h,i]perylene	1.307	1.196	8.5	105	-0.18

(#) = Out of Range

BW0614.M Mon Apr 07 13:44:19 2014 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\04-07-14\
Data File : B7966.D
Acq On : 7 Apr 2014 19:39
Operator : DANA
Sample : ABN070-13,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 08 08:03:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0614.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Apr 07 12:04:02 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	133	-0.01
2	T	N-Nitrosodimethylamine	0.811	0.739	8.9	126	0.00
3	T	Pyridine	1.126	0.943	16.3	116	0.00
4	S	2-Fluorophenol	1.031	1.016	1.5	129	0.00
5	T	Benzaldehyde	0.542	0.503	7.2	174	-0.15
6	S	Phenol-d5	1.316	1.319	-0.2	133	0.00
7	MC	Phenol	1.235	1.100	10.9	126	-0.01
8	T	Aniline	0.694	0.630	9.2	126	-0.01
9	T	Bis(2-chloroethyl) ether	0.910	0.849	6.7	125	0.00
10	M	2-Chlorophenol	1.450	1.373	5.3	133	-0.01
11	T	1,3-Dichlorobenzene	1.667	1.529	8.3	135	-0.01
12	MC	1,4-Dichlorobenzene	1.404	1.348	4.0	132	-0.01
13	T	Benzyl alcohol	0.863	0.795	7.9	127	-0.01
14	T	1,2-Dichlorobenzene	1.481	1.431	3.4	136	-0.01
15	T	2-Methylphenol	1.066	0.996	6.6	130	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.617	1.434	11.3	120	0.00
17	T	4-Methylphenol	1.170	1.136	2.9	133	0.00
18	MP	N-Nitrosodi-n-propylamine	0.892	0.781	12.4	128	0.00
19	T	Acetophenone	1.584	1.489	6.0	130	-0.01
20	T	3-Methylphenol	1.170	1.136	2.9	133	0.00
21	T	Hexachloroethane	0.571	0.563	1.4	132	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	133	-0.01
24	S	Nitrobenzene-d5	0.398	0.372	6.5	126	0.00
25	T	Nitrobenzene	0.375	0.337	10.1	125	-0.01
26	T	Isophorone	0.690	0.643	6.8	130	0.00
27	TC	2-Nitrophenol	0.172	0.170	1.2	137	0.00
28	T	2,4-Dimethylphenol	0.313	0.309	1.3	134	0.00
29	T	Bis(2-chloroethoxy) methane	0.387	0.346	10.6	128	0.00
30	T	Benzoic acid	0.236	0.221	6.4	119	0.00
31	T	2,4-Dimethylaniline	0.401	0.376	6.2	128	-0.01
32	TC	2,4-Dichlorophenol	0.308	0.298	3.2	128	0.00
33	M	1,2,4-Trichlorobenzene	0.384	0.382	0.5	139	0.00
34	T	Naphthalene	0.905	0.896	1.0	127	-0.01
35	T	4-Chloroaniline	0.564	0.516	8.5	127	-0.01
36	T	4-Aminotoluene	0.509	0.558	-9.6	136	0.00
37	TC	Hexachlorobutadiene	0.241	0.245	-1.7	136	-0.01
38	T	Caprolactam	0.132	0.123	6.8	118	0.00
39	T	2-Aminotoluene	0.511	0.558	-9.2	136	0.00
40	MC	4-Chloro-3-methylphenol	0.290	0.281	3.1	127	0.00
41	T	2-Methylnaphthalene	0.633	0.639	-0.9	130	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	124	-0.01
44	TP	Hexachlorocyclopentadiene	0.339	0.355	-4.7	126	-0.01
45	TC	2,4,6-Trichlorophenol	0.422	0.446	-5.7	132	-0.01
46	T	2,4,5-Trichlorophenol	0.462	0.468	-1.3	126	-0.01

47	S	2-Fluorobiphenyl	1.276	1.319	-3.4	128	0.00
48	T	1,1'-Biphenyl	1.476	1.449	1.8	130	-0.01
49	T	2-Chloronaphthalene	1.222	1.140	6.7	127	-0.01
50	T	2-Nitroaniline	0.308	0.322	-4.5	125	0.00
51	T	Dimethyl phthalate	1.265	1.264	0.1	129	-0.01
52	T	2,6-Dinitrotoluene	0.311	0.321	-3.2	128	0.00
53	T	Acenaphthylene	1.780	1.696	4.7	127	-0.01
54	T	3-Nitroaniline	0.298	0.329	-10.4	130	-0.01
55	MC	Acenaphthene	0.928	0.833	10.2	119	-0.01
56	TP	2,4-Dinitrophenol	0.051	0.053	-3.9	111	-0.01
57	MP	4-Nitrophenol	0.182	0.185	-1.6	121	-0.01
58	M	2,4-Dinitrotoluene	0.367	0.383	-4.4	124	-0.02
59	T	Dibenzofuran	1.505	1.439	4.4	121	-0.02
60	T	Diethyl phthalate	1.028	1.114	-8.4	130	-0.02
61	T	Fluorene	0.913	0.906	0.8	116	-0.02
62	T	4-Chlorophenyl phenyl ether	0.596	0.651	-9.2	122	-0.02
63	T	4-Nitroaniline	0.263	0.251	4.6	118	-0.01
64		1,2,4,5-Tetrachlorobenzene	0.712	0.757	-6.3	135	-0.01
65	T	2,3,4,6-Tetrachlorophenol	0.350	0.357	-2.0	129	-0.02
66	I	Phenanthrene-d10	1.000	1.000	0.0	122	-0.02
67	T	4,6-Dinitro-2-methylphenol	0.110	0.126	-14.5	125	-0.02
68	TC	N-Nitrosodiphenylamine	0.558	0.555	0.5	118	-0.02
69	T	1,2-Diphenylhydrazine	0.878	0.799	9.0	122	-0.02
70	S	2,4,6-Tribromophenol	0.183	0.180	1.6	122	-0.02
71	T	4-Bromophenyl phenyl ether	0.276	0.302	-9.4	126	-0.02
72	T	Hexachlorobenzene	0.328	0.363	-10.7	129	-0.02
73	T	Atrazine	0.212	0.224	-5.7	125	-0.02
74	MC	Pentachlorophenol	0.183	0.206	-12.6	127	-0.02
75	T	Phenanthrene	0.926	0.921	0.5	123	-0.02
76	T	Anthracene	0.949	1.010	-6.4	124	-0.02
77	T	Carbazole	0.859	0.908	-5.7	123	-0.02
78	T	Di-n-butyl phthalate	0.913	0.991	-8.5	122	-0.02
79	TC	Fluoranthene	0.973	1.035	-6.4	126	-0.03
80	T	Benzidine	0.512	0.492	3.9	135	-0.16
82	I	Chrysene-d12	1.000	1.000	0.0	129	-0.06
83	M	Pyrene	1.170	1.111	5.0	128	-0.04
84	S	Terphenyl-d14	1.011	0.958	5.2	128	-0.04
85	T	3,3'-Dimethylbenzidine	0.654	0.535	18.2	119	-0.16
86	T	Butyl benzyl phthalate	0.387	0.385	0.5	130	-0.05
87	T	3,3'-Dichlorobenzidine	0.296	0.322	-8.8	115	-0.06
88	T	Benzo[a]anthracene	0.952	0.992	-4.2	134	-0.06
89	T	Chrysene	0.834	0.835	-0.1	132	-0.06
90	T	Bis(2-ethylhexyl) phthalate	0.460	0.465	-1.1	131	-0.06
92	I	Perylene-d12	1.000	1.000	0.0	126	-0.07
93	TC	Di-n-octyl phthalate	0.860	0.842	2.1	125	-0.07
94	T	Benzo[b]fluoranthene	1.101	1.186	-7.7	128	-0.07
95	T	Benzo[k]fluoranthene	1.078	0.932	13.5	122	-0.07
96	TC	Benzo[a]pyrene	1.004	1.014	-1.0	123	-0.07
97	T	Indeno[1,2,3-cd]pyrene	1.427	1.326	7.1	112	-0.09
98	T	Dibenz[a,h]anthracene	1.161	1.084	6.6	112	-0.09
99	T	Benzo[g,h,i]perylene	1.307	1.226	6.2	112	-0.09

(#) = Out of Range

BW0614.M Tue Apr 08 09:39:08 2014 MSD_B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C4754.D

Date Analyzed: 03/24/2014

Instrument ID: MSDC

Time Analyzed: 09:18

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	1958756	2.43	5477593	2.99	4428784	3.82
	UPPER LIMIT	3917512	2.93	10955186	3.49	8857568	4.32
	LOWER LIMIT	979378	1.93	2738797	2.49	2214392	3.32
	LAB SAMPLE ID						
01	ICC010BNA1	1801593	2.44	5378222	2.98	3905338	3.80
02	ICC020BNA1	1790647	2.44	5121092	2.98	3910752	3.80
03	ICC040BNA1	1580950	2.44	4775910	2.98	3590556	3.81
04	ICC080BNA1	1634395	2.44	5042093	2.98	3533789	3.80
05	ICC120BNA1	1320758	2.44	4246804	2.98	2841929	3.81
06	ICV040BNA1	1666592	2.44	4905682	2.98	3739562	3.81
07	ICC120BNA2	1771030	2.44	5607884	2.98	4096264	3.80
08	ICC080BNA2	1854699	2.44	5665239	2.98	4547676	3.80
09	ICC040BNA2	2086156	2.44	5753312	2.98	4081730	3.79
10	ICC020BNA2	1987757	2.44	5007198	2.98	4508528	3.78
11	ICC010BNA2	1802084	2.44	4822881	2.98	3903541	3.78
12	ICC001BNA2	1957191	2.44	5137362	2.98	4536696	3.78
13	ICV040BNA2	1861618	2.44	4556050	2.98	4325479	3.78
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C4754.D Date Analyzed: 03/24/2014

Instrument ID: MSDC Time Analyzed: 09:18

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	5494634	4.60	5611755	6.38	2924667	7.70
	UPPER LIMIT	10989268	5.10	11223510	6.88	5849334	8.20
	LOWER LIMIT	2747317	4.10	2805878	5.88	1462334	7.20
	LAB SAMPLE ID						
01	ICC010BNA1	5261622	4.55	5079058	6.32	2657644	7.61
02	ICC020BNA1	4995008	4.56	4829941	6.33	2621495	7.62
03	ICC040BNA1	5153928	4.58	4306154	6.34	2750808	7.66
04	ICC080BNA1	4706150	4.56	3618145	6.33	2504250	7.63
05	ICC120BNA1	3106803	4.57	3856227	6.33	2674531	7.66
06	ICV040BNA1	5056075	4.58	4345185	6.34	2777693	7.66
07	ICC120BNA2	5356761	4.55	4903898	6.32	3020578	7.61
08	ICC080BNA2	5952650	4.55	5154838	6.30	2975719	7.63
09	ICC040BNA2	6450377	4.54	6346352	6.30	3645938	7.62
10	ICC020BNA2	5992902	4.53	5812068	6.27	3335873	7.60
11	ICC010BNA2	5297520	4.53	5589479	6.27	3242668	7.60
12	ICC001BNA2	6206749	4.53	5908008	6.27	3348449	7.60
13	ICV040BNA2	5475734	4.53	5598067	6.27	3166106	7.60
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5251.D

Date Analyzed: 04/04/2014

Instrument ID: MSDC

Time Analyzed: 11:54

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	1085244		2.44		3827443		2.98		2422585		3.79	
	UPPER LIMIT	2170488		2.94		7654886		3.48		4845170		4.29	
	LOWER LIMIT	542622		1.94		1913722		2.48		1211293		3.29	
	LAB SAMPLE ID												
01	CCVBNA2	1508068		2.44		6316878		2.98		3606955		3.78	
02	LCSS140403-02	1961043		2.44		6107155		2.98		4038930		3.80	
03	E14-02765-001MS	1834510		2.44		5929142		2.98		3966227		3.79	
04	E14-02765-001MSD	2157610		2.44		6704699		2.98		4511079		3.80	
05	E14-02798-006	1959589		2.44		3036883		2.99		3969064		3.80	
06	E14-02798-001	1496062		2.44		6282603		2.98		3549170		3.79	
07	E14-02798-003	1499632		2.44		6256280		2.98		3550126		3.79	
08	E14-02798-004	2050375		2.44		7190312		2.98		4669281		3.80	
09	E14-02357-005	1616112		2.44		5935598		2.98		2724111		3.80	
10	BLKS140403-04	2067400		2.44		7623857		2.98		4372663		3.79	
11	LCSS140403-04	1164343		2.44		4241030		2.98		2926585		3.78	
12	E14-02771-031MS	1356095		2.44		5327104		2.99		3053573		3.80	
13	E14-02771-031MSD	1811966		2.44		5300137		2.98		4057397		3.78	
14	E14-02771-031	1660177		2.44		6770041		2.98		3746128		3.78	
15	E14-02771-033	1725522		2.44		7091239		2.98		3922518		3.77	
16	E14-02771-035	1447101		2.44		5903220		2.98		3279210		3.77	
17	E14-02771-037	2077628		2.44		6920376		2.98		4649795		3.77	
18	E14-02771-039	1556790		2.44		6415104		2.98		3571488		3.77	
19	E14-02771-001	2095508		2.44		6386978		2.98		4772855		3.78	
20	E14-02771-003	1543030		2.44		6342510		2.98		3566661		3.77	
21	E14-02771-005	1550320		2.44		6464858		2.98		3584484		3.77	
22	E14-02771-007	1694216		2.44		7032918		2.98		3957075		3.77	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5251.D Date Analyzed: 04/04/2014

Instrument ID: MSDC Time Analyzed: 11:54

CommandButt

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	3713329		4.54		3816221		6.31		2509866		7.63	
	UPPER LIMIT	7426658		5.04		7632442		6.81		5019732		8.13	
	LOWER LIMIT	1856665		4.04		1908111		5.81		1254933		7.13	
	LAB SAMPLE ID												
01	CCVBNA2	5377372		4.54		5620644		6.30		3609145		7.61	
02	LCSS140403-02	5144516		4.56		3519905		6.33		1968417		7.68	
03	E14-02765-001MS	5674062		4.54		3798471		6.31		1990606		7.63	
04	E14-02765-001MSD	5802283		4.55		4015912		6.30		2000577		7.66	
05	E14-02798-006	4850844		4.54		3658675		6.29		2007394		7.64	
06	E14-02798-001	5572865		4.54		4297924		6.31		2139068		7.64	
07	E14-02798-003	5539236		4.54		4445531		6.31		2166445		7.63	
08	E14-02798-004	6261284		4.55		4301059		6.31		2013922		7.63	
09	E14-02357-005	3743116		4.56		3110773		6.31		2144564		7.63	
10	BLKS140403-04	6141459		4.54		3395465		6.30		1514064		7.62	
11	LCSS140403-04	4342229		4.53		2884026		6.29		1806893		7.61	
12	E14-02771-031MS	4595001		4.56		3130275		6.33		2130209		7.66	
13	E14-02771-031MSD	5877875		4.52		4029886		6.28		2375393		7.60	
14	E14-02771-031	5728581		4.52		3787231		6.27		1827729		7.59	
15	E14-02771-033	6106083		4.51		4266988		6.26		1855553		7.59	
16	E14-02771-035	3789551		4.51		3645594		6.25		2118585		7.60	
17	E14-02771-037	6745147		4.51		3891538		6.26		2039347		7.58	
18	E14-02771-039	5544110		4.51		3677592		6.26		2021551		7.58	
19	E14-02771-001	6520057		4.52		3687760		6.26		1984063		7.58	
20	E14-02771-003	5640697		4.51		3856475		6.26		2090662		7.58	
21	E14-02771-005	5572703		4.50		3600822		6.25		1894967		7.57	
22	E14-02771-007	6116301		4.51		3999730		6.25		2130869		7.60	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5251.D Date Analyzed: 04/04/2014

Instrument ID: MSDC Time Analyzed: 11:54

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	1085244	2.44	3827443	2.98	2422585	3.79
	UPPER LIMIT	2170488	2.94	7654886	3.48	4845170	4.29
	LOWER LIMIT	542622	1.94	1913722	2.48	1211293	3.29
	LAB SAMPLE ID						
01	E14-02771-009	1499319	2.44	6306082	2.98	3508014	3.77
02	E14-02771-011	1526882	2.44	6272621	2.98	3496391	3.78
03	E14-02771-013	1861893	2.44	7539250	2.98	4103361	3.78
04	E14-02771-015	1374989	2.44	5686463	2.98	3120442	3.78
05	E14-02771-017	1492535	2.44	6278918	2.98	3450727	3.78
06	E14-02771-019	1594238	2.44	6532718	2.98	3543154	3.78
07	E14-02771-021	1350706	2.44	5692216	2.98	3205669	3.77
08	E14-02771-023	1427670	2.44	5935801	2.98	3230181	3.77
09	E14-02771-025	1412290	2.44	5756089	2.98	3188272	3.77
10	E14-02771-027	1387534	2.44	5798717	2.98	3205030	3.77
11	E14-02771-029	1379722	2.44	5753869	2.98	3148814	3.77
12	BLKS140404-01	1391442	2.44	5723688	2.98	3108663	3.77
13	LCSS140404-01	1523413	2.44	5330882	2.98	3286034	3.77
14	E14-02847-001MS	1352837	2.44	4596165	2.98	2942694	3.78
15	E14-02847-001MSD	1443489	2.44	5750024	2.99	3144995	3.78
16	E14-02847-001	1224466	2.44	4448884	2.98	2746605	3.78
17	E14-02847-002	1178656	2.44	4537680	2.99	3375088	3.79
18	E14-02847-003	1317761	2.44	4461826	2.98	3364974	3.77
19	E14-02847-004	1246705	2.44	5029510	2.98	3605541	3.78
20	E14-02847-005	1235146	2.44	4402473	2.98	2875758	3.78
21	E14-02492-001	1635895	2.44	4492050	2.99	1540006	3.81
22	E14-02878-008	1861912	2.44	5235556	2.98	2876555	3.79

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5251.D

Date Analyzed: 04/04/2014

Instrument ID: MSDC

Time Analyzed: 11:54

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	3713329		4.54		3816221		6.31		2509866		7.63	
	UPPER LIMIT	7426658		5.04		7632442		6.81		5019732		8.13	
	LOWER LIMIT	1856665		4.04		1908111		5.81		1254933		7.13	
	LAB SAMPLE ID												
01	E14-02771-009	5432424		4.51		3679310		6.26		2025915		7.58	
02	E14-02771-011	5438575		4.52		3792288		6.27		2156075		7.59	
03	E14-02771-013	6231630		4.52		4782602		6.27		2890675		7.59	
04	E14-02771-015	4699975		4.52		3331311		6.26		2008089		7.62	
05	E14-02771-017	5226549		4.52		3717457		6.26		2230243		7.61	
06	E14-02771-019	5251943		4.52		3688366		6.27		2263283		7.59	
07	E14-02771-021	4799199		4.51		3308048		6.25		1967314		7.6	
08	E14-02771-023	4873053		4.51		3603691		6.25		2211712		7.59	
09	E14-02771-025	4785722		4.50		3556314		6.24		2147108		7.59	
10	E14-02771-027	4735744		4.51		3237204		6.24		1932971		7.6	
11	E14-02771-029	4757511		4.51		3341141		6.24		1943681		7.6	
12	BLKS140404-01	4691886		4.51		3414275		6.25		2122681		7.6	
13	LCSS140404-01	4752181		4.51		3431729		6.25		2418070		7.59	
14	E14-02847-001MS	4569408		4.51		3759355		6.24		2321184		7.59	
15	E14-02847-001MSD	4348635		4.52		3919906		6.26		2392393		7.58	
16	E14-02847-001	4278441		4.52		3254833		6.26		1929517		7.59	
17	E14-02847-002	3915712		4.52		3485758		6.26		2059627		7.58	
18	E14-02847-003	4512958		4.50		3494666		6.24		2112463		7.57	
19	E14-02847-004	4391637		4.51		3295207		6.25		1887424		7.57	
20	E14-02847-005	4226687		4.51		3241168		6.25		1924289		7.57	
21	E14-02492-001	3513467		4.54		3885594		6.25		2343061		7.57	
22	E14-02878-008	3318267		4.54		4092741		6.37		1423742		7.83	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5308.D

Date Analyzed: 04/07/2014

Instrument ID: MSDC

Time Analyzed: 08:29

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	2457807	2.44	6589268	2.98	4244545	3.81
	UPPER LIMIT	4915614	2.94	13178536	3.48	8489090	4.31
	LOWER LIMIT	1228904	1.94	3294634	2.48	2122273	3.31
	LAB SAMPLE ID						
01	CCVBNA2	2483598	2.44	9735746	2.98	5383731	3.81
02	BLKS140404-04	1866572	2.44	7690131	3.00	4057807	3.85
03	LCSS140404-04	2600252	2.44	6664256	2.98	4795682	3.81
04	E14-02851-021MS	2384883	2.44	6665400	2.98	4561217	3.81
05	E14-02851-021MSD	2330837	2.44	6717222	2.98	4447563	3.81
06	E14-02851-021	2438947	2.44	9928380	2.99	5190151	3.81
07	E14-02851-023	2862679	2.44	10548556	2.98	5700515	3.80
08	E14-02851-025	2347861	2.44	9410005	2.98	4699722	3.80
09	E14-02851-027	2274929	2.44	9219556	2.98	4593487	3.80
10	E14-02851-029	2511718	2.44	9876893	2.98	5045676	3.80
11	E14-02851-031	2480285	2.44	9570269	2.98	4883273	3.79
12	E14-02851-033	2170528	2.44	8635493	2.98	4217627	3.79
13	E14-02851-035	1861212	2.44	7390783	2.98	3664236	3.79
14	E14-02851-037	2542536	2.44	8938074	2.98	4168344	3.79
15	E14-02851-039	2354159	2.44	8274561	2.98	3636108	3.79
16	E14-02851-041	2169991	2.44	7974120	2.98	3469732	3.78
17	E14-02851-043	2194025	2.44	7891185	2.98	3523324	3.78
18	E14-02851-045	2314235	2.44	8434740	2.98	3754704	3.79
19	E14-02851-047	2233776	2.44	7964377	2.98	3478340	3.79
20	E14-02851-049	2041121	2.44	7398969	2.98	3259198	3.79
21	E14-02851-051	2390044	2.44	8436085	2.98	3628809	3.79
22	E14-02851-053	2017045	2.44	7329911	2.98	3264394	3.80

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5308.D

Date Analyzed: 04/07/2014

Instrument ID: MSDC

Time Analyzed: 08:29

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	5384543		4.58		4266597		6.36		2950335		7.68	
	UPPER LIMIT	10769086		5.08		8533194		6.86		5900670		8.18	
	LOWER LIMIT	2692272		4.08		2133299		5.86		1475168		7.18	
	LAB SAMPLE ID												
01	CCVBNA2	6929109		4.58		5213453		6.35		3452100		7.67	
02	BLKS140404-04	5840779		4.66		3414403		6.46		1601213		7.79	
03	LCSS140404-04	6251726		4.58		3845312		6.36		2393761		7.69	
04	E14-02851-021MS	5838369		4.58		3502525		6.36		2103751		7.69	
05	E14-02851-021MSD	5140228		4.59		3329224		6.36		1998266		7.72	
06	E14-02851-021	6876067		4.59		4077852		6.38		2008973		7.70	
07	E14-02851-023	7189505		4.58		4151620		6.35		2079281		7.68	
08	E14-02851-025	5908482		4.57		3435948		6.35		1808293		7.67	
09	E14-02851-027	5789924		4.57		3422981		6.34		1826363		7.67	
10	E14-02851-029	6204359		4.57		3790468		6.33		1986315		7.69	
11	E14-02851-031	6146315		4.55		3631438		6.31		1924005		7.64	
12	E14-02851-033	5208471		4.55		3288154		6.32		1829807		7.65	
13	E14-02851-035	4766842		4.55		3262183		6.32		1913504		7.64	
14	E14-02851-037	5462340		4.55		4381866		6.31		2847781		7.66	
15	E14-02851-039	4649479		4.54		3549642		6.30		2212530		7.63	
16	E14-02851-041	4360359		4.54		3505104		6.30		2214772		7.65	
17	E14-02851-043	4456098		4.54		3518374		6.30		2223499		7.62	
18	E14-02851-045	4751165		4.54		3617738		6.31		2237435		7.63	
19	E14-02851-047	4402520		4.54		3403425		6.31		2059594		7.63	
20	E14-02851-049	4147078		4.55		3248943		6.32		2023915		7.64	
21	E14-02851-051	4644902		4.55		3682935		6.31		2320331		7.64	
22	E14-02851-053	4199803		4.55		3366546		6.32		2105884		7.65	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5308.D

Date Analyzed: 04/07/2014

Instrument ID: MSDC

Time Analyzed: 08:29

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	2457807	2.44	6589268	2.98	4244545	3.81
	UPPER LIMIT	4915614	2.94	13178536	3.48	8489090	4.31
	LOWER LIMIT	1228904	1.94	3294634	2.48	2122273	3.31
	LAB SAMPLE ID						
01	E14-02535-003	2014130	2.44	6777137	2.98	3363328	3.79
02	E14-02535-005	1681082	2.44	4850432	3.02	4247864	3.9
03	E14-02535-006	2184694	2.44	8085672	2.98	3737960	3.79
04	E14-02492-001DL	1875507	2.44	6150559	2.99	4536744	3.81
05	E14-02878-008DL	1746102	2.44	5957339	2.98	3275514	3.78
06	E14-02878-009	2400736	2.44	8560490	2.98	3870302	3.78
07	E14-02878-010	1755266	2.44	6500567	2.98	3269031	3.79
08	E14-02878-011	2402474	2.44	8378976	2.98	4190336	3.80
09	E14-02541-003	2822940	2.44	7847327	2.98	4755195	3.82
10	E14-02878-001	2306041	2.44	8579627	2.98	4001692	3.79
11	E14-02878-002	2454766	2.44	8860488	2.98	4490364	3.78
12	E14-02878-003	1974894	2.44	7328665	2.98	3458606	3.78
13	E14-02878-004	2014841	2.44	7544103	2.98	3579421	3.78
14	E14-02878-005	2101222	2.44	8189836	2.98	3908244	3.78
15	E14-02878-006	2001690	2.44	6567556	2.98	3425629	3.78
16	E14-02878-007	2350814	2.44	8680443	2.98	4057931	3.78
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5308.D

Date Analyzed: 04/07/2014

Instrument ID: MSDC

Time Analyzed: 08:29

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	5384543	4.58	4266597	6.36	2950335	7.68
	UPPER LIMIT	10769086	5.08	8533194	6.86	5900670	8.18
	LOWER LIMIT	2692272	4.08	2133299	5.86	1475168	7.18
	LAB SAMPLE ID						
01	E14-02535-003	4147576	4.54	3277954	6.30	2014351	7.66
02	E14-02535-005	4319680	4.74	5014263	6.57	2491233	7.9
03	E14-02535-006	4783481	4.54	3905094	6.31	2454423	7.63
04	E14-02492-001DL	5503370	4.57	4995544	6.31	3052016	7.63
05	E14-02878-008DL	4410362	4.53	4708070	6.32	2473675	7.69
06	E14-02878-009	5196394	4.54	4660784	6.29	3051621	7.64
07	E14-02878-010	4379766	4.54	4161494	6.32	2389625	7.71
08	E14-02878-011	5536143	4.55	5013936	6.32	3208428	7.65
09	E14-02541-003	4737371	4.59	6426368	6.34	3962664	7.66
10	E14-02878-001	5357814	4.55	4870801	6.31	3040112	7.66
11	E14-02878-002	6135351	4.54	5539361	6.30	3319613	7.63
12	E14-02878-003	4610747	4.54	4365577	6.30	2851610	7.62
13	E14-02878-004	4933295	4.54	4477985	6.30	2794782	7.61
14	E14-02878-005	5360465	4.53	4740035	6.28	2986064	7.60
15	E14-02878-006	4594648	4.52	4215841	6.28	2677012	7.60
16	E14-02878-007	5381857	4.53	4942355	6.28	3019354	7.60
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII SV-2

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7926.D

Date Analyzed: 04/07/2014

Instrument ID: MSDB

Time Analyzed: 08:36

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	197331		3.69		659136		4.46		373093		5.48	
	UPPER LIMIT	394662		4.19		1318272		4.96		746186		5.98	
	LOWER LIMIT	98666		3.19		329568		3.96		186547		4.98	
	LAB SAMPLE ID												
01	ICC001BNA1	216135		3.69		722450		4.45		395022		5.48	
02	ICC010BNA1	227173		3.69		754011		4.45		423244		5.48	
03	ICC020BNA1	210298		3.69		716757		4.46		385466		5.48	
04	ICC080BNA1	193624		3.69		611251		4.46		329791		5.48	
05	ICC120BNA1	198494		3.68		730700		4.45		432899		5.47	
06	ICC120BNA2	253903		3.68		879690		4.44		499711		5.47	
07	ICC080BNA2	272525		3.68		943395		4.44		539515		5.47	
08	ICC040BNA2	280786		3.68		962849		4.44		546047		5.47	
09	ICC020BNA2	364809		3.68		1226781		4.44		655880		5.47	
10	ICC010BNA2	256376		3.68		892580		4.44		519799		5.47	
11	ICC001BNA2	289008		3.68		996634		4.44		568354		5.47	
12	ICV040BNA1	266948		3.68		872791		4.45		438779		5.47	
13	ICV040BNA2	300256		3.68		997685		4.44		529120		5.47	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7926.D Date Analyzed: 04/07/2014

Instrument ID: MSDB Time Analyzed: 08:36

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	564002		6.40		492001		8.03		485970		9.36	
	UPPER LIMIT	1128004		6.90		984002		8.53		971940		9.86	
	LOWER LIMIT	282001		5.90		246001		7.53		242985		8.86	
	LAB SAMPLE ID												
01	ICC001BNA1	614861		6.40		557486		8.01		417304		9.35	
02	ICC010BNA1	637514		6.39		564511		8.01		416160		9.35	
03	ICC020BNA1	584981		6.40		506901		8.01		428040		9.34	
04	ICC080BNA1	491457		6.40		399724		8.02		449569		9.36	
05	ICC120BNA1	695252		6.39		546694		8.04		597846		9.36	
06	ICC120BNA2	810465		6.38		775667		7.98		701751		9.30	
07	ICC080BNA2	854679		6.38		845288		7.98		717283		9.30	
08	ICC040BNA2	880815		6.38		878307		7.97		724973		9.28	
09	ICC020BNA2	943766		6.38		869315		7.96		718395		9.26	
10	ICC010BNA2	857146		6.39		920662		7.95		752217		9.25	
11	ICC001BNA2	908075		6.38		886010		7.95		728120		9.25	
12	ICV040BNA1	662892		6.39		604629		7.94		588201		9.23	
13	ICV040BNA2	802378		6.38		668981		7.94		627050		9.24	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7966.D Date Analyzed: 04/07/2014

Instrument ID: MSDB Time Analyzed: 19:39

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	262527		3.68		877983		4.45		463813		5.47	
	UPPER LIMIT	525054		4.18		1755966		4.95		927626		5.97	
	LOWER LIMIT	131264		3.18		438992		3.95		231907		4.97	
	LAB SAMPLE ID												
01	CCV040BNA2	331118		3.68		1114055		4.45		582209		5.47	
02	BLKA140407-01	297744		3.68		1001193		4.45		543570		5.47	
03	LCSA140407-01	260028		3.68		893063		4.45		480012		5.47	
04	E14-02821-001MS	266622		3.68		916205		4.45		464565		5.47	
05	E14-02821-001MSD	281673		3.68		955446		4.45		476943		5.47	
06	E14-02801-001	252664		3.68		831214		4.45		428746		5.47	
07	E14-02797-001	269289		3.68		889109		4.45		480934		5.47	
08	E14-02797-005	224045		3.68		587807		4.45		399179		5.47	
09	E14-02860-001	236649		3.68		803224		4.45		445968		5.47	
10	E14-02861-001	199556		3.68		586685		4.45		371469		5.47	
11	E14-02902-001	238385		3.68		776496		4.45		419916		5.47	
12	E14-02901-001	226657		3.68		766546		4.45		430854		5.47	
13	E14-02919-001	247251		3.68		855399		4.45		476180		5.47	
14	E14-02931-001	222401		3.68		732644		4.45		419338		5.47	
15	E14-02935-002	246867		3.68		844834		4.45		486300		5.47	
16	E14-02935-003	245065		3.68		807524		4.45		449519		5.47	
17	E14-02968-001	253032		3.68		858665		4.45		458672		5.47	
18	E14-02969-001	236155		3.68		772884		4.45		455643		5.48	
19	E14-02970-001	233105		3.68		776562		4.45		418928		5.47	
20	E14-02878-038	267345		3.68		906739		4.45		496097		5.47	
21	E14-02928-001	264256		3.68		902610		4.45		508190		5.47	
22	E14-02928-002	248419		3.68		860334		4.45		482741		5.47	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7966.D

Date Analyzed: 04/07/2014

Instrument ID: MSDB

Time Analyzed: 19:39

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	687150		6.38		635450		7.97		611374		9.29	
	UPPER LIMIT	1374300		6.88		1270900		8.47		1222748		9.79	
	LOWER LIMIT	343575		5.88		317725		7.47		305687		8.79	
	LAB SAMPLE ID												
01	CCV040BNA2	865887		6.38		723104		7.95		635505		9.26	
02	BLKA140407-01	784898		6.38		588067		7.97		415625		9.29	
03	LCSA140407-01	696728		6.38		514169		7.93		416888		9.25	
04	E14-02821-001MS	643371		6.39		478823		7.92		404111		9.22	
05	E14-02821-001MSD	658904		6.39		453608		7.92		416819		9.23	
06	E14-02801-001	604109		6.39		526295		7.91		422714		9.21	
07	E14-02797-001	701718		6.38		574566		7.92		439080		9.22	
08	E14-02797-005	624432		6.39		524950		7.91		411011		9.21	
09	E14-02860-001	684701		6.38		580407		7.92		429554		9.22	
10	E14-02861-001	600956		6.38		530833		7.93		406920		9.24	
11	E14-02902-001	615080		6.38		548783		7.93		412351		9.25	
12	E14-02901-001	666207		6.38		567965		7.92		408513		9.22	
13	E14-02919-001	720185		6.38		608688		7.93		421857		9.25	
14	E14-02931-001	677609		6.39		606145		7.92		450382		9.23	
15	E14-02935-002	752119		6.39		635064		7.92		431106		9.21	
16	E14-02935-003	661504		6.38		588019		7.94		447322		9.25	
17	E14-02968-001	657074		6.38		561725		7.94		445830		9.25	
18	E14-02969-001	663947		6.39		558485		7.95		435433		9.27	
19	E14-02970-001	620459		6.39		563701		7.97		452138		9.29	
20	E14-02878-038	701022		6.38		554564		7.97		405219		9.30	
21	E14-02928-001	756956		6.38		589883		7.98		420766		9.31	
22	E14-02928-002	757268		6.38		584499		7.97		409632		9.30	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7966.D Date Analyzed: 04/07/2014

Instrument ID: MSDB Time Analyzed: 19:39

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	262527	3.68	877983	4.45	463813	5.47
	UPPER LIMIT	525054	4.18	1755966	4.95	927626	5.97
	LOWER LIMIT	131264	3.18	438992	3.95	231907	4.97
	LAB SAMPLE ID						
01	E14-02810-001	184196	3.70	211197*	4.45	215188*	5.51
02	E14-02821-001	272704	3.68	895765	4.45	476649	5.47
03	E14-02821-002	257759	3.68	864107	4.45	474990	5.47
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B7966.D

Date Analyzed: 04/07/2014

Instrument ID: MSDB

Time Analyzed: 19:39

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	687150	6.38	635450	7.97	611374	9.29
	UPPER LIMIT	1374300	6.88	1270900	8.47	1222748	9.79
	LOWER LIMIT	343575	5.88	317725	7.47	305687	8.79
	LAB SAMPLE ID						
01	E14-02810-001	369366	6.41	274638*	7.98	121327*	9.29
02	E14-02821-001	680910	6.39	545133	7.96	389300	9.26
03	E14-02821-002	696187	6.39	554475	7.96	413079	9.27
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMI-VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5340.D
Acq On : 7 Apr 2014 16:47
Operator : JC
Sample : B-474_(4,E14-02878-001,S,15.13g,18.3,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 08 07:57:09 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	2306041	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	8579627	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	4001692	40.00	UG	-0.01
66) Phenanthrene-d10	4.55	188	5357814	40.00	UG	-0.01
82) Chrysene-d12	6.31	240	4870801	40.00	UG	-0.02
92) Perylene-d12	7.66	264	3040112	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	2066227	27.19	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	54.38%		
47) 2-Fluorobiphenyl	3.45	172	4501296m	43.92	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	87.84%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.44	244	4785286	42.46	UG	-0.02
Spiked Amount 50.000	Range 15 - 122		Recovery =	84.92%		

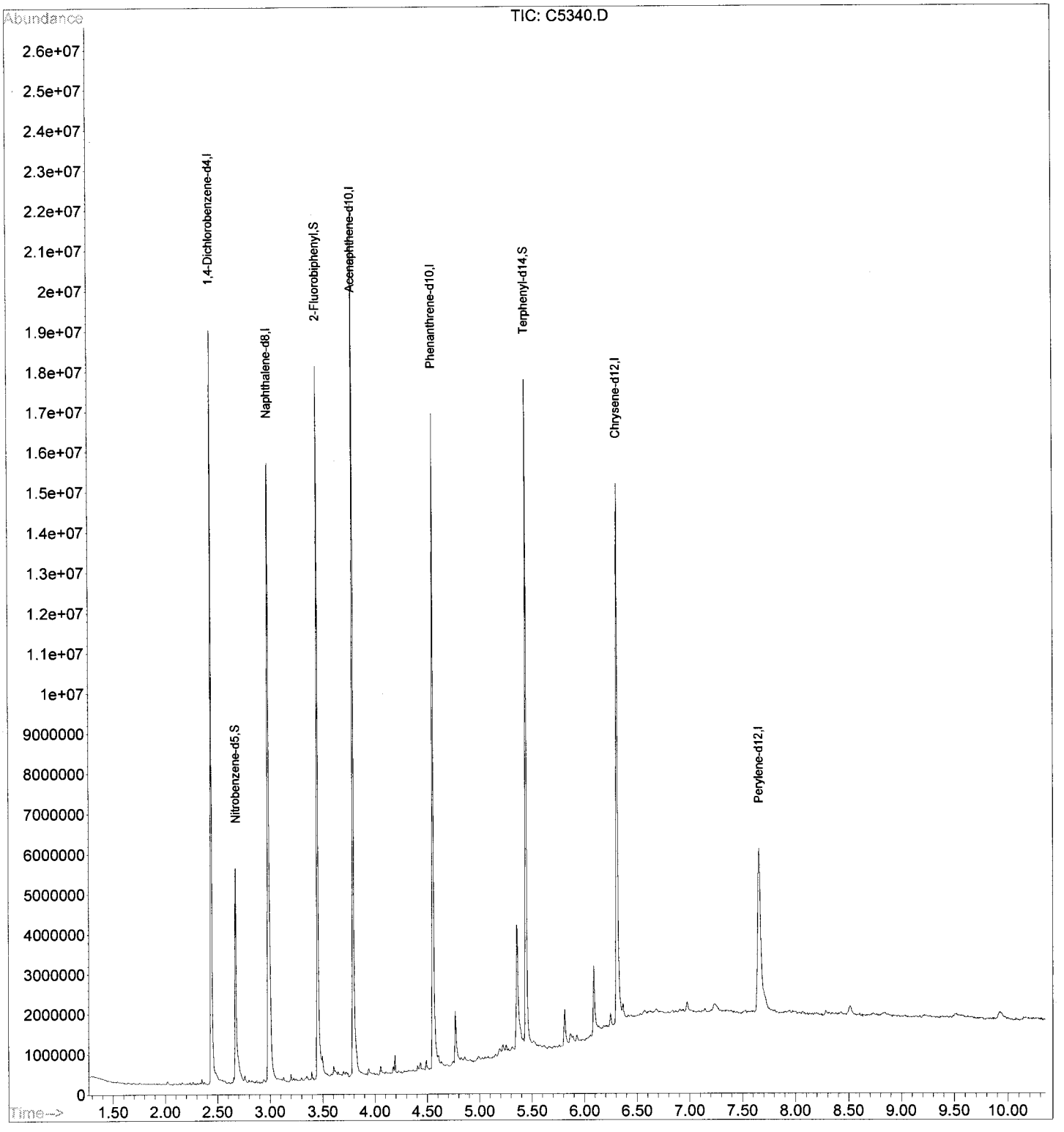
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5340.D
Acq On : 7 Apr 2014 16:47
Operator : JC
Sample : B-474_(4,E14-02878-001,S,15.13g,18.3,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 08 07:57:09 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5341.D
Acq On : 7 Apr 2014 17:02
Operator : JC
Sample : B-474_(6,E14-02878-002,S,15.05g,16.6,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 08 07:32:28 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	2454766	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	8860488	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	4490364	40.00	UG	-0.02
66) Phenanthrene-d10	4.54	188	6135351	40.00	UG	-0.03
82) Chrysene-d12	6.30	240	5539361	40.00	UG	-0.04
92) Perylene-d12	7.63	264	3319613	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1744183	22.23	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 44.46%			
47) 2-Fluorobiphenyl	3.45	172	3943220	34.29	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 68.58%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.42	244	4403898	34.36	UG	-0.04
Spiked Amount 50.000	Range 15 - 122		Recovery = 68.72%			

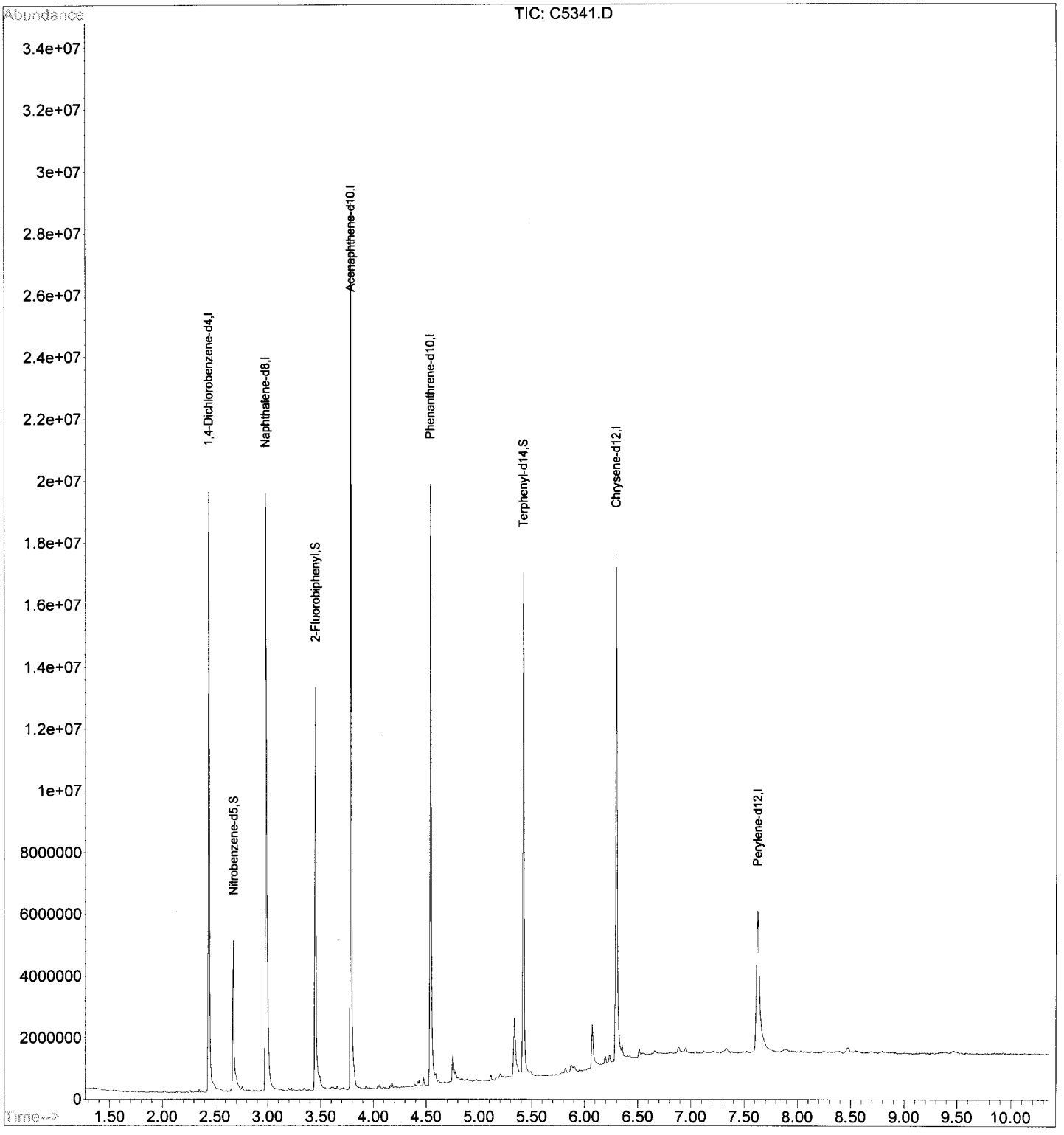
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5341.D
Acq On : 7 Apr 2014 17:02
Operator : JC
Sample : B-474_(6,E14-02878-002,S,15.05g,16.6,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Apr 08 07:32:28 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5342.D
Acq On : 7 Apr 2014 17:18
Operator : JC
Sample : B-474_(8,E14-02878-003,S,15.29g,28.0,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 08 07:33:43 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

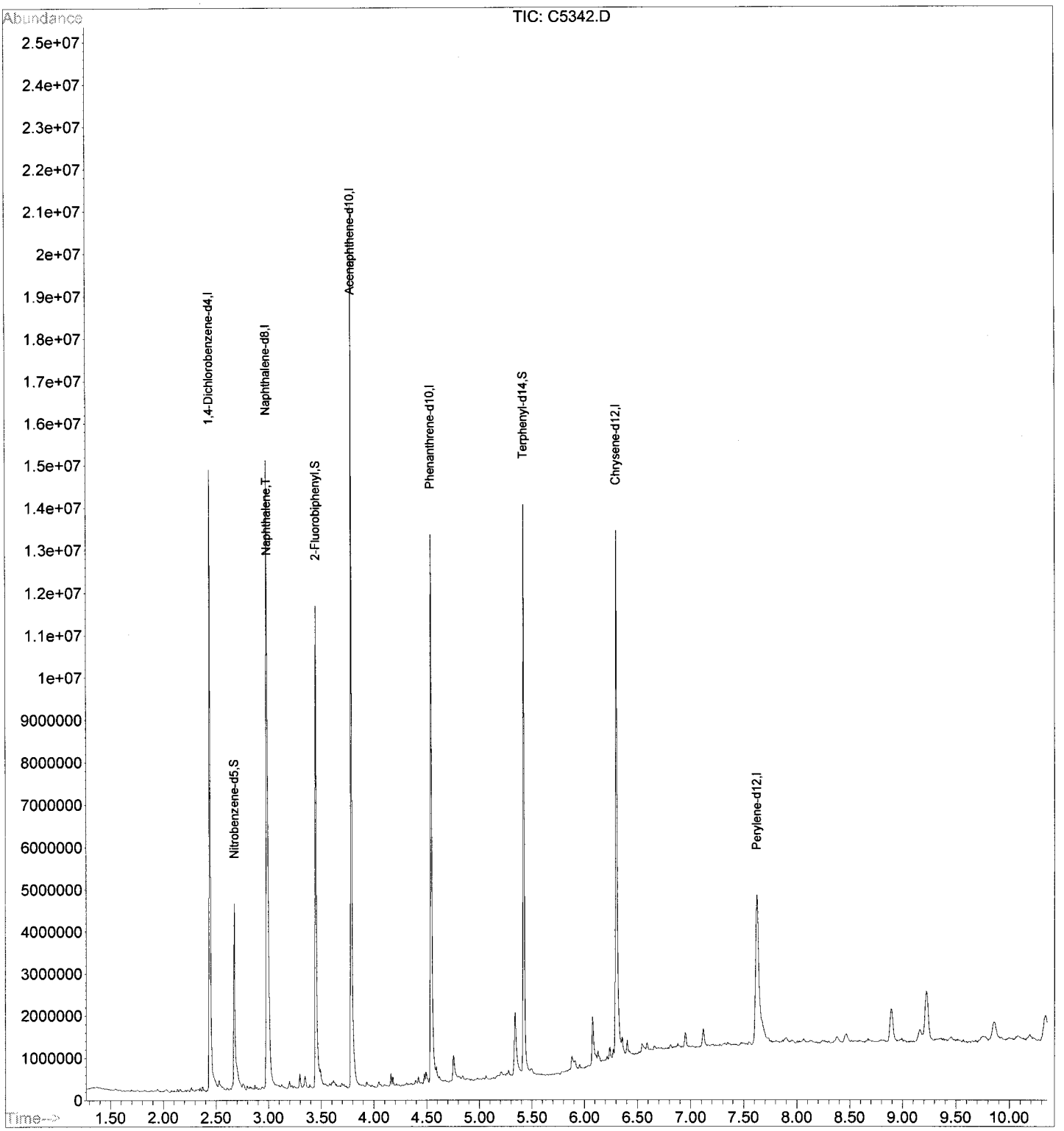
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1974894	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	7328665	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3458606	40.00	UG	-0.02
66) Phenanthrene-d10	4.54	188	4610747	40.00	UG	-0.03
82) Chrysene-d12	6.30	240	4365577	40.00	UG	-0.03
92) Perylene-d12	7.62	264	2851610	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1542992	23.77	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 47.54%			
47) 2-Fluorobiphenyl	3.45	172	3484368	39.34	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 78.68%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.42	244	3618159	35.82	UG	-0.04
Spiked Amount 50.000	Range 15 - 122		Recovery = 71.64%			
Target Compounds						Qvalue
34) Naphthalene	2.99	128	1110247	6.48	UG	# 54

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5342.D
Acq On : 7 Apr 2014 17:18
Operator : JC
Sample : B-474_(8,E14-02878-003,S,15.29g,28.0,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Apr 08 07:33:43 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5344.D
Acq On : 7 Apr 2014 17:48
Operator : JC
Sample : B-477_(3,E14-02878-005,S,15.22g,15.3,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 08 07:35:00 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

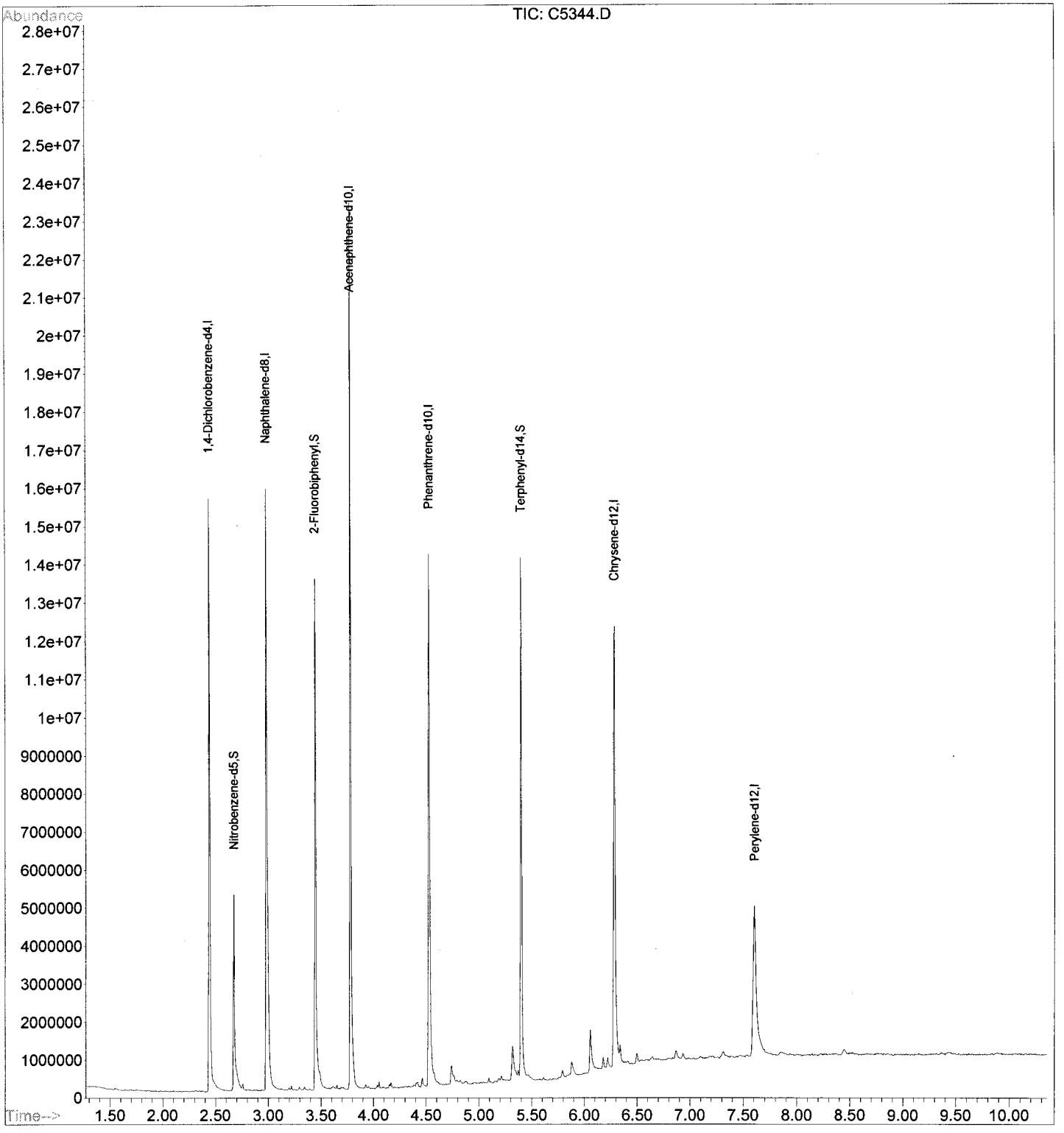
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	2101222	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	8189836	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3908244	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	5360465	40.00	UG	-0.04
82) Chrysene-d12	6.28	240	4740035	40.00	UG	-0.05
92) Perylene-d12	7.60	264	2986064	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.67	82	1702286	23.47	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 46.94%			
47) 2-Fluorobiphenyl	3.44	172	3963531	39.60	UG	-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery = 79.20%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	5.40	244	3922349	35.76	UG	-0.06
Spiked Amount 50.000	Range 15 - 122		Recovery = 71.52%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5344.D
Acq On : 7 Apr 2014 17:48
Operator : JC
Sample : B-477_(3,E14-02878-005,S,15.22g,15.3,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 08 07:35:00 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5345.D
Acq On : 7 Apr 2014 18:04
Operator : JC
Sample : B-477_(8,E14-02878-006,S,15.04g,18.7,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 08 07:38:00 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

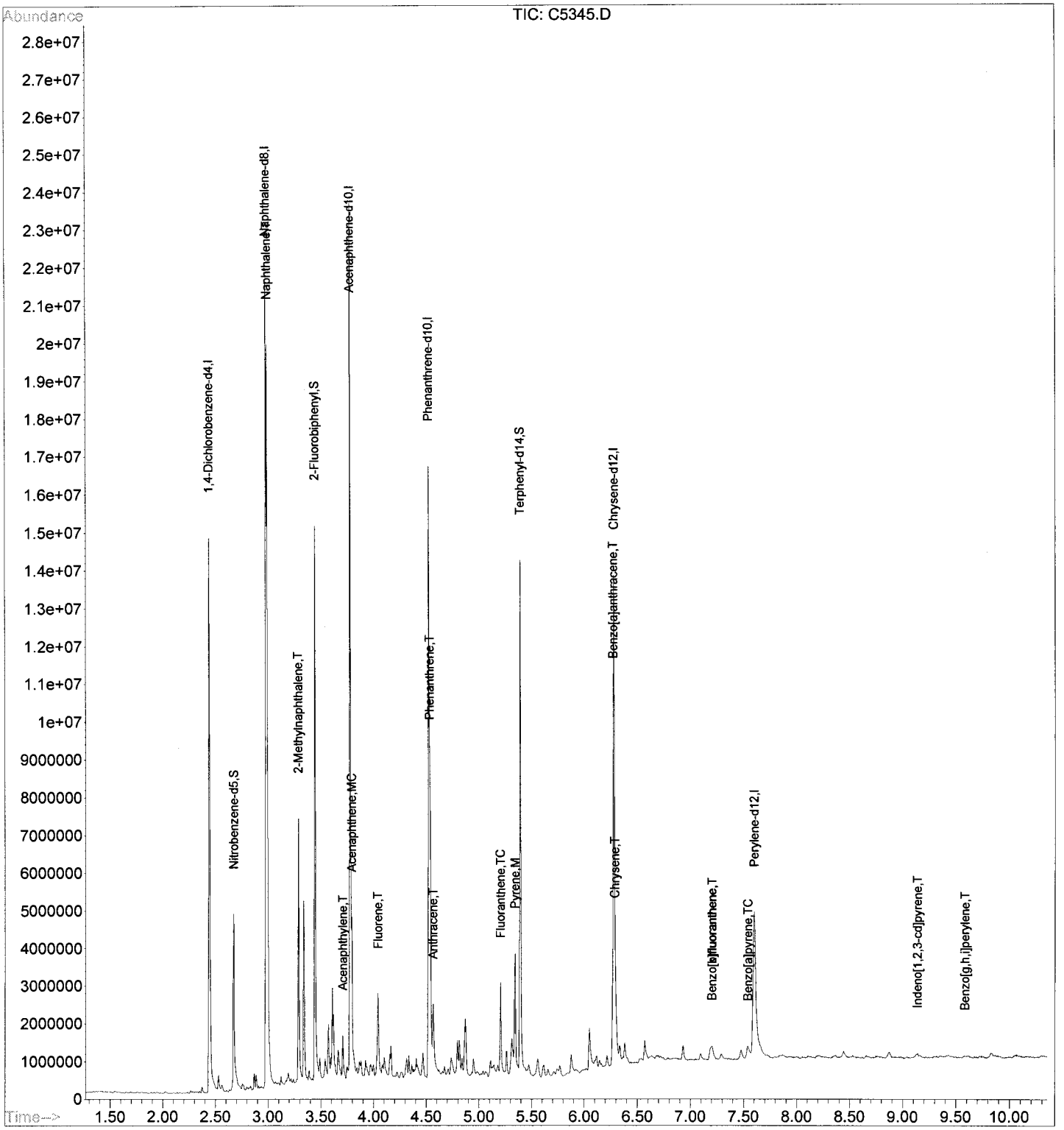
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	2001690	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	6567556	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	3425629	40.00	UG	-0.02
66) Phenanthrene-d10	4.52	188	4594648	40.00	UG	-0.04
82) Chrysene-d12	6.28	240	4215841	40.00	UG	-0.05
92) Perylene-d12	7.60	264	2677012	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1505492	25.88	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	51.76%		
47) 2-Fluorobiphenyl	3.44	172	3608042	41.13	UG	-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery =	82.26%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.39	244	3509041	35.97	UG	-0.07
Spiked Amount 50.000	Range 15 - 122		Recovery =	71.94%		
Target Compounds						Qvalue
34) Naphthalene	2.99	128	5766232	37.53	UG	# 53
41) 2-Methylnaphthalene	3.29	142	1547007	11.49	UG	99
53) Acenaphthylene	3.71	152	182088	1.34	UG	94
55) Acenaphthene	3.80	153	634150	7.66	UG	94
61) Fluorene	4.04	166	515223	5.78	UG	98
75) Phenanthrene	4.54	178	2070240	18.05	UG	99
76) Anthracene	4.56	178	706677	6.73	UG	98
79) Fluoranthene	5.21	202	710226	6.23	UG	# 73
83) Pyrene	5.34	202	1054229	9.47	UG	# 69
88) Benzo[a]anthracene	6.27	228	327784	3.58	UG	# 70
89) Chrysene	6.30	228	313320	3.89	UG	# 33
94) Benzo[b]fluoranthene	7.20	252	158105m	1.98	UG	
95) Benzo[k]fluoranthene	7.20	252	157195m	2.06	UG	
96) Benzo[a]pyrene	7.54	252	226597	3.29	UG	# 91
97) Indeno[1,2,3-cd]pyrene	9.14	276	84379	1.08	UG	# 32
99) Benzo[g,h,i]perylene	9.59	276	88173m	1.32	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5345.D
Acq On : 7 Apr 2014 18:04
Operator : JC
Sample : B-477_(8,E14-02878-006,S,15.04g,18.7,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 08 07:38:00 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5346.D
Acq On : 7 Apr 2014 18:19
Operator : JC
Sample : B-477_(1,E14-02878-007,S,15.42g,19.4,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 08 07:39:27 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

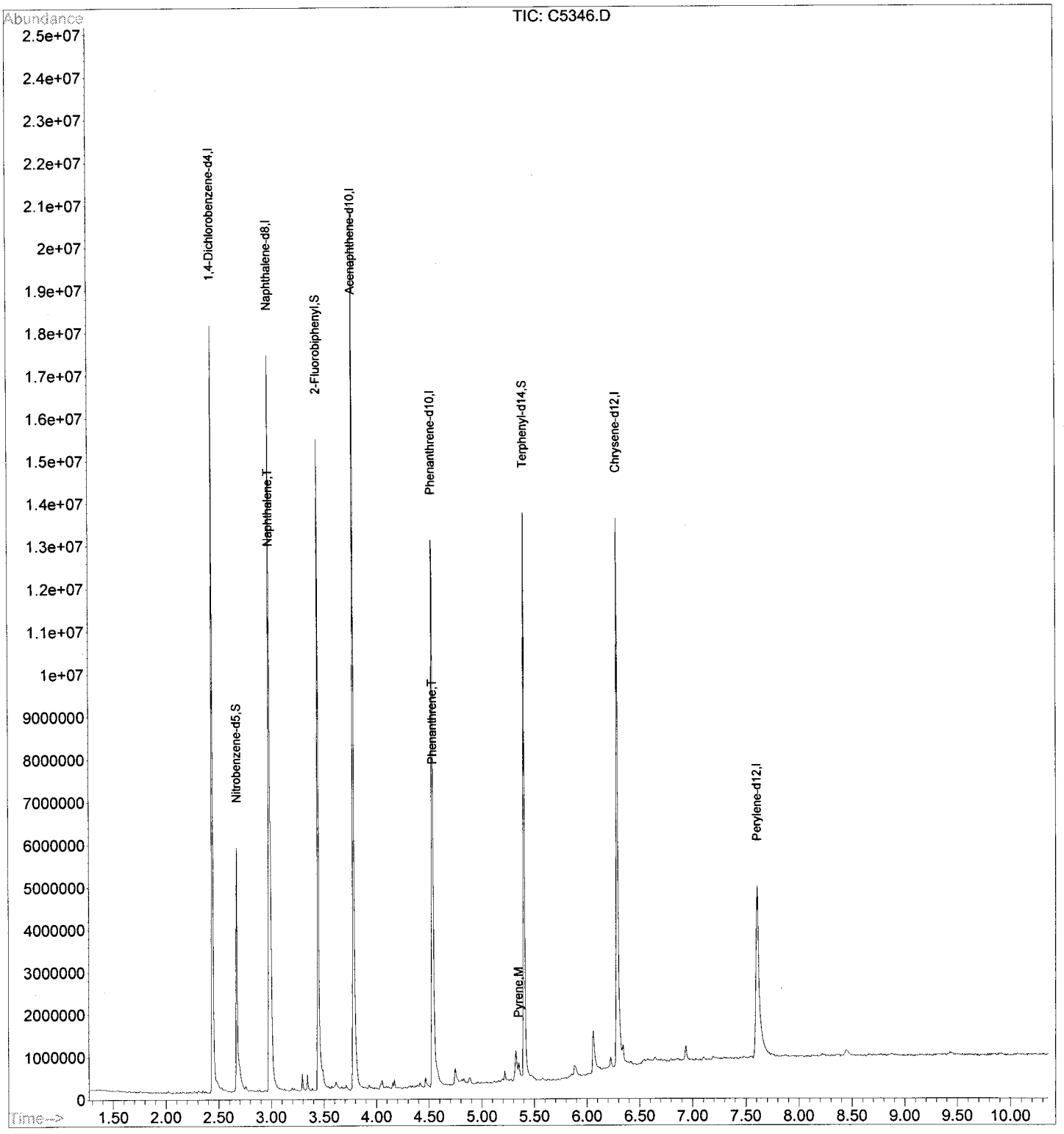
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	2350814	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	8680443	40.00	UG	0.00
43) Acenaphthene-d10	3.78	164	4057931	40.00	UG	-0.02
66) Phenanthrene-d10	4.53	188	5381857	40.00	UG	-0.03
82) Chrysene-d12	6.28	240	4942355	40.00	UG	-0.05
92) Perylene-d12	7.60	264	3019354	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1989068	25.87	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	51.74%		
47) 2-Fluorobiphenyl	3.44	172	4393597	42.28	UG	-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery =	84.56%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.40	244	4161000	36.39	UG	-0.06
Spiked Amount 50.000	Range 15 - 122		Recovery =	72.78%		
Target Compounds						Qvalue
34) Naphthalene	2.99	128	284284	1.40	UG	# 55
75) Phenanthrene	4.54	178	219760	1.64	UG	# 94
83) Pyrene	5.36	202	109099	0.84	UG	# 61

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5346.D
Acq On : 7 Apr 2014 18:19
Operator : JC
Sample : B-477_(1,E14-02878-007,S,15.42g,19.4,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 08 07:39:27 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-04-14\
Data File : C5295.D
Acq On : 4 Apr 2014 23:02
Operator : EDM
Sample : DS-9A_(4,E14-02878-008,S,15.35g,33.2,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 07 10:04:18 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

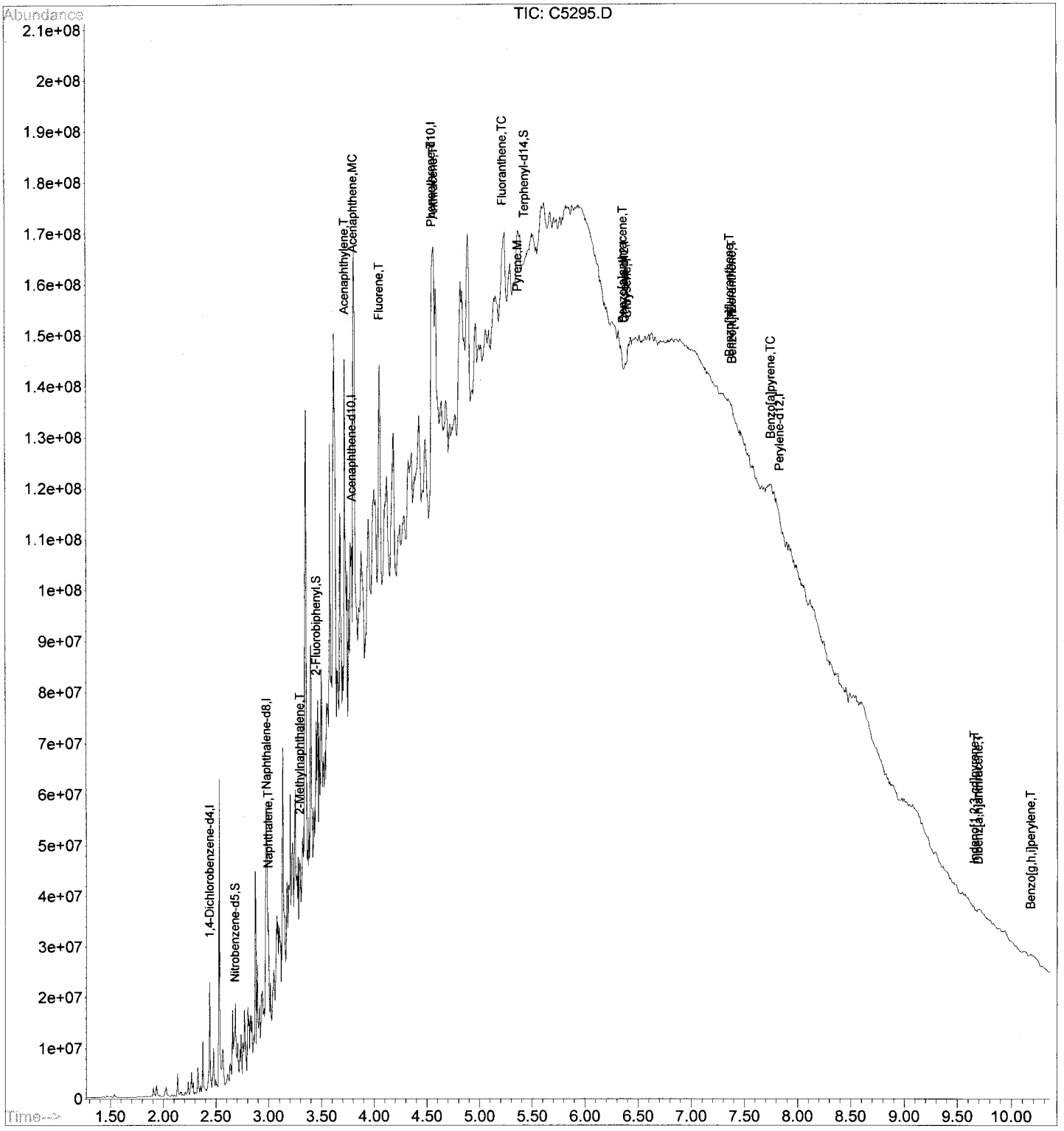
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1861912	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5235556	40.00	UG	0.00
43) Acenaphthene-d10	3.79	164	2876555	40.00	UG	-0.01
66) Phenanthrene-d10	4.54	188	3318267	40.00	UG	-0.02
82) Chrysene-d12	6.37	240	4092741m	40.00	UG	0.04
92) Perylene-d12	7.83	264	1423742m	40.00	UG	0.21
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.67	82	1742079	37.57	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	75.14%		
47) 2-Fluorobiphenyl	3.45	172	3278701m	44.50	UG	0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	89.00%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	5.42	244	1934846	20.43	UG	-0.04
Spiked Amount 50.000	Range 15 - 122		Recovery =	40.86%		
Target Compounds						Qvalue
34) Naphthalene	2.99	128	3967599	32.39	UG	# 59
41) 2-Methylnaphthalene	3.29	142	761337	7.10	UG	94
53) Acenaphthylene	3.72	152	7340978	64.36	UG	# 78
55) Acenaphthene	3.80	153	11720003	168.54	UG	# 78
61) Fluorene	4.05	166	9183130	122.79	UG	86
75) Phenanthrene	4.54	178	22277734m	269.02	UG	
76) Anthracene	4.58	178	11518582m	151.98	UG	
79) Fluoranthene	5.22	202	19710135m	239.27	UG	
83) Pyrene	5.36	202	24007195m	222.13	UG	
88) Benzo[a]anthracene	6.36	228	6994848m	78.75	UG	
89) Chrysene	6.39	228	3600862m	46.03	UG	
94) Benzo[b]fluoranthene	7.37	252	6893269m	162.65	UG	
95) Benzo[k]fluoranthene	7.39	252	5776744m	142.46	UG	
96) Benzo[a]pyrene	7.75	252	19829326m	541.00	UG	
97) Indeno[1,2,3-cd]pyrene	9.66	276	5078706m	122.51	UG	
98) Dibenz[a,h]anthracene	9.69	278	3054554m	93.63	UG	
99) Benzo[g,h,i]perylene	10.18	276	2864400m	80.72	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-04-14\
Data File : C5295.D
Acq On : 4 Apr 2014 23:02
Operator : EDM
Sample : DS-9A_(4,E14-02878-008,S,15.35g,33.2,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 07 10:04:18 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5335.D
Acq On : 7 Apr 2014 15:30
Operator : JC
Sample : DS-9A_(4,E14-02878-008DL,S,15.35g,33.2,0.5
Misc : 140404-01,04/04/14,04/03/14,5
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 08 07:54:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

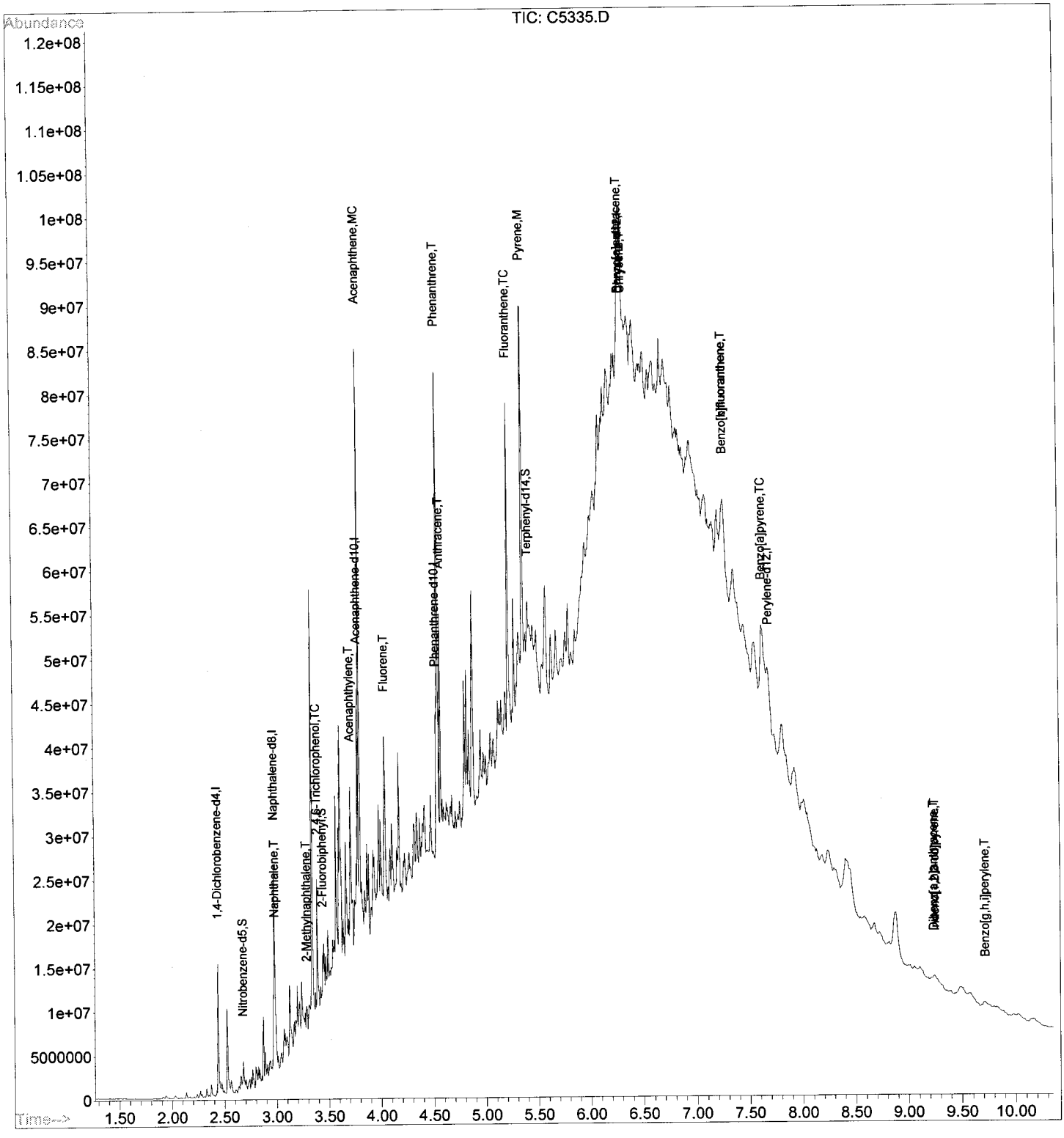
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1746102	40.00	UG		0.00
23) Naphthalene-d8	2.98	136	5957339	40.00	UG		0.00
43) Acenaphthene-d10	3.78	164	3275514	40.00	UG		-0.02
66) Phenanthrene-d10	4.53	188	4410362	40.00	UG		-0.03
82) Chrysene-d12	6.32	240	4708070m	40.00	UG		-0.02
92) Perylene-d12	7.69	264	2473675	40.00	UG		0.07
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#				
6) Phenol-d5	0.00	99	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#				
24) Nitrobenzene-d5	2.67	82	299255	5.67	UG		0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 11.34%#				
47) 2-Fluorobiphenyl	3.44	172	672342m	8.01	UG		-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery = 16.02%#				
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#				
84) Terphenyl-d14	5.41	244	717984	6.59	UG		-0.05
Spiked Amount 50.000	Range 15 - 122		Recovery = 13.18%#				
Target Compounds							Qvalue
34) Naphthalene	2.99	128	809539	5.81	UG	#	58
41) 2-Methylnaphthalene	3.29	142	161755	1.32	UG		95
45) 2,4,6-Trichlorophenol	3.39	196	17266	0.80	UG	#	30
53) Acenaphthylene	3.71	152	2350268	18.10	UG		94
55) Acenaphthene	3.80	153	6608200	83.45	UG	#	84
61) Fluorene	4.05	166	2383797	27.99	UG	#	81
75) Phenanthrene	4.55	178	8632112	78.43	UG	#	55
76) Anthracene	4.58	178	5743618	57.02	UG	#	90
79) Fluoranthene	5.22	202	7176184	65.54	UG	#	57
83) Pyrene	5.37	202	8187139	65.85	UG	#	26
88) Benzo[a]anthracene	6.30	228	4827085m	47.24	UG		
89) Chrysene	6.33	228	5563028m	61.82	UG		
94) Benzo[b]fluoranthene	7.27	252	2485098m	33.75	UG		
95) Benzo[k]fluoranthene	7.27	252	2197049m	31.18	UG		
96) Benzo[a]pyrene	7.63	252	3274262	51.42	UG	#	89
97) Indeno[1,2,3-cd]pyrene	9.25	276	1103747	15.32	UG	#	22
98) Dibenz[a,h]anthracene	9.24	278	364101	6.42	UG	#	68
99) Benzo[g,h,i]perylene	9.72	276	1281269m	20.78	UG		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5335.D
Acq On : 7 Apr 2014 15:30
Operator : JC
Sample : DS-9A_(4,E14-02878-008DL,S,15.35g,33.2,0.5
Misc : 140404-01,04/04/14,04/03/14,5
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 08 07:54:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5336.D
Acq On : 7 Apr 2014 15:45
Operator : JC
Sample : DS-9A (8,E14-02878-009,S,15.30g,18.8,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 08 07:50:58 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

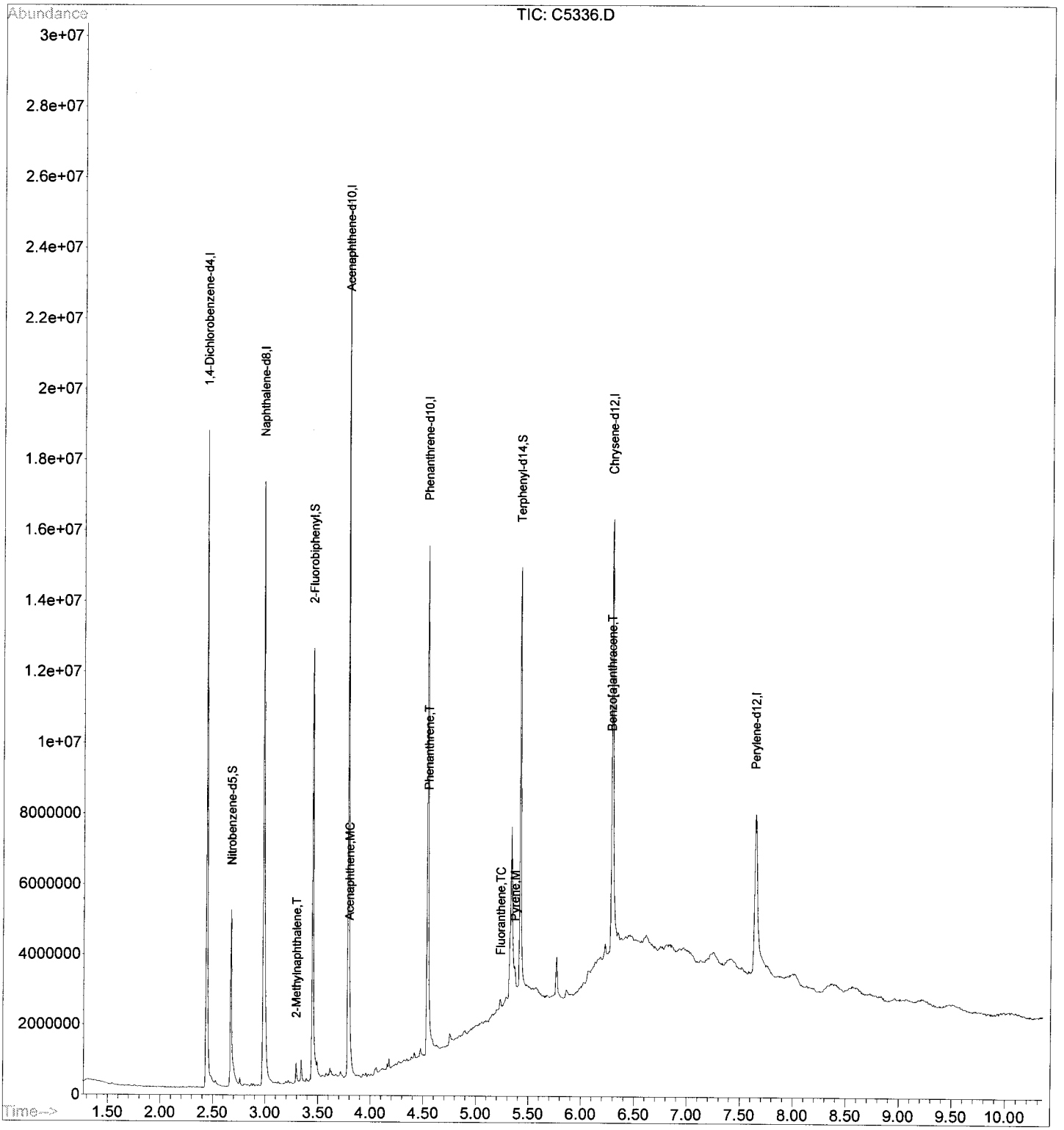
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	2400736	40.00	UG		0.00
23) Naphthalene-d8	2.98	136	8560490	40.00	UG		0.00
43) Acenaphthene-d10	3.78	164	3870302	40.00	UG		-0.02
66) Phenanthrene-d10	4.54	188	5196394	40.00	UG		-0.03
82) Chrysene-d12	6.29	240	4660784m	40.00	UG		-0.04
92) Perylene-d12	7.64	264	3051621	40.00	UG		0.02
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#				
6) Phenol-d5	0.00	99	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#				
24) Nitrobenzene-d5	2.67	82	1857989	24.50	UG		0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 49.00%				
47) 2-Fluorobiphenyl	3.45	172	3997721	40.33	UG		0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 80.66%				
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#				
84) Terphenyl-d14	5.42	244	3642219	33.77	UG		-0.04
Spiked Amount 50.000	Range 15 - 122		Recovery = 67.54%				
Target Compounds							Qvalue
41) 2-Methylnaphthalene	3.29	142	136882	0.78	UG		100
55) Acenaphthene	3.80	153	172976	1.85	UG		96
75) Phenanthrene	4.55	178	136208	1.05	UG		97
79) Fluoranthene	5.23	202	80661m	0.63	UG		
83) Pyrene	5.37	202	108880	0.88	UG	#	51
88) Benzo[a]anthracene	6.27	228	64337	0.64	UG	#	67

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5336.D
Acq On : 7 Apr 2014 15:45
Operator : JC
Sample : DS-9A_(8,E14-02878-009,S,15.30g,18.8,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 08 07:50:58 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5337.D
Acq On : 7 Apr 2014 16:00
Operator : JC
Sample : DS-9A (9,E14-02878-010,S,15.27g,25.0,0.5
Misc : 140404-01,04/04/14,04/03/14,3
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 08 07:56:29 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1755266	40.00	UG		0.00
23) Naphthalene-d8	2.98	136	6500567	40.00	UG		0.00
43) Acenaphthene-d10	3.79	164	3269031	40.00	UG		-0.01
66) Phenanthrene-d10	4.54	188	4379766	40.00	UG		-0.02
82) Chrysene-d12	6.32	240	4161494	40.00	UG		-0.01
92) Perylene-d12	7.71	264	2389625	40.00	UG		0.08
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 100		Recovery =	0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 108		Recovery =	0.00%#			
24) Nitrobenzene-d5	2.67	82	344909m	5.99	UG		0.00
Spiked Amount 50.000	Range 24 - 91		Recovery =	11.98%#			
47) 2-Fluorobiphenyl	3.45	172	1236749m	14.77	UG		0.00
Spiked Amount 50.000	Range 33 - 91		Recovery =	29.54%#			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 37 - 115		Recovery =	0.00%#			
84) Terphenyl-d14	5.43	244	1151169	11.96	UG		-0.03
Spiked Amount 50.000	Range 15 - 122		Recovery =	23.92%			
Target Compounds							Qvalue
34) Naphthalene	2.99	128	445640	2.93	UG	#	63
41) 2-Methylnaphthalene	3.29	142	170334	1.28	UG		97
53) Acenaphthylene	3.72	152	1151508	8.88	UG	#	91
55) Acenaphthene	3.81	153	5231395	66.20	UG	#	90
61) Fluorene	4.05	166	1520639	17.89	UG		85
~~63) 4-Nitroaniline~~	~~4.05~~	~~138~~	~~24722~~	~~1.74~~	~~UG~~	~~#~~	~~51~~
75) Phenanthrene	4.55	178	5839172m	53.42	UG		
76) Anthracene	4.58	178	3631315	36.30	UG	#	95
79) Fluoranthene	5.24	202	4509702	41.48	UG	#	74
~~80) Benzidine~~	~~5.25~~	~~184~~	~~28317~~	~~0.63~~	~~UG~~	~~#~~	~~1~~
83) Pyrene	5.38	202	6271861	57.07	UG	#	66
88) Benzo[a]anthracene	6.31	228	2192312	24.28	UG	#	66
89) Chrysene	6.34	228	2428887	30.54	UG	#	39
94) Benzo[b]fluoranthene	7.28	252	1245128m	17.50	UG		
95) Benzo[k]fluoranthene	7.28	252	1106561m	16.26	UG		
96) Benzo[a]pyrene	7.64	252	1548336	25.17	UG	#	84
97) Indeno[1,2,3-cd]pyrene	9.27	276	484572m	6.96	UG		
98) Dibenz[a,h]anthracene	9.25	278	166765	3.05	UG	#	89
99) Benzo[g,h,i]perylene	9.74	276	521165m	8.75	UG		

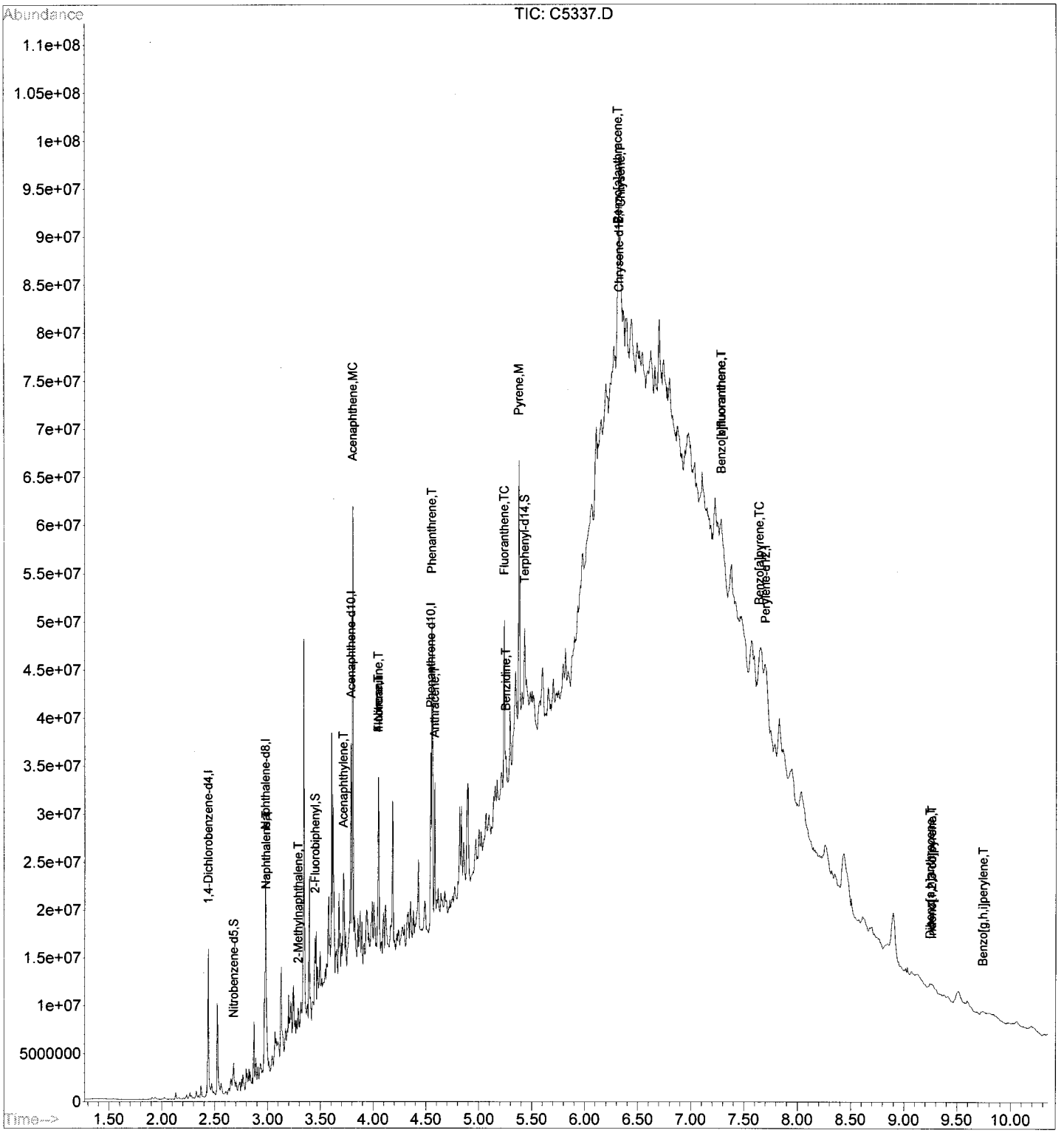
(#) = qualifier out of range (m) = manual integration (+) = signals summed

m 4/24/14

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5337.D
Acq On : 7 Apr 2014 16:00
Operator : JC
Sample : DS-9A_(9,E14-02878-010,S,15.27g,25.0,0.5
Misc : 140404-01,04/04/14,04/03/14,3
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 08 07:56:29 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5338.D
Acq On : 7 Apr 2014 16:16
Operator : JC
Sample : DS-9A_(1,E14-02878-011,S,15.31g,17.2,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 08 07:28:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

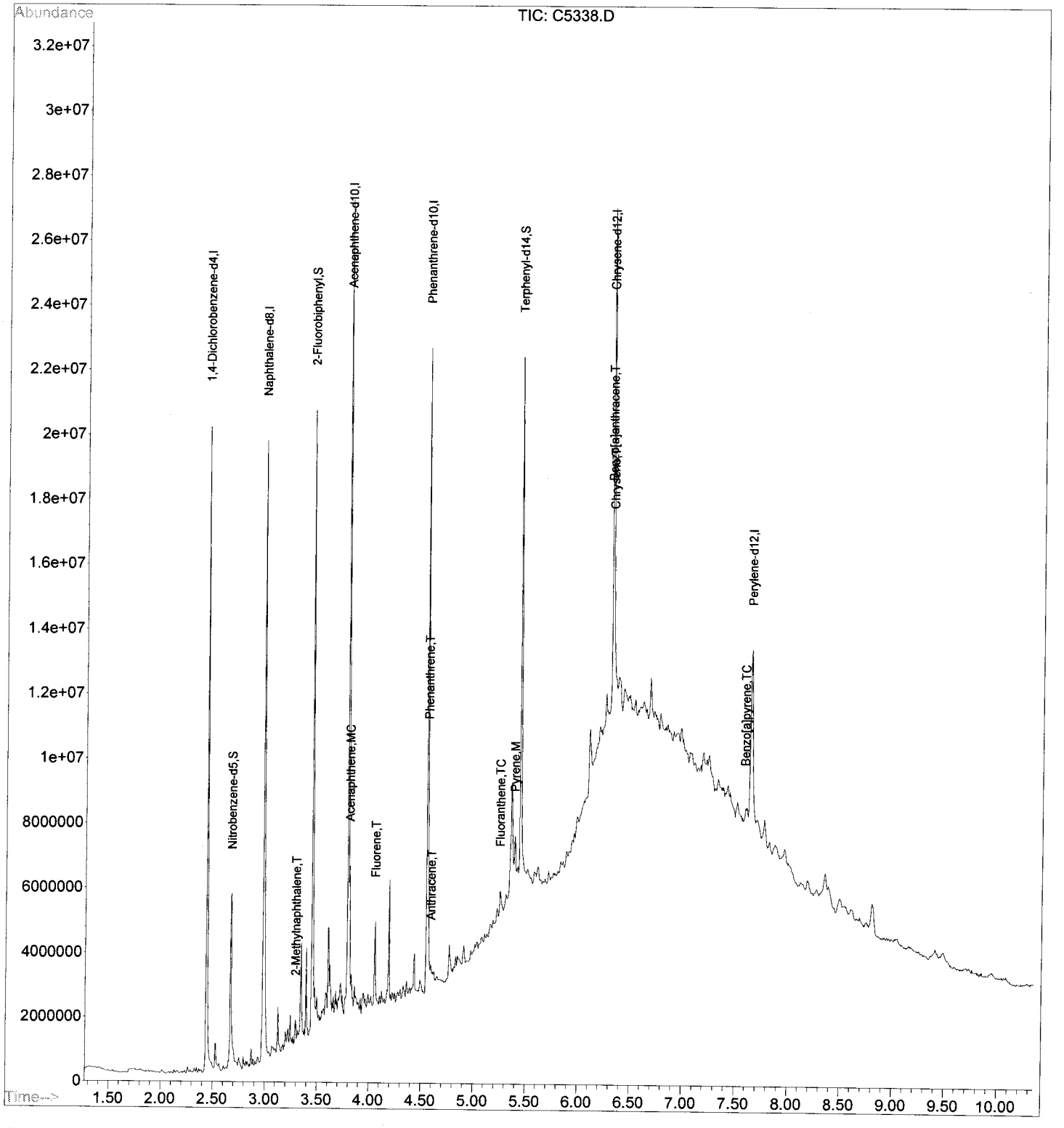
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	2402474	40.00	UG		0.00
23) Naphthalene-d8	2.98	136	8378976	40.00	UG		0.00
43) Acenaphthene-d10	3.80	164	4190336	40.00	UG		0.00
66) Phenanthrene-d10	4.55	188	5536143	40.00	UG		-0.01
82) Chrysene-d12	6.32	240	5013936	40.00	UG		-0.01
92) Perylene-d12	7.65	264	3208428	40.00	UG		0.02
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 100		Recovery = 0.00%#				
6) Phenol-d5	0.00	99	0d	0.00	UG		
Spiked Amount 100.000	Range 25 - 108		Recovery = 0.00%#				
24) Nitrobenzene-d5	2.67	82	2053447	27.67	UG		0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 55.34%				
47) 2-Fluorobiphenyl	3.45	172	4813798	44.86	UG		0.00
Spiked Amount 50.000	Range 33 - 91		Recovery = 89.72%				
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG		
Spiked Amount 100.000	Range 37 - 115		Recovery = 0.00%#				
84) Terphenyl-d14	5.44	244	4227234	36.44	UG		-0.02
Spiked Amount 50.000	Range 15 - 122		Recovery = 72.88%				
Target Compounds							Qvalue
41) 2-Methylnaphthalene	3.29	142	146698	0.85	UG		97
55) Acenaphthene	3.81	153	555128	5.48	UG		94
61) Fluorene	4.06	166	106595	0.98	UG		88
75) Phenanthrene	4.56	178	495795	3.59	UG	#	96
76) Anthracene	4.60	178	223868	1.77	UG		95
79) Fluoranthene	5.25	202	203830	1.48	UG	#	67
83) Pyrene	5.39	202	312582	2.36	UG	#	60
88) Benzo[a]anthracene	6.31	228	136446	1.25	UG	#	53
89) Chrysene	6.33	228	144943	1.51	UG	#	1
96) Benzo[a]pyrene	7.58	252	71399	0.86	UG	#	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : C5338.D
Acq On : 7 Apr 2014 16:16
Operator : JC
Sample : DS-9A_(1,E14-02878-011,S,15.31g,17.2,0.5
Misc : 140404-01,04/04/14,04/03/14,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 08 07:28:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : B8002.D
Acq On : 8 Apr 2014 5:30
Operator : DANA
Sample : FIELD_BL,E14-02878-038,A,1000ml,100,1
Misc : 140407-01,04/07/14,04/03/14,1
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Apr 08 09:11:12 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0614.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Apr 07 12:04:02 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.68	152	267345	40.00	UG	-0.01
23) Naphthalene-d8	4.45	136	906739	40.00	UG	-0.01
43) Acenaphthene-d10	5.47	164	496097	40.00	UG	-0.01
66) Phenanthrene-d10	6.38	188	701022	40.00	UG	-0.02
82) Chrysene-d12	7.97	240	554564	40.00	UG	-0.05
92) Perylene-d12	9.30	264	405219	40.00	UG	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	4.01	82	266155	29.53	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 59.06%			
47) 2-Fluorobiphenyl	5.06	172	647364	40.90	UG	-0.01
Spiked Amount 50.000	Range 26 - 101		Recovery = 81.80%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.27	244	670309	47.81	UG	-0.04
Spiked Amount 50.000	Range 23 - 124		Recovery = 95.62%			

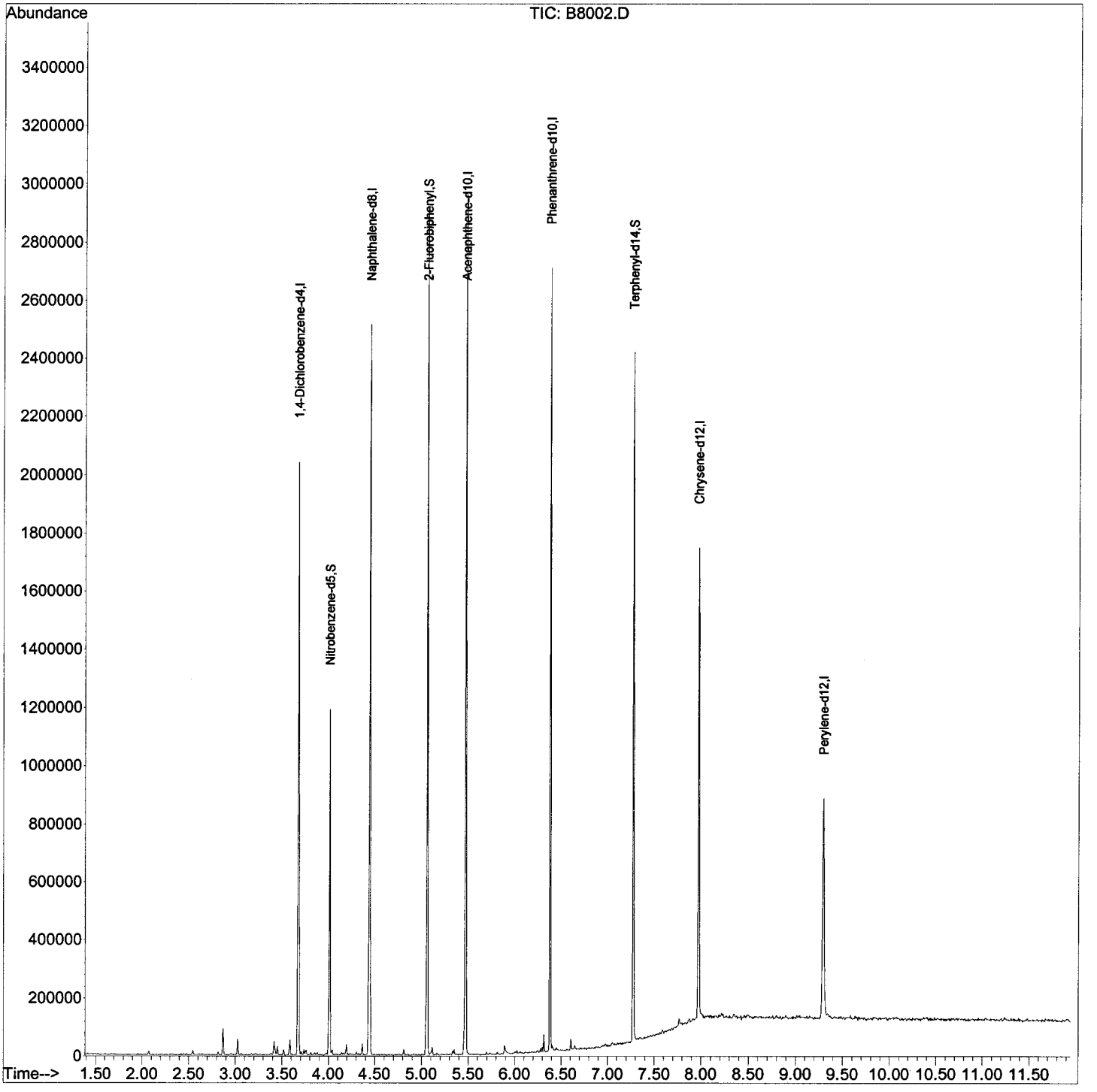
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : B8002.D
Acq On : 8 Apr 2014 5:30
Operator : DANA
Sample : FIELD_BL,E14-02878-038,A,1000ml,100,1
Misc : 140407-01,04/07/14,04/03/14,1
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Apr 08 09:11:12 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0614.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Apr 07 12:04:02 2014
Response via : Initial Calibration



E14-02878 0103

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140404-01
Client ID: .
Date Received: NA
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
Data file: C5285.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		0.033	0.020
Pyridine	ND		0.033	0.020
Benzaldehyde	ND		0.033	0.020
Phenol	ND		0.033	0.020
Aniline	ND		0.033	0.023
Bis(2-chloroethyl) ether	ND		0.033	0.020
2-Chlorophenol	ND		0.033	0.031
1,3-Dichlorobenzene	ND		0.033	0.020
1,4-Dichlorobenzene	ND		0.033	0.029
Benzyl alcohol	ND		0.033	0.027
1,2-Dichlorobenzene	ND		0.033	0.029
2-Methylphenol	ND		0.033	0.025
Bis(2-chloroisopropyl) ether	ND		0.033	0.022
4-Methylphenol **	ND		0.033	0.024
N-Nitrosodi-n-propylamine	ND		0.033	0.030
Acetophenone	ND		0.033	0.029
3-Methylphenol	ND		0.033	0.024
Hexachloroethane	ND		0.033	0.029
Nitrobenzene	ND		0.033	0.022
Isophorone	ND		0.033	0.033
2-Nitrophenol	ND		0.033	0.020
2,4-Dimethylphenol	ND		0.033	0.020
Bis(2-chloroethoxy) methane	ND		0.033	0.028
Benzoic acid	ND		0.033	0.025
2,4-Dimethylaniline	ND		0.033	0.020
2,4-Dichlorophenol	ND		0.033	0.025
1,2,4-Trichlorobenzene	ND		0.033	0.020
Naphthalene	ND		0.033	0.020
4-Chloroaniline	ND		0.033	0.020
4-Aminotoluene	ND		0.033	0.020
Hexachlorobutadiene	ND		0.033	0.026
Caprolactam	ND		0.033	0.020
2-Aminotoluene	ND		0.033	0.020
4-Chloro-3-methylphenol	ND		0.033	0.021
2-Methylnaphthalene	ND		0.033	0.025
Hexachlorocyclopentadiene	ND		0.033	0.020
2,4,6-Trichlorophenol	ND		0.033	0.020
2,4,5-Trichlorophenol	ND		0.033	0.020
1,1'-Biphenyl	ND		0.033	0.020
2-Chloronaphthalene	ND		0.033	0.020
2-Nitroaniline	ND		0.033	0.020
Dimethyl phthalate	ND		0.033	0.022

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS140404-01
Client ID: .
Date Received: NA
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
Data file: C5285.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		0.033	0.020
Acenaphthylene	ND		0.033	0.020
3-Nitroaniline	ND		0.033	0.025
Acenaphthene	ND		0.033	0.031
2,4-Dinitrophenol	ND		0.033	0.020
4-Nitrophenol	ND		0.033	0.031
2,4-Dinitrotoluene	ND		0.033	0.020
Dibenzofuran	ND		0.033	0.027
Diethyl phthalate	ND		0.033	0.020
Fluorene	ND		0.033	0.020
4-Chlorophenyl phenyl ether	ND		0.033	0.020
4-Nitroaniline	ND		0.033	0.020
1,2,4,5-Tetrachlorobenzene	ND		0.033	0.020
2,3,4,6-Tetrachlorophenol	ND		0.033	0.020
4,6-Dinitro-2-methylphenol	ND		0.033	0.020
N-Nitrosodiphenylamine	ND		0.033	0.020
1,2-Diphenylhydrazine	ND		0.033	0.020
4-Bromophenyl phenyl ether	ND		0.033	0.020
Hexachlorobenzene	ND		0.033	0.020
Atrazine	ND		0.033	0.020
Pentachlorophenol	ND		0.033	0.020
Phenanthrene	ND		0.033	0.020
Anthracene	ND		0.033	0.020
Carbazole	ND		0.033	0.020
Di-n-butyl phthalate	ND		0.033	0.020
Fluoranthene	ND		0.033	0.020
Benzidine	ND		0.033	0.020
Pyrene	ND		0.033	0.020
3,3'-Dimethylbenzidine	ND		0.033	0.020
Butyl benzyl phthalate	ND		0.033	0.020
3,3'-Dichlorobenzidine	ND		0.033	0.020
Benzo[a]anthracene	ND		0.033	0.020
Chrysene	ND		0.033	0.020
Bis(2-ethylhexyl) phthalate	ND		0.033	0.020
Di-n-octyl phthalate	ND		0.033	0.020
Benzo[b]fluoranthene	ND		0.033	0.020
Benzo[k]fluoranthene	ND		0.033	0.020
Benzo[a]pyrene	ND		0.033	0.020
Indeno[1,2,3-cd]pyrene	ND		0.033	0.020
Dibenz[a,h]anthracene	ND		0.033	0.020
Benzo[g,h,i]perylene	ND		0.033	0.020

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKS140404-01
Client ID: .
Date Received: NA
Date Extracted: 04/04/2014
Date Analyzed: 04/04/2014
Data file: C5285.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-04-14\
Data File : C5285.D
Acq On : 4 Apr 2014 20:29
Operator : EDM
Sample : .,BLKS140404-01,S,15.00g,0,0.5
Misc : 140404-01,04/04/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 07 10:00:43 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	1391442	40.00	UG	0.00
23) Naphthalene-d8	2.98	136	5723688	40.00	UG	0.00
43) Acenaphthene-d10	3.77	164	3108663	40.00	UG	-0.03
66) Phenanthrene-d10	4.51	188	4691886	40.00	UG	-0.06
82) Chrysene-d12	6.25	240	3414275	40.00	UG	-0.09
92) Perylene-d12	7.60	264	2122681	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	1.92	112	2987312	69.57	UG	0.00
Spiked Amount 100.000	Range 25 - 100		Recovery = 69.57%			
6) Phenol-d5	2.26	99	4220937	79.77	UG	0.00
Spiked Amount 100.000	Range 25 - 108		Recovery = 79.77%			
24) Nitrobenzene-d5	2.68	82	1521749	30.02	UG	0.00
Spiked Amount 50.000	Range 24 - 91		Recovery = 60.04%			
47) 2-Fluorobiphenyl	3.44	172	3493913m	43.88	UG	-0.01
Spiked Amount 50.000	Range 33 - 91		Recovery = 87.76%			
70) 2,4,6-Tribromophenol	4.16	330	1023346	83.85	UG	-0.04
Spiked Amount 100.000	Range 37 - 115		Recovery = 83.85%			
84) Terphenyl-d14	5.37	244	4008724	50.74	UG	-0.10
Spiked Amount 50.000	Range 15 - 122		Recovery = 101.48%			

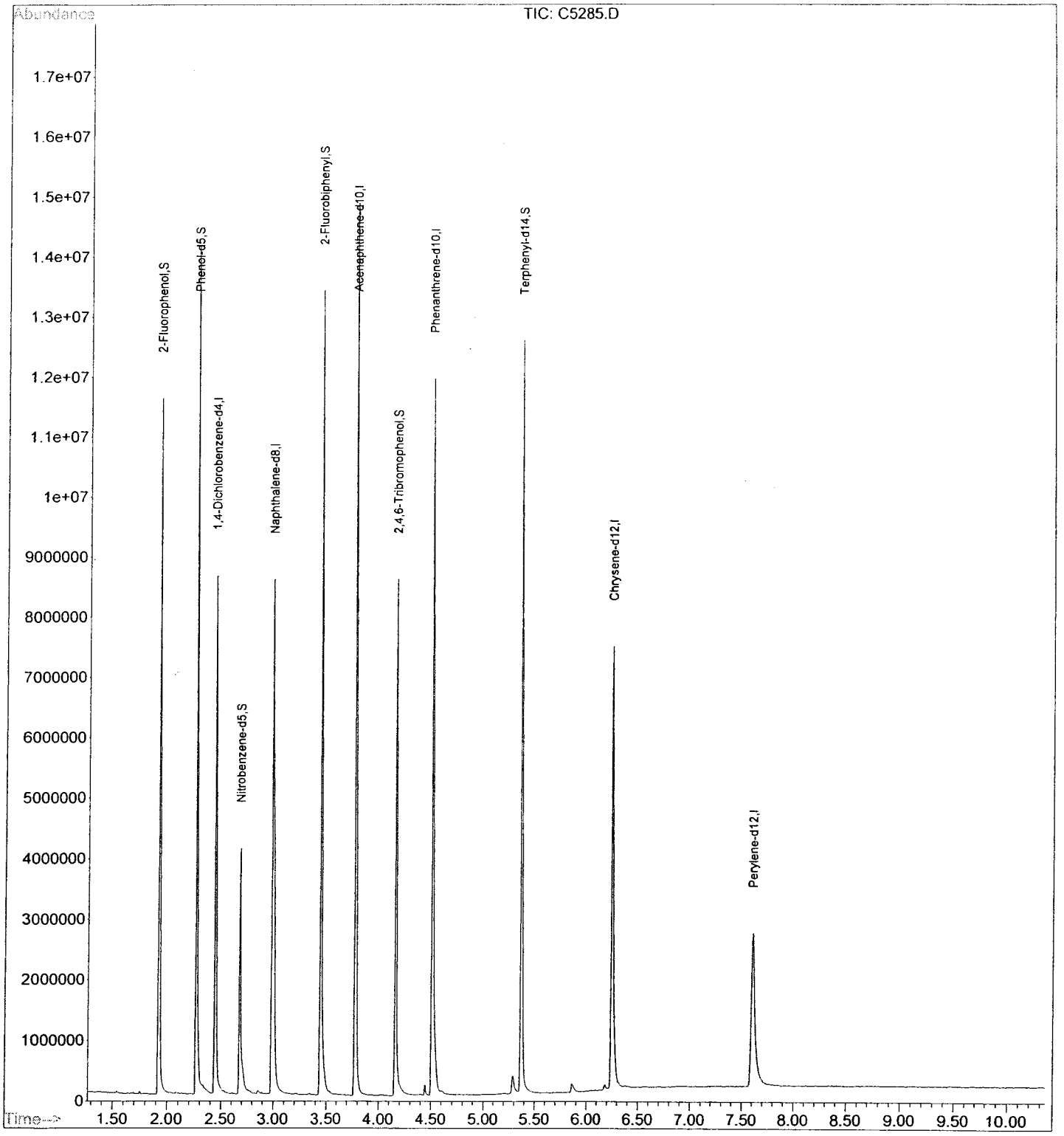
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-04-14\
Data File : C5285.D
Acq On : 4 Apr 2014 20:29
Operator : EDM
Sample : .,BLKS140404-01,S,15.00g,0,0.5
Misc : 140404-01,04/04/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 07 10:00:43 2014
Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Mar 27 12:25:08 2014
Response via : Initial Calibration



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\04-04-14\
Data File : C5285.D
Acq On : 4 Apr 2014 20:29
Operator : EDM
Sample : ,BLKS140404-01,S,15.00g,0,0.5
Misc : 140404-01,04/04/14,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\CS0514.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

CS0514.M Mon Apr 07 10:44:17 2014 RPT1

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA140407-01
Client ID: .
Date Received: NA
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
Data file: B7984.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		1.00	0.403
Pyridine	ND		1.00	0.236
Benzaldehyde	ND		1.00	0.295
Phenol	ND		1.00	0.450
Aniline	ND		1.00	0.236
Bis(2-chloroethyl) ether	ND		1.00	0.428
2-Chlorophenol	ND		1.00	0.284
1,3-Dichlorobenzene	ND		1.00	0.366
1,4-Dichlorobenzene	ND		1.00	0.427
Benzyl alcohol	ND		1.00	0.389
1,2-Dichlorobenzene	ND		1.00	0.306
2-Methylphenol	ND		1.00	0.425
Bis(2-chloroisopropyl) ether	ND		1.00	0.438
4-Methylphenol **	ND		1.00	0.450
N-Nitrosodi-n-propylamine	ND		1.00	0.331
Acetophenone	ND		1.00	0.460
3-Methylphenol	ND		1.00	0.450
Hexachloroethane	ND		1.00	0.372
Nitrobenzene	ND		1.00	0.265
Isophorone	ND		1.00	0.263
2-Nitrophenol	ND		1.00	0.311
2,4-Dimethylphenol	ND		1.00	0.323
Bis(2-chloroethoxy) methane	ND		1.00	0.259
Benzoic acid	ND		1.00	0.263
2,4-Dimethylaniline	ND		1.00	0.217
2,4-Dichlorophenol	ND		1.00	0.457
1,2,4-Trichlorobenzene	ND		1.00	0.319
Naphthalene	ND		1.00	0.273
4-Chloroaniline	ND		1.00	0.305
4-Aminotoluene	ND		1.00	0.215
Hexachlorobutadiene	ND		1.00	0.378
Caprolactam	ND		1.00	0.513
2-Aminotoluene	ND		1.00	0.249
4-Chloro-3-methylphenol	ND		1.00	0.256
2-Methylnaphthalene	ND		1.00	0.433
Hexachlorocyclopentadiene	ND		1.00	0.223
2,4,6-Trichlorophenol	ND		1.00	0.223
2,4,5-Trichlorophenol	ND		1.00	0.218
1,1'-Biphenyl	ND		1.00	0.268
2-Chloronaphthalene	ND		1.00	0.223
2-Nitroaniline	ND		1.00	0.243
Dimethyl phthalate	ND		1.00	0.329

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA140407-01
Client ID: .
Date Received: NA
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
Data file: B7984.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		1.00	0.391
Acenaphthylene	ND		1.00	0.316
3-Nitroaniline	ND		1.00	0.237
Acenaphthene	ND		1.00	0.261
2,4-Dinitrophenol	ND		1.00	0.318
4-Nitrophenol	ND		1.00	0.582
2,4-Dinitrotoluene	ND		1.00	0.230
Dibenzofuran	ND		1.00	0.275
Diethyl phthalate	ND		1.00	0.449
Fluorene	ND		1.00	0.447
4-Chlorophenyl phenyl ether	ND		1.00	0.476
4-Nitroaniline	ND		1.00	0.331
1,2,4,5-Tetrachlorobenzene	ND		1.00	0.218
2,3,4,6-Tetrachlorophenol	ND		1.00	0.224
4,6-Dinitro-2-methylphenol	ND		1.00	0.280
N-Nitrosodiphenylamine	ND		1.00	0.310
1,2-Diphenylhydrazine	ND		1.00	0.366
4-Bromophenyl phenyl ether	ND		1.00	0.481
Hexachlorobenzene	ND		1.00	0.357
Atrazine	ND		1.00	0.418
Pentachlorophenol	ND		1.00	0.223
Phenanthrene	ND		1.00	0.372
Anthracene	ND		1.00	0.322
Carbazole	ND		1.00	0.276
Di-n-butyl phthalate	ND		1.00	0.264
Fluoranthene	ND		1.00	0.362
Benzidine	ND		1.00	0.265
Pyrene	ND		1.00	0.308
3,3'-Dimethylbenzidine	ND		1.00	0.233
Butyl benzyl phthalate	ND		1.00	0.304
3,3'-Dichlorobenzidine	ND		1.00	0.285
Benzo[a]anthracene	ND		1.00	0.243
Chrysene	ND		1.00	0.243
Bis(2-ethylhexyl) phthalate	ND		1.00	0.304
Di-n-octyl phthalate	ND		1.00	0.507
Benzo[b]fluoranthene	ND		1.00	0.716
Benzo[k]fluoranthene	ND		1.00	0.683
Benzo[a]pyrene	ND		1.00	0.381
Indeno[1,2,3-cd]pyrene	ND		1.00	0.509
Dibenz[a,h]anthracene	ND		1.00	0.514
Benzo[g,h,i]perylene	ND		1.00	0.468

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA140407-01
Client ID: .
Date Received: NA
Date Extracted: 04/07/2014
Date Analyzed: 04/08/2014
Data file: B7984.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : B7984.D
Acq On : 8 Apr 2014 00:25
Operator : DANA
Sample : .,BLKA140407-01,A,1000ml,100,1
Misc : 140407-01,04/07/14,NA,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 08 08:46:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0614.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Apr 07 12:04:02 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.68	152	297744	40.00	UG	-0.01
23) Naphthalene-d8	4.45	136	1001193	40.00	UG	-0.01
43) Acenaphthene-d10	5.47	164	543570	40.00	UG	-0.01
66) Phenanthrene-d10	6.38	188	784898	40.00	UG	-0.02
82) Chrysene-d12	7.97	240	588067	40.00	UG	-0.05
92) Perylene-d12	9.29	264	415625	40.00	UG	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	2.86	112	380580	49.59	UG	0.00
Spiked Amount 100.000	Range 10 - 100		Recovery = 49.59%			
6) Phenol-d5	3.44	99	475710	48.56	UG	-0.01
Spiked Amount 100.000	Range 10 - 102		Recovery = 48.56%			
24) Nitrobenzene-d5	4.01	82	287349	28.87	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 57.74%			
47) 2-Fluorobiphenyl	5.06	172	660412	38.08	UG	-0.01
Spiked Amount 50.000	Range 26 - 101		Recovery = 76.16%			
70) 2,4,6-Tribromophenol	6.00	330	206462	57.43	UG	-0.02
Spiked Amount 100.000	Range 22 - 115		Recovery = 57.43%			
84) Terphenyl-d14	7.27	244	577128	38.82	UG	-0.04
Spiked Amount 50.000	Range 23 - 124		Recovery = 77.64%			

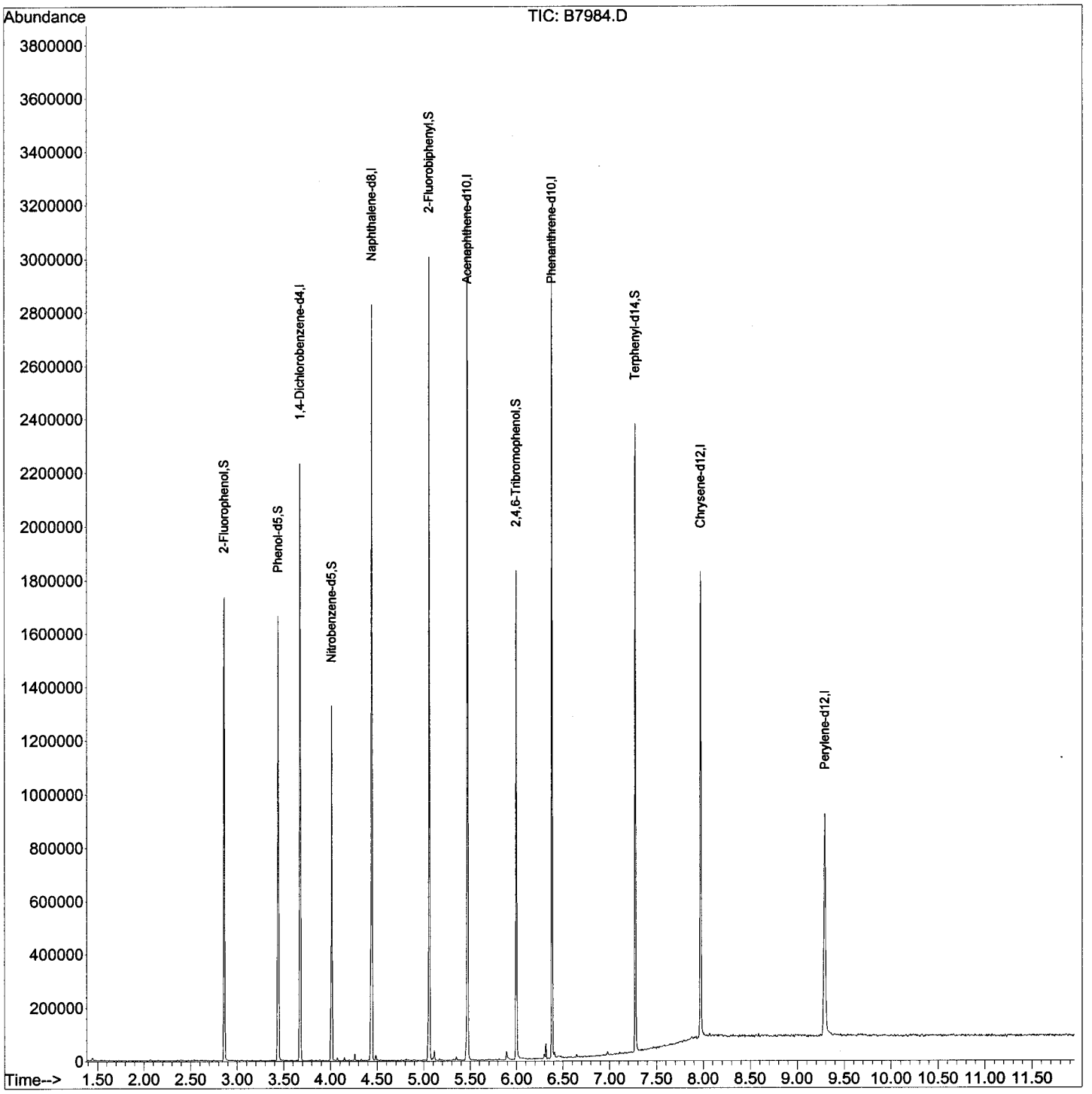
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : B7984.D
Acq On : 8 Apr 2014 00:25
Operator : DANA
Sample : .,BLKA140407-01,A,1000ml,100,1
Misc : 140407-01,04/07/14,NA,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 08 08:46:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\BW0614.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Apr 07 12:04:02 2014
Response via : Initial Calibration



Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\04-07-14\
Data File : B7984.D
Acq On : 8 Apr 2014 00:25
Operator : DANA
Sample : .,BLKA140407-01,A,1000ml,100,1
Misc : 140407-01,04/07/14,NA,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\BW0614.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

BW0614.M Tue Apr 08 08:42:59 2014 MSD_B

SAMPLE TRACKING

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

IAL Integrated Analytical Laboratories LLC

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO		REPORTING INFO	
Company:	GEI	REPORT TO:	GEI
Address:	18000 Horizon Way, Suite 200	Address:	~~Brian Manning~~
	Mount Laurel, NJ 08054		18000 Horizon Way, Mt Laurel, NJ
Telephone #:	856-608-6860	Attn:	Brian Manning
Fax #:	856-608-6864	FAX #	856-608-6864
Project Manager:	Chris Dailey	INVOICE TO:	GEI
EMAIL Address:	cdailey@geiconsultants.com	Address:	18000 Horizon Way, Suite 200
Sampler:	Brian Manning		Mount Laurel, NJ 08054
Project Name:	Sea Isle City		
Project Location (State):	NJ	Attn:	Brian Manning
Bottle Order #:		PO #	
Quote # :			

Turnaround Time *(starts the following day if samples rec'd at lab > 5PM)*

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) | NJ EPH Fractionated (5 day TAT)
NJ EPH - C40 (5 day TAT)
DRO-8015 (3-5 day TAT) | QAM025 (5 day TAT)

Verbal/Fax: Std 2 wk unless otherwise specified
24 hr** | 48 hr** | 72 hr** | 96 hr** | 1 wk**
Other** (specify):

Hard Copy: Std 3 week * | Other - call for price

Rush TAT Charge **
24 hr - 100%....
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix
DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
B-474	4-4.5	4/2	8:52	S	1	1	X							1	
B-474	6-6.5	4/2	8:56	S	1	2	X							1	
B-474	8.5-9	4/2	8:58	S	1	3	X							1	
*(H) B-477	2.5-3	4/2	9:06	S	1	4	X							1	
B-477	3.5-4	4/2	9:20	S	1	5	X							1	
B-477	8.5-9	4/2	9:15	S	1	6	X							1	
B-477	11.5-12	4/2	9:20	S	1	7	X							1	
DS-9A	4-4.5	4/2	11:30	S	1	8	X							1	

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by: Brian Manning/GEI	3/3/14	16:30	Received by:	3/3/14	17:30
Relinquished by:			Received by: (CAM)	3/3/14	1830
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		

Comments: (H) = Hold sample
3-day TAT for DS-9A samples
* (H) = Extract + hold

Lab Case # 2878

PAGE: 1 of 3

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01/2012 rev

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO

Company:	GEI
Address:	10000 Horizon Way, Suite 200
	Mount Laurel, NJ 08054
Telephone #:	856-608-6860
Fax #:	856-608-6864
Project Manager:	Chris Dailey
EMAIL Address:	cdailey@geiconsultants.com
Sampler:	Brian Mannino
Project Name:	San Isle City
Project Location (State):	NJ
Bottle Order #:	
Quote # :	

REPORTING INFO

REPORT TO:	GEI
Address:	10000 Horizon Way, Suite 200
	Mount Laurel, NJ
Attn:	Brian Mannino
FAX #	856-608-6864
INVOICE TO:	GEI
Address:	10000 Horizon Way, Suite 200
	Mount Laurel, NJ 08054
Attn:	Brian Mannino
PO #	

Turnaround Time (starts the following day if samples rec'd at lab > 5PM)

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) NJ EPH Fractionated (5 day TAT)

NJ EPH - C40 (5 day TAT)

DRO-8015 (3-5 day TAT) QAM025 (5 day TAT)

Verbal/Fax: Std 2 wk unless otherwise specified

24 hr** 48 hr** 72 hr** 96 hr** 1 wk**

Other** (specify):

Hard Copy: Std 3 week * Other - call for price

Rush TAT Charge **
24 hr - 100%....
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix

DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
DS-9A	8-8.5	4/2	11:31	S	1	9	X							1	
DS-9A	9-9.5	4/2	11:35	S	1	10	X							1	
DS-9A	10.5-11	4/2	11:36	S	1	11	X							1	
(H) B-338	3-3.5	4/2	13:40	S	1	12	X							1	
(H) B-338	6-6.5	4/2	13:42	S	1	13	X							1	
(H) B-338	10-10.5	4/2	13:43	S	1	14	X							1	
(H) B-338	11.5-12	4/2	13:44	S	1	15	X							1	
(H) B-339	4-4.5	4/2	11:06	S	1	16	X							1	

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by: Brian Mannino/GEI	3/3/14	16:20	Received by:	3/3/14	1:30
Relinquished by:			Received by:	4/3/14	1830
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		

Comments: (H) = Hold sample
-3-day TAT for DS-9A samples

Lab Case # 2878

PAGE: 2 of 5

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Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO	REPORTING INFO
Company: GEI	REPORT TO: GEI
Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054	Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Telephone #: 856-608-6666	Attn: Brian Manning
Fax #: 856-608-6664	FAX # 856-608-6664
Project Manager: Chris Dailey	INVOICE TO: GEI
EMAIL Address: cdailey@geiconsultants.com	Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Sampler: Brian Manning	
Project Name: San Isle City	Attn: Brian Manning
Project Location (State): NJ	PO #
Bottle Order #:	
Quote # :	

Turnaround Time *(starts the following day if samples rec'd at lab > 5PM)*

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) | NJ EPH Fractionated (5 day TAT)
NJ EPH - C40 (5 day TAT)
DRO-8015 (3-5 day TAT) | QAM025 (5 day TAT)

Verbal/Fax: Std 2 wk unless otherwise specified
24 hr** 48 hr** 72 hr** 96 hr** 1 wk**
Other** (specify): _____

Hard Copy: Std 3 week * Other - call for price

Rush TAT Charge **
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix
DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

	Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
(H)	B-339	6.5-7	4/2	11:07	S	1	17	X							1	
(H)	B-339	9.5-10	4/2	11:14	S	1	18	X							1	
(H)	B-339	11-11.5	4/2	11:15	S	1	19	X							1	
(H)	B-340	3.5-4	4/2	13:15	S	1	20	X							1	
(H)	B-340	8.5-9	4/2	13:16	S	1	21	X							1	
(H)	B-340	9.-9.5	4/2	13:25	S	1	22	X							1	
(H)	B-340	11.5-12	4/2	13:26	S	1	23	X							1	
(H)	B-341	4.5-5	4/2	10:27	S	1	24	X							1	

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by: Brian Manning / GEI	3/2/14	6:30	Received by:	3/3/14	1:30
Relinquished by:			Received by:	4/3/14	1830
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		

Comments: (H) = Hold sample

Lab Case # 2878

PAGE: 3 of 5

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Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
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Web: www.ialonline.com

CUSTOMER INFO	REPORTING INFO
Company: GET	REPORT TO: GET
Address: 10000 Horizon Way, Suite 200	Address: 10000 Horizon Way, Suite 200
Mount Laurel, NJ 08054	Mount Laurel, NJ 08054
Telephone #: 856-608-6860	Attn: Brian Manning
Fax #: 856-608-6864	FAX # 856-608-6864
Project Manager: Chris Dailey	INVOICE TO: GET
EMAIL Address: cdailey@geiconsultants.com	Address: 10000 Horizon Way, Suite 200
Sampler: Brian Manning	Mount Laurel, NJ 08054
Project Name: Sea Isle City	
Project Location (State): NJ	Attn: Brian Manning
Bottle Order #:	PO #
Quote # :	

Turnaround Time *(starts the following day if samples rec'd at lab > 5PM)*

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) — NJ EPH Fractionated (5 day TAT)
NJ EPH - C40 (5 day TAT)
DRO-8015 (3-5 day TAT) — QAM025 (5 day TAT)

Rush TAT Charge **: 24 hr - 100%... 48 hr - 75%.... 72 hr - 50%.... 96 hr - 35%.... 5 day - 25%.... 6-9 day 10%

Verbal/Fax: Std 2 wk unless otherwise specified
24 hr** 48 hr** 72 hr** 96 hr** 1 wk**
Other** (specify):
Hard Copy: Std 3 week * Other - call for price

Report Format: Results Only; Reduced; Regulatory - 15% Surcharge applies; Other (describe)
EDDs: NJ SRP format; NYSDEC; lab approved custom EDD; NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix
DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

	Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
(H)	B-341	6-6.5	4/2	16:29	S	1	25	X							1	
(H)	B-342	4-4.5	4/2	12:55	S	1	26	X							1	
(H)	B-342	7.5-8	4/2	12:56	S	1	27	X							1	
(H)	B-342	9-9.5	4/2	13:00	S	1	28	X							1	
(H)	B-342	10-10.5	4/2	13:04	S	1	29	X							1	
(H)	B-343	4-4.5	4/2	16:45	S	1	30	X							1	
(H)	B-343	9-9.5	4/2	18:52	S	1	31	X							1	
(H)	B-344	5-5.5	4/2	14:20	S	1	32	X							1	

Known Hazard: Yes or No Describe:
Conc. Expected: Low Med High
MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): ____ IAL Courier ____ Client Courier ____ FedEx/UPS

Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by: Brian Manning / GET	3/3/14	6:30	Received by:	3/3/14	16:30
Relinquished by:			Received by:	4/3/14	1830
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		

Comments: (H) = Hold sample

Lab Case # 2878

PAGE: 4 of 5

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Randolph, NJ 07869

Integrated Analytical Laboratories LLC

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CUSTOMER INFO		REPORTING INFO	
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Telephone #:	856-608-6860	Attn:	Brian Manning
Fax #:	856-608-6864	FAX #	856-608-6864
Project Manager:	Chris Bailey	INVOICE TO:	GEI
EMAIL Address:	cdailey@geiconsultants.com	Address:	18000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Sampler:	Brian Manning		
Project Name:	Sea Isle City	Attn:	Brian Manning
Project Location (State):	NJ	PO #	
Bottle Order #:			
Quote # :			

Turnaround Time (starts the following day if samples rec'd at lab > 5PM)

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PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) | NJ EPH Fractionated (5 day TAT)
NJ EPH - C40 (5 day TAT)
DRO-8015 (3-5 day TAT) | QAM025 (5 day TAT)

Verbal/Fax: Std 2 wk unless otherwise specified
24 hr** 48 hr** 72 hr** 96 hr** 1 wk**
Other** (specify):

Hard Copy: Std 3 week * Other - call for price

Rush TAT Charge **
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format	EDDs
Results Only	NJ SRP format
Reduced	NYSDEC
Regulatory - 15% Surcharge applies	lab approved custom EDD
Other (describe)	NO EDD/CD REQ'D

Cooler Temp 4 °C

SAMPLE INFORMATION

Sample Matrix
DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

	Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	NaOH	H2SO4	Other	None	Encore
(H)	B-344	8.5-9	4/2	14:21	S	1	33	X							1	
(H)	B-345	4.5-5	4/2	13:58	S	1	34	X							1	
(H)	B-345	8-8.5	4/2	14:00	S	1	35	X							1	
(H)	B-345	9-9.5	4/2	14:18	S	1	36	X							1	
(H)	B-345	10.5-11	4/2	~~13:14~~ 14:14	S	1	37	X							1	
	Field Blank	—	4/2	~~7:00~~	AQ	2	38	X							2	
	~~Field Blank~~		~~4/2~~													

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by: Brian Manning/GEI	3/3/14	16:30	Received by:	3/3/14	1530
Relinquished by:			Received by:	3/3/14	1850
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		

Comments: (H) = Hold sample

Lab Case # 2878

PAGE: 5 of 5

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EL4-02878 0121

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Integrated Analytical Laboratories LLC

PROJECT INFORMATION

RUSH

E14-02878: SEA ISLE CITY

To: Chris Dailey
GEI Consultants, Inc.
Fax: 1(856) 608-6864
EMail: cdailey@geiconsultants.com;datagr

Report To

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054
Attn: Chris Dailey

Bill To

GEI Consultants, Inc.
PO Box 3

Hooksett, NH 03106
Attn: Chris Dailey

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Reduced		Apr 03, 2014 @ 18:30	NA	Apr 18, 2014	Apr 30, 2014 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. Equis GEI

**** QC Requirement (must meet):** NJ IGW

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
02878-001	B-474 (4-4.5)	4/4.5	04/02/14@08:52	Soil	mg/Kg (ppm)	
02878-002	B-474 (6-6.5)	6/6.5	04/02/14@08:50	Soil	mg/Kg (ppm)	
02878-003	B-474 (8.5-9)	8.5/9	04/02/14@08:56	Soil	mg/Kg (ppm)	
02878-004	B-477 (2.5-3)	2.5/3	04/02/14@08:00	Soil	mg/Kg (ppm)	
02878-005	B-477 (3.5-4)	3.5/4	04/02/14@08:20	Soil	mg/Kg (ppm)	
02878-006	B-477 (8.5-9)	8.5/9	04/02/14@08:15	Soil	mg/Kg (ppm)	
02878-007	B-477 (11.5-12)	11.5/12	04/02/14@08:20	Soil	mg/Kg (ppm)	
02878-008	DS-9A (4-4.5)	4/4.5	04/02/14@11:30	Soil	mg/Kg (ppm)	
02878-009	DS-9A (8-8.5)	8/8.5	04/02/14@11:31	Soil	mg/Kg (ppm)	
02878-010	DS-9A (9-9.5)	9/9.5	04/02/14@11:35	Soil	mg/Kg (ppm)	
02878-011	DS-9A (10.5-11)	10.5/11	04/02/14@11:36	Soil	mg/Kg (ppm)	
02878-012	B-338 (3-3.5)	3/3.5	04/02/14@13:40	Soil	mg/Kg (ppm)	
02878-013	B-338 (6-6.5)	6/6.5	04/02/14@13:42	Soil	mg/Kg (ppm)	
02878-014	B-338 (10-10.5)	10/10.5	04/02/14@13:43	Soil	mg/Kg (ppm)	
02878-015	B-338 (11.5-12)	11.5/12	04/02/14@13:44	Soil	mg/Kg (ppm)	
02878-016	B-339 (4-4.5)	4/4.5	04/02/14@11:06	Soil	mg/Kg (ppm)	
02878-017	B-339 (6.5-7)	6.5/7	04/02/14@11:07	Soil	mg/Kg (ppm)	
02878-018	B-339 (9.5-10)	9.5/10	04/02/14@11:14	Soil	mg/Kg (ppm)	
02878-019	B-339 (11-11.5)	11/11.5	04/02/14@11:15	Soil	mg/Kg (ppm)	
02878-020	B-340 (3.5-4)	3.5/4	04/02/14@13:15	Soil	mg/Kg (ppm)	
02878-021	B-340 (8.5-9)	8.5/9	04/02/14@13:16	Soil	mg/Kg (ppm)	
02878-022	B-340 (9-9.5)	9/9.5	04/02/14@13:25	Soil	mg/Kg (ppm)	
02878-023	B-340 (11.5-12)	11.5/12	04/02/14@13:26	Soil	mg/Kg (ppm)	
02878-024	B-341 (4.5-5)	4.5/5	04/02/14@10:27	Soil	mg/Kg (ppm)	
02878-025	B-341 (6-6.5)	6/6.5	04/02/14@10:29	Soil	mg/Kg (ppm)	
02878-026	B-342 (4-4.5)	4/4.5	04/02/14@12:53	Soil	mg/Kg (ppm)	
02878-027	B-342 (7.5-8)	7.5/8	04/02/14@12:56	Soil	mg/Kg (ppm)	

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

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Integrated Analytical Laboratories LLC

PROJECT INFORMATION

RUSH

E14-02878: SEA ISLE CITY

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
02878-028	B-342 (9-9.5)	9/9.5	04/02/14@13:00	Soil	mg/Kg (ppm)	
02878-029	B-342 (10-10.5)	10/10.5	04/02/14@13:01	Soil	mg/Kg (ppm)	
02878-030	B-343 (4-4.5)	4/4.5	04/02/14@10:45	Soil	mg/Kg (ppm)	
02878-031	B-343 (9-9.5)	9/9.5	04/02/14@10:52	Soil	mg/Kg (ppm)	
02878-032	B-344 (5-5.5)	5/5.5	04/02/14@14:20	Soil	mg/Kg (ppm)	
02878-033	B-344 (8.5-9)	8.5/9	04/02/14@14:21	Soil	mg/Kg (ppm)	
02878-034	B-345 (4.5-5)	4.5/5	04/02/14@13:58	Soil	mg/Kg (ppm)	
02878-035	B-345 (8-8.5)	8/8.5	04/02/14@14:00	Soil	mg/Kg (ppm)	
02878-036	B-345 (9-9.5)	9/9.5	04/02/14@14:10	Soil	mg/Kg (ppm)	
02878-037	B-345 (10.5-11)	10.5/11	04/02/14@14:11	Soil	mg/Kg (ppm)	
02878-038	FIELD BLANK	NA	04/02/14@15:00	Aqueous	mg/L (ppm)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	TCL/PAH	Analyze	8270D	STD/2 WKS	4/16/2014
002	TCL/PAH	Analyze	8270D	STD/2 WKS	4/16/2014
003	TCL/PAH	Analyze	8270D	STD/2 WKS	4/16/2014
004	Extract & Hold(PAH)	Analyze	8270D	STD/2 WKS	4/16/2014
	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
005	TCL/PAH	Analyze	8270D	STD/2 WKS	4/16/2014
006	TCL/PAH	Analyze	8270D	STD/2 WKS	4/16/2014
007	TCL/PAH	Analyze	8270D	STD/2 WKS	4/16/2014
008	TCL/PAH	Analyze	8270D	RUSH 72 HRS	4/16/2014
009	TCL/PAH	Analyze	8270D	RUSH 72 HRS	4/16/2014
010	TCL/PAH	Analyze	8270D	RUSH 72 HRS	4/16/2014
011	TCL/PAH	Analyze	8270D	RUSH 72 HRS	4/16/2014
012	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
013	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
014	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
015	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
016	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
017	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
018	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
019	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
020	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
021	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
022	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
023	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
024	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
025	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
026	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
027	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
028	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
029	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
030	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
031	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

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Integrated Analytical Laboratories LLC

PROJECT INFORMATION

RUSH

E14-02878: SEA ISLE CITY

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
032	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
033	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
034	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
035	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
036	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
037	TCL/PAH	Cancel	8270D	STD/2 WKS	4/16/2014
038	TCL/PAH	Analyze	8270D	STD/2 WKS	4/9/2014

Project Notes:

NOTE 1 taken by Ellen on 04/04/2014 09:45

SAMPLES #8 - #11 ON 72 HR TAT, FAX DUE 4/9.

SAMPLES #1-3, #5 - #7 & #38 ON STD TAT, FAX DUE 4/18.

SAMPLE #4 TO BE EXTRACTED & HELD.

SAMPLES #12 - #37 ON HOLD.

REV 1 taken by Evan on 04/11/2014 04:35

PER BRIAN MANNINO HOLD SAMPLE -004 FOR PAH, CANCEL ALL OTHERS

REV 2 taken by kim on 04/23/2014 05:28

As per Brian Mannino, cancel TCL/PAH for sample # 4

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 14** **02878** CLIENT: GLT

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

COC: (COMPLETE) / INCOMPLETE

Comments

KEY

✓ = YES/NA

✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✓	no-Extra Bottles	
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✓	pH Check (exclude VOs)[1]	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✓	**Chain of Custody is Clear**	

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [ ] DATE 4/3/14

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ☐

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [ ] DATE 4.4.14

Laboratory Custody Chronicle

IAL Case No.

E14-02878

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 4/ 3/2014@18:30

Department: Semivolatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL/PAH	02878-001	Soil	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-002	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-003	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-005	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-006	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-007	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-008	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-009	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-010	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-011	"	4/ 4/14	Kou-Liang	4/ 7/14	JC
"	-038	Aqueous	4/ 7/14	Kou-Liang	4/ 8/14	Dana

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IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054

Project Name: **SEA ISLE CITY**
IAL Case Number: **E15-04181**

These data have been reviewed and accepted by:

Michael H. Lefkin, Ph.D.
Laboratory Director

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

This report was finalized on June 09, 2015

* Methodology is included in the IAL Project Information Page

Sample Summary

IAL Case No.

E15-04181

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 5/20/2015@17:30

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
04181-001	B-495	4.5/5	5/19/2015@11:15	Soil	1
04181-002	B-494	3.5/4	5/19/2015@11:30	Soil	1
04181-003	B-496	4.5/5	5/19/2015@11:45	Soil	1
04181-004	B-493	3.5/4	5/19/2015@12:00	Soil	1

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DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-04181

Integrated Analytical Laboratories, LLC. received four (4) samples** from GEI Consultants, Inc. (IAL SDG# **E15-04181**, Project: SEA ISLE CITY) on May 20, 2015 for the analysis of :

(4) TCL/PAH

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2°C

Semivolatiles By 8270D	**Batch: 150521-03**	**Matrix: Soil**

QC
- Calibration curve met QC criteria.
- Internal standard recovery me QC criteria.
- Surrogate recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

E15-04181
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- 04181-003 performed 10x dilution because of high target compounds;.
- The following samples were analyzed as a straight run and no further dilutions were required: 001, 002, 004.
- 04181-003: *double final volume.

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

6/8/2015
Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
Client: GEI Consultants, Inc.
Project Location: SEA ISLE CITY
IAL Project #: E15-04181
IAL Sample ID(s): E15-04181-001 ~ -004
Sampling Date(s): 5/19/2015

List of DKQP Method Used:
TCL/PAH by 8270D

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP	X		
1A	Were the method specified handling, preservation, and holding time requirements met?	X		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)			X
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	X		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?		X	
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?	X		
5B	Were these reporting limits met?		X	
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	X		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?		X	

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E15-04181

Lab ID:	04181-001			04181-002			04181-003			04181-004		
Client ID:	B-495			B-494			B-496			B-493		
Depth:	4.5/5			3.5/4			4.5/5			3.5/4		
Matrix:	Soil			Soil			Soil			Soil		
Sampled Date	5/19/15			5/19/15			5/19/15			5/19/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Semivolatiles - PAH (Units)	*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*			*(mg/Kg)*		
Naphthalene	ND		0.022	ND		0.023	16.1	D	0.402	ND		0.024
2-Methylnaphthalene	ND		0.022	ND		0.023	6.84	D	0.402	ND		0.024
Acenaphthylene	ND		0.026	ND		0.027	9.21	D	0.468	ND		0.028
Acenaphthene	0.097		0.028	ND		0.029	96.1	D	0.508	ND		0.030
Fluorene	ND		0.022	ND		0.023	56.3	D	0.402	ND		0.024
Phenanthrene	ND		0.022	ND		0.023	179	D	0.804	ND		0.024
Anthracene	ND		0.022	ND		0.023	61.1	D	0.402	ND		0.024
Fluoranthene	0.026	J	0.022	ND		0.023	86.5	D	0.402	ND		0.024
Pyrene	ND		0.022	ND		0.023	106	D	0.804	ND		0.024
Benzo[a]anthracene	ND		0.022	ND		0.023	44.2	D	0.402	ND		0.024
Chrysene	ND		0.022	ND		0.023	46.1	D	0.402	ND		0.024
Benzo[b]fluoranthene	ND		0.022	ND		0.023	25.0	D	0.402	ND		0.024
Benzo[k]fluoranthene	ND		0.022	ND		0.023	29.1	D	0.402	ND		0.024
Benzo[a]pyrene	ND		0.022	ND		0.023	49.0	D	0.402	ND		0.024
Indeno[1,2,3-cd]pyrene	ND		0.032	ND		0.034	16.9	D	0.591	ND		0.035
Dibenz[a,h]anthracene	ND		0.022	ND		0.023	5.58	D	0.402	ND		0.024
Benzo[g,h,i]perylene	ND		0.022	ND		0.023	19.8	D	0.402	ND		0.024

ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
D = The compound was reported from the Diluted analysis

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04181-001
Client ID: B-495/4.
Date Received: 05/20/2015
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5662.D

GC/MS Column: DB-5
Sample wt/vol: 15.41g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 11.2

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.037	0.022
2-Methylnaphthalene	ND		0.037	0.022
Acenaphthylene	ND		0.037	0.026
Acenaphthene	0.097		0.037	0.028
Fluorene	ND		0.037	0.022
Phenanthrene	ND		0.037	0.022
Anthracene	ND		0.037	0.022
Fluoranthene	0.026	J	0.037	0.022
Pyrene	ND		0.037	0.022
Benzo[a]anthracene	ND		0.037	0.022
Chrysene	ND		0.037	0.022
Benzo[b]fluoranthene	ND		0.037	0.022
Benzo[k]fluoranthene	ND		0.037	0.022
Benzo[a]pyrene	ND		0.037	0.022
Indeno[1,2,3-cd]pyrene	ND		0.037	0.032
Dibenz[a,h]anthracene	ND		0.037	0.022
Benzo[g,h,i]perylene	ND		0.037	0.022
Total Target Compounds (17):	0.123	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04181-002
Client ID: B-494/3.
Date Received: 05/20/2015
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5663.D

GC/MS Column: DB-5
Sample wt/vol: 15.58g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 15.9

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.038	0.023
2-Methylnaphthalene	ND		0.038	0.023
Acenaphthylene	ND		0.038	0.027
Acenaphthene	ND		0.038	0.029
Fluorene	ND		0.038	0.023
Phenanthrene	ND		0.038	0.023
Anthracene	ND		0.038	0.023
Fluoranthene	ND		0.038	0.023
Pyrene	ND		0.038	0.023
Benzo[a]anthracene	ND		0.038	0.023
Chrysene	ND		0.038	0.023
Benzo[b]fluoranthene	ND		0.038	0.023
Benzo[k]fluoranthene	ND		0.038	0.023
Benzo[a]pyrene	ND		0.038	0.023
Indeno[1,2,3-cd]pyrene	ND		0.038	0.034
Dibenz[a,h]anthracene	ND		0.038	0.023
Benzo[g,h,i]perylene	ND		0.038	0.023

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-04181 0010

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04181-003
Client ID: B-496/4.
Date Received: 05/20/2015
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5664.D

GC/MS Column: DB-5
Sample wt/vol: 15.52g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 5
% Moisture: 51.9

Compound	Concentration	Q	RL	MDL
Naphthalene	16.1	D	0.670	0.402
2-Methylnaphthalene	6.84	D	0.670	0.402
Acenaphthylene	9.21	D	0.670	0.468
Acenaphthene	96.1	D	0.670	0.508
Fluorene	56.3	D	0.670	0.402
Phenanthrene	154	E	0.670	0.402
Anthracene	61.1	D	0.670	0.402
Fluoranthene	86.5	D	0.670	0.402
Pyrene	108	E	0.670	0.402
Benzo[a]anthracene	44.2	D	0.670	0.402
Chrysene	46.1	D	0.670	0.402
Benzo[b]fluoranthene	25.0	D	0.670	0.402
Benzo[k]fluoranthene	29.1	D	0.670	0.402
Benzo[a]pyrene	49.0	D	0.670	0.402
Indeno[1,2,3-cd]pyrene	16.9	D	0.670	0.591
Dibenz[a,h]anthracene	5.58	D	0.670	0.402
Benzo[g,h,i]perylene	19.8	D	0.670	0.402
Total Target Compounds (17):	830	DE		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-04181 0011

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04181-003DL
Client ID: B-496/4.
Date Received: 05/20/2015
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5666.D

GC/MS Column: DB-5
Sample wt/vol: 15.52g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 10
% Moisture: 51.9

Compound	Concentration	Q	RL	MDL
Naphthalene	15.6	D	1.34	0.804
2-Methylnaphthalene	6.52	D	1.34	0.804
Acenaphthylene	8.63	D	1.34	0.935
Acenaphthene	94.2	D	1.34	1.02
Fluorene	55.4	D	1.34	0.804
Phenanthrene	179	D	1.34	0.804
Anthracene	55.9	D	1.34	0.804
Fluoranthene	82.4	D	1.34	0.804
Pyrene	106	D	1.34	0.804
Benzo[a]anthracene	40.8	D	1.34	0.804
Chrysene	44.0	D	1.34	0.804
Benzo[b]fluoranthene	27.2	D	1.34	0.804
Benzo[k]fluoranthene	25.7	D	1.34	0.804
Benzo[a]pyrene	47.1	D	1.34	0.804
Indeno[1,2,3-cd]pyrene	16.8	D	1.34	1.18
Dibenz[a,h]anthracene	5.91	D	1.34	0.804
Benzo[g,h,i]perylene	19.8	D	1.34	0.804
Total Target Compounds (17):	831	D		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04181-004
Client ID: B-493/3.
Date Received: 05/20/2015
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5665.D

GC/MS Column: DB-5
Sample wt/vol: 15.63g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: 18.7

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		0.039	0.024
2-Methylnaphthalene	ND		0.039	0.024
Acenaphthylene	ND		0.039	0.028
Acenaphthene	ND		0.039	0.030
Fluorene	ND		0.039	0.024
Phenanthrene	ND		0.039	0.024
Anthracene	ND		0.039	0.024
Fluoranthene	ND		0.039	0.024
Pyrene	ND		0.039	0.024
Benzo[a]anthracene	ND		0.039	0.024
Chrysene	ND		0.039	0.024
Benzo[b]fluoranthene	ND		0.039	0.024
Benzo[k]fluoranthene	ND		0.039	0.024
Benzo[a]pyrene	ND		0.039	0.024
Indeno[1,2,3-cd]pyrene	ND		0.039	0.035
Dibenz[a,h]anthracene	ND		0.039	0.024
Benzo[g,h,i]perylene	ND		0.039	0.024

Total Target Compounds (17): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS QC SUMMARY

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 05/18/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2		C5568.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKS150515-02	SOIL	C5571.D	57		60		47		52		59		69	
LCSS150515-02	SOIL	C5572.D	55		59		55		59		60		69	
E15-03939-004MS	SOIL	C5573.D	46		49		47		46		45		44	
E15-03939-004MSD	SOIL	C5574.D	55		57		54		53		54		56	
E15-03744-001	SOIL	C5575.D	N/A		N/A		36		54		N/A		58	
E15-03942-001	SOIL	C5576.D	N/A		N/A		53		52		N/A		50	
E15-03939-001	SOIL	C5577.D	N/A		N/A		37		48		N/A		57	
E15-03939-003	SOIL	C5578.D	N/A		N/A		46		56		N/A		67	
E15-03939-004	SOIL	C5579.D	N/A		N/A		37		44		N/A		56	
E15-03939-005	SOIL	C5580.D	N/A		N/A		43		44		N/A		56	
E15-04021-001	SOIL	C5581.D	N/A		N/A		38		46		N/A		48	
E15-03988-002	SOIL	C5582.D	N/A		N/A		37		41		N/A		47	
E15-04019-001	SOIL	C5583.D	N/A		N/A		35		50		N/A		50	
E15-03987-001	SOIL	C5584.D	41		48		40		53		61		55	
E15-03987-002	SOIL	C5585.D	41		44		34		44		51		46	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	45-104	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	52-106	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	57-107	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	57-126	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	30-147	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	68-133	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 05/22/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2		C5655.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKS150521-03	SOIL	C5656.D	57		61		56		63		66		82	
LCSS150521-03	SOIL	C5657.D	54		59		57		66		65		79	
E15-04196-001	SOIL	C5658.D	40		44		44		52		48		44	
E15-04162-001	SOIL	C5659.D	N/A		N/A		44		56		N/A		60	
E15-04183-001	SOIL	C5660.D	N/A		N/A		40		50		N/A		45	
E15-04183-002	SOIL	C5661.D	N/A		N/A		43		57		N/A		63	
E15-04181-001	SOIL	C5662.D	N/A		N/A		45		57		N/A		61	
E15-04181-002	SOIL	C5663.D	N/A		N/A		46		59		N/A		65	
E15-04181-003	SOIL	C5664.D	N/A		N/A		60		70		N/A		70	
E15-04181-004	SOIL	C5665.D	N/A		N/A		57		71		N/A		73	
E15-04181-003DL	SOIL	C5666.D	N/A		N/A		60		80		N/A		60	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	45-104	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	52-106	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	57-107	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	57-126	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	30-147	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	68-133	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS150515-02
Date Received: NA
Date Extracted: 05/15/2015
Date Analyzed: 05/18/2015
Data file: C5572.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	DKQP
N-Nitrosodimethylamine	50.0	25.3	51	$	40-140	70-130
Pyridine	50.0	20.3	41		20-120	20-160
Benzaldehyde	50.0	7.2	14	$	10-110	20-160
Phenol	50.0	30.8	62		30-140	20-160
Aniline	50.0	34.8	70		40-140	70-130
Bis(2-chloroethyl) ether	50.0	29.7	59	$	40-140	70-130
2-Chlorophenol	50.0	26.6	53		30-140	20-160
1,3-Dichlorobenzene	50.0	26.9	54	$	40-140	70-130
1,4-Dichlorobenzene	50.0	25.8	52	$	40-140	70-130
Benzyl alcohol	50.0	31.3	63	$	40-140	70-130
1,2-Dichlorobenzene	50.0	27.6	55	$	40-140	70-130
2-Methylphenol	50.0	32.4	65		30-140	20-160
Bis(2-chloroisopropyl) ether	50.0	31.8	64	$	40-140	70-130
4-Methylphenol	50.0	34.5	69	$	30-140	70-130
N-Nitrosodi-n-propylamine	50.0	31.9	64	$	40-140	70-130
Acetophenone	50.0	34.1	68	$	40-140	70-130
3-Methylphenol	50.0	34.5	69		30-140	20-160
Hexachloroethane	50.0	26.6	53	$	40-140	70-130
Nitrobenzene	50.0	29.6	59	$	40-140	70-130
Isophorone	50.0	33.5	67	$	40-140	70-130
2-Nitrophenol	50.0	28.5	57		30-140	20-160
2,4-Dimethylphenol	50.0	27.0	54		30-140	20-160
Bis(2-chloroethoxy) methane	50.0	29.9	60	$	40-140	70-130
Benzoic acid	50.0	52.2	104		30-140	20-160
2,4-Dimethylaniline	50.0	33.4	67	$	40-140	70-130
2,4-Dichlorophenol	50.0	27.6	55		30-140	20-160
1,2,4-Trichlorobenzene	50.0	27.4	55	$	40-140	70-130
Naphthalene	50.0	27.9	56	$	40-140	70-130
4-Chloroaniline	50.0	33.2	66	$	40-140	70-130
Hexachlorobutadiene	50.0	26.0	52	$	40-140	70-130
Caprolactam	50.0	34.7	69	$	40-140	70-130
4-Chloro-3-methylphenol	50.0	30.9	62		30-140	20-160
2-Methylnaphthalene	50.0	33.4	67	$	40-140	70-130
Hexachlorocyclopentadiene	50.0	11.7	23		5-105	20-160
2,4,6-Trichlorophenol	50.0	28.3	57		30-140	20-160
2,4,5-Trichlorophenol	50.0	33.3	67		30-140	20-160
1,1'-Biphenyl	50.0	33.3	67	$	40-140	70-130
2-Chloronaphthalene	50.0	30.3	61	$	40-140	70-130
2-Nitroaniline	50.0	37.2	74		40-140	70-130
Dimethyl phthalate	50.0	32.9	66	$	40-140	70-130
2,6-Dinitrotoluene	50.0	34.7	69	$	40-140	70-130
Acenaphthylene	50.0	29.7	59	$	40-140	70-130
3-Nitroaniline	50.0	37.8	76		40-140	70-130
Acenaphthene	50.0	30.8	62		40-140	20-160
2,4-Dinitrophenol	50.0	37.2	74		5-105	20-160

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS150515-02
Date Received: NA
Date Extracted: 05/15/2015
Date Analyzed: 05/18/2015
Data file: C5572.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	50.0	30.7	61		30-140	20-160
2,4-Dinitrotoluene	50.0	35.2	70		40-140	70-130
Dibenzofuran	50.0	34.2	68	$	40-140	70-130
Diethyl phthalate	50.0	33.3	67	$	40-140	70-130
Fluorene	50.0	32.5	65	$	40-140	70-130
4-Chlorophenyl phenyl ether	50.0	33.6	67	$	40-140	70-130
4-Nitroaniline	50.0	38.1	76		40-140	70-130
1,2,4,5-Tetrachlorobenzene	50.0	28.8	58	$	40-140	70-130
2,3,4,6-Tetrachlorophenol	50.0	28.6	57	$	40-140	70-130
4,6-Dinitro-2-methylphenol	50.0	41.2	82		10-110	20-160
N-Nitrosodiphenylamine	50.0	32.0	64	$	40-140	70-130
1,2-Diphenylhydrazine	50.0	27.2	54	$	40-140	70-130
4-Bromophenyl phenyl ether	50.0	31.0	62	$	40-140	70-130
Hexachlorobenzene	50.0	29.5	59	$	40-140	70-130
Atrazine	50.0	32.9	66		20-120	20-160
Pentachlorophenol	50.0	27.2	54		30-140	20-160
Phenanthrene	50.0	31.7	63	$	40-140	70-130
Anthracene	50.0	33.8	68	$	40-140	70-130
Carbazole	50.0	34.8	70		40-140	70-130
Di-n-butyl phthalate	50.0	34.0	68	$	40-140	70-130
Fluoranthene	50.0	32.3	65	$	40-140	70-130
Benzidine	50.0	8.0	16	$	5-105	20-160
Pyrene	50.0	36.8	74		40-140	70-130
3,3'-Dimethylbenzidine	50.0	15.2	30		5-105	20-160
Butyl benzyl phthalate	50.0	39.1	78		40-140	70-130
3,3'-Dichlorobenzidine	50.0	35.8	72		40-140	70-130
Benzo[a]anthracene	50.0	34.7	69	$	40-140	70-130
Chrysene	50.0	38.7	77		40-140	70-130
Bis(2-ethylhexyl) phthalate	50.0	38.9	78		40-140	70-130
Di-n-octyl phthalate	50.0	58.3	117		40-140	70-130
Benzo[b]fluoranthene	50.0	48.2	96		40-140	70-130
Benzo[k]fluoranthene	50.0	51.3	103		40-140	70-130
Benzo[a]pyrene	50.0	49.6	99		40-140	70-130
Indeno[1,2,3-cd]pyrene	50.0	50.6	101		40-140	70-130
Dibenz[a,h]anthracene	50.0	50.1	100		40-140	70-130
Benzo[g,h,i]perylene	50.0	52.3	105		40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E15-04181 0019

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS150521-03
Date Received: NA
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5657.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	DKQP
N-Nitrosodimethylamine	50.0	27.6	55	$	40-140	70-130
Pyridine	50.0	23.7	47		20-120	20-160
Benzaldehyde	50.0	5.0	10	$	10-110	20-160
Phenol	50.0	28.0	56		30-140	20-160
Aniline	50.0	30.8	62	$	40-140	70-130
Bis(2-chloroethyl) ether	50.0	28.4	57	$	40-140	70-130
2-Chlorophenol	50.0	27.7	55		30-140	20-160
1,3-Dichlorobenzene	50.0	28.7	57	$	40-140	70-130
1,4-Dichlorobenzene	50.0	26.3	53	$	40-140	70-130
Benzyl alcohol	50.0	29.4	59	$	40-140	70-130
1,2-Dichlorobenzene	50.0	27.7	55	$	40-140	70-130
2-Methylphenol	50.0	29.2	58		30-140	20-160
Bis(2-chloroisopropyl) ether	50.0	30.4	61	$	40-140	70-130
4-Methylphenol	50.0	31.8	64	$	30-140	70-130
N-Nitrosodi-n-propylamine	50.0	30.3	61	$	40-140	70-130
Acetophenone	50.0	28.7	57	$	40-140	70-130
3-Methylphenol	50.0	31.8	64		30-140	20-160
Hexachloroethane	50.0	26.6	53	$	40-140	70-130
Nitrobenzene	50.0	27.9	56	$	40-140	70-130
Isophorone	50.0	29.4	59	$	40-140	70-130
2-Nitrophenol	50.0	29.2	58		30-140	20-160
2,4-Dimethylphenol	50.0	28.7	57		30-140	20-160
Bis(2-chloroethoxy) methane	50.0	28.6	57	$	40-140	70-130
Benzoic acid	50.0	60.6	121		30-140	20-160
2,4-Dimethylaniline	50.0	31.4	63	$	40-140	70-130
2,4-Dichlorophenol	50.0	29.9	60		30-140	20-160
1,2,4-Trichlorobenzene	50.0	29.1	58	$	40-140	70-130
Naphthalene	50.0	28.7	57	$	40-140	70-130
4-Chloroaniline	50.0	32.1	64	$	40-140	70-130
Hexachlorobutadiene	50.0	28.4	57	$	40-140	70-130
Caprolactam	50.0	30.6	61	$	40-140	70-130
4-Chloro-3-methylphenol	50.0	30.6	61		30-140	20-160
2-Methylnaphthalene	50.0	32.6	65	$	40-140	70-130
Hexachlorocyclopentadiene	50.0	33.9	68		5-105	20-160
2,4,6-Trichlorophenol	50.0	32.8	66		30-140	20-160
2,4,5-Trichlorophenol	50.0	35.6	71		30-140	20-160
1,1'-Biphenyl	50.0	31.2	62	$	40-140	70-130
2-Chloronaphthalene	50.0	32.0	64	$	40-140	70-130
2-Nitroaniline	50.0	35.5	71		40-140	70-130
Dimethyl phthalate	50.0	32.3	65	$	40-140	70-130
2,6-Dinitrotoluene	50.0	36.1	72		40-140	70-130
Acenaphthylene	50.0	32.5	65	$	40-140	70-130
3-Nitroaniline	50.0	36.2	72		40-140	70-130
Acenaphthene	50.0	31.6	63		40-140	20-160
2,4-Dinitrophenol	50.0	47.1	94		5-105	20-160

E15-04181 0020

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSS150521-03
Date Received: NA
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5657.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	50.0	33.7	67		30-140	20-160
2,4-Dinitrotoluene	50.0	37.1	74		40-140	70-130
Dibenzofuran	50.0	33.7	67	$	40-140	70-130
Diethyl phthalate	50.0	33.2	66	$	40-140	70-130
Fluorene	50.0	33.0	66	$	40-140	70-130
4-Chlorophenyl phenyl ether	50.0	33.8	68	$	40-140	70-130
4-Nitroaniline	50.0	33.6	67	$	40-140	70-130
1,2,4,5-Tetrachlorobenzene	50.0	20.2	40	$	40-140	70-130
2,3,4,6-Tetrachlorophenol	50.0	30.1	60	$	40-140	70-130
4,6-Dinitro-2-methylphenol	50.0	50.1	100		10-110	20-160
N-Nitrosodiphenylamine	50.0	34.4	69	$	40-140	70-130
1,2-Diphenylhydrazine	50.0	29.3	59	$	40-140	70-130
4-Bromophenyl phenyl ether	50.0	33.4	67	$	40-140	70-130
Hexachlorobenzene	50.0	32.0	64	$	40-140	70-130
Atrazine	50.0	30.8	62		20-120	20-160
Pentachlorophenol	50.0	34.1	68		30-140	20-160
Phenanthrene	50.0	31.9	64	$	40-140	70-130
Anthracene	50.0	33.3	67	$	40-140	70-130
Carbazole	50.0	34.4	69	$	40-140	70-130
Di-n-butyl phthalate	50.0	34.1	68	$	40-140	70-130
Fluoranthene	50.0	32.6	65	$	40-140	70-130
Benzidine	50.0	7.7	15	$	5-105	20-160
Pyrene	50.0	38.2	76		40-140	70-130
3,3'-Dimethylbenzidine	50.0	15.3	31		5-105	20-160
Butyl benzyl phthalate	50.0	36.7	73		40-140	70-130
3,3'-Dichlorobenzidine	50.0	36.9	74		40-140	70-130
Benzo[a]anthracene	50.0	36.1	72		40-140	70-130
Chrysene	50.0	35.9	72		40-140	70-130
Bis(2-ethylhexyl) phthalate	50.0	38.7	77		40-140	70-130
Di-n-octyl phthalate	50.0	52.4	105		40-140	70-130
Benzo[b]fluoranthene	50.0	46.8	94		40-140	70-130
Benzo[k]fluoranthene	50.0	46.5	93		40-140	70-130
Benzo[a]pyrene	50.0	47.7	95		40-140	70-130
Indeno[1,2,3-cd]pyrene	50.0	51.5	103		40-140	70-130
Dibenz[a,h]anthracene	50.0	52.6	105		40-140	70-130
Benzo[g,h,i]perylene	50.0	49.9	100		40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E15-04181 0021

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-03939-004
Date Received: NA
Date Extracted: 05/15/2015
Date Analyzed: 05/18/2015
MS Data file: C5573.D
MSD Data file: C5574.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD limits IAL	DKQP
N-Nitrosodimethylamine	50.0	0.0	26.4	53	$	35.3	71		29		40-140/30	70-130/30
Pyridine	50.0	0.0	21.5	43		28.0	56		26		20-120/30	20-160/30
Benzaldehyde	50.0	0.0	41.1	82		36.2	72		13		10-110/30	20-160/30
Phenol	50.0	0.0	33.2	66		41.1	82		21		30-140/30	20-160/30
Aniline	50.0	0.0	33.0	66	$	41.5	83		23		40-140/30	70-130/30
Bis(2-chloroethyl) ether	50.0	0.0	31.5	63	$	39.7	79		23		40-140/30	70-130/30
2-Chlorophenol	50.0	0.0	30.4	61		38.5	77		24		30-140/30	20-160/30
1,3-Dichlorobenzene	50.0	0.0	29.7	59	$	37.9	76		24		40-140/30	70-130/30
1,4-Dichlorobenzene	50.0	0.0	29.2	58	$	36.2	72		21		40-140/30	70-130/30
Benzyl alcohol	50.0	0.0	33.1	66	$	41.3	83		22		40-140/30	70-130/30
1,2-Dichlorobenzene	50.0	0.0	30.2	60	$	36.4	73		19		40-140/30	70-130/30
2-Methylphenol	50.0	0.0	32.5	65		39.0	78		18		30-140/30	20-160/30
Bis(2-chloroisopropyl) ether	50.0	0.0	35.5	71		42.3	85		17		40-140/30	70-130/30
4-Methylphenol	50.0	0.0	35.3	71		42.1	84		18		30-140/30	70-130/30
N-Nitrosodi-n-propylamine	50.0	0.0	34.8	70		40.3	81		15		40-140/30	70-130/30
Acetophenone	50.0	0.0	38.3	77		47.0	94		20		40-140/30	70-130/30
3-Methylphenol	50.0	0.0	35.3	71		42.1	84		18		30-140/30	20-160/30
Hexachloroethane	50.0	0.0	29.3	59	$	36.2	72		21		40-140/30	70-130/30
Nitrobenzene	50.0	0.0	32.5	65	$	38.2	76		16		40-140/30	70-130/30
Isophorone	50.0	0.0	37.3	75		44.5	89		18		40-140/30	70-130/30
2-Nitrophenol	50.0	0.0	31.7	63		37.5	75		17		30-140/30	20-160/30
2,4-Dimethylphenol	50.0	0.0	21.4	43		23.9	48		11		30-140/30	20-160/30
Bis(2-chloroethoxy) methane	50.0	0.0	34.1	68	$	41.3	83		19		40-140/30	70-130/30
Benzoic acid	50.0	0.0	16.0	32		15.8	32		1		30-140/30	20-160/30
2,4-Dimethylaniline	50.0	0.0	31.1	62	$	39.4	79		24		40-140/30	70-130/30
2,4-Dichlorophenol	50.0	0.0	30.3	61		36.7	73		19		30-140/30	20-160/30
1,2,4-Trichlorobenzene	50.0	0.0	30.1	60	$	36.0	72		18		40-140/30	70-130/30
Naphthalene	50.0	1.1	31.2	60	$	37.0	72		17		40-140/30	70-130/30
4-Chloroaniline	50.0	0.0	34.6	69	$	41.9	84		19		40-140/30	70-130/30
Hexachlorobutadiene	50.0	0.0	28.7	57	$	33.8	68	$	16		40-140/30	70-130/30
Caprolactam	50.0	0.0	37.5	75		43.9	88		16		40-140/30	70-130/30
4-Chloro-3-methylphenol	50.0	0.0	33.9	68		40.6	81		18		30-140/30	20-160/30
2-Methylnaphthalene	50.0	0.0	34.1	68	$	42.3	85		21		40-140/30	70-130/30
Hexachlorocyclopentadiene	50.0	0.0	13.5	27		18.3	37		30		5-105/30	20-160/30
2,4,6-Trichlorophenol	50.0	0.0	29.8	60		35.4	71		17		30-140/30	20-160/30
2,4,5-Trichlorophenol	50.0	0.0	33.7	67		39.6	79		16		30-140/30	20-160/30
1,1'-Biphenyl	50.0	0.0	34.2	68	$	41.0	82		18		40-140/30	70-130/30
2-Chloronaphthalene	50.0	0.0	31.0	62	$	38.7	77		22		40-140/30	70-130/30
2-Nitroaniline	50.0	0.0	39.1	78		44.6	89		13		40-140/30	70-130/30
Dimethyl phthalate	50.0	0.0	35.0	70		39.5	79		12		40-140/30	70-130/30
2,6-Dinitrotoluene	50.0	0.0	36.7	73		44.7	89		20		40-140/30	70-130/30
Acenaphthylene	50.0	0.0	32.4	65	$	39.1	78		19		40-140/30	70-130/30
3-Nitroaniline	50.0	0.0	40.0	80		46.6	93		15		40-140/30	70-130/30
Acenaphthene	50.0	0.0	33.0	66		39.5	79		18		40-140/30	20-160/30
2,4-Dinitrophenol	50.0	0.0	31.7	63		39.7	79		22		5-105/30	20-160/30

E15-04181 0022

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-03939-004
Date Received: NA
Date Extracted: 05/15/2015
Date Analyzed: 05/18/2015
MS Data file: C5573.D
MSD Data file: C5574.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
% Moisture: NA
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD IAL Limits	Rec/RPD DKQP Limits
4-Nitrophenol	50.0	0.0	33.8	68		39.0	78		14		30-140/30	20-160/30
2,4-Dinitrotoluene	50.0	0.0	37.9	76		44.7	89		16		40-140/30	70-130/30
Dibenzofuran	50.0	0.0	34.6	69	$	42.0	84		19		40-140/30	70-130/30
Diethyl phthalate	50.0	0.0	33.9	68	$	40.9	82		19		40-140/30	70-130/30
Fluorene	50.0	1.1	33.3	64	$	40.2	78		19		40-140/30	70-130/30
4-Chlorophenyl phenyl ether	50.0	0.0	35.3	71		41.9	84		17		40-140/30	70-130/30
4-Nitroaniline	50.0	0.0	39.9	80		42.7	85		7		40-140/30	70-130/30
1,2,4,5-Tetrachlorobenzene	50.0	0.0	31.1	62	$	36.5	73		16		40-140/30	70-130/30
2,3,4,6-Tetrachlorophenol	50.0	0.0	30.1	60	$	35.2	70		16		40-140/30	70-130/30
4,6-Dinitro-2-methylphenol	50.0	0.0	44.6	89		54.0	108		19		10-110/30	20-160/30
N-Nitrosodiphenylamine	50.0	0.0	34.4	69	$	40.7	81		17		40-140/30	70-130/30
1,2-Diphenylhydrazine	50.0	0.0	31.0	62	$	36.3	73		16		40-140/30	70-130/30
4-Bromophenyl phenyl ether	50.0	0.0	32.1	64	$	37.1	74		14		40-140/30	70-130/30
Hexachlorobenzene	50.0	0.0	30.3	61	$	35.7	71		16		40-140/30	70-130/30
Atrazine	50.0	0.0	29.5	59		32.2	64		9		20-120/30	20-160/30
Pentachlorophenol	50.0	0.0	26.1	52		30.0	60		14		30-140/30	20-160/30
Phenanthrene	50.0	6.5	31.8	51	$	37.3	62	$	16		40-140/30	70-130/30
Anthracene	50.0	1.9	33.6	63	$	39.6	75		16		40-140/30	70-130/30
Carbazole	50.0	0.0	34.7	69	$	41.0	82		17		40-140/30	70-130/30
Di-n-butyl phthalate	50.0	0.0	34.1	68	$	40.7	81		18		40-140/30	70-130/30
Fluoranthene	50.0	5.4	33.9	57	$	39.0	67	$	14		40-140/30	70-130/30
Benzidine	50.0	0.0	4.1	8	$	3.9	8	$	5		5-105/30	20-160/30
Pyrene	50.0	5.4	32.5	54	$	38.7	67	$	17		40-140/30	70-130/30
3,3'-Dimethylbenzidine	50.0	0.0	6.8	14	$	7.7	15	$	12		5-105/30	20-160/30
Butyl benzyl phthalate	50.0	0.0	36.1	72		40.9	82		12		40-140/30	70-130/30
3,3'-Dichlorobenzidine	50.0	0.0	34.8	70		42.3	85		19		40-140/30	70-130/30
Benzo[a]anthracene	50.0	2.5	32.1	59	$	38.8	73		19		40-140/30	70-130/30
Chrysene	50.0	2.7	34.6	64	$	40.3	75		15		40-140/30	70-130/30
Bis(2-ethylhexyl) phthalate	50.0	0.0	36.0	72		41.1	82		13		40-140/30	70-130/30
Di-n-octyl phthalate	50.0	0.0	48.4	97		58.5	117		19		40-140/30	70-130/30
Benzo[b]fluoranthene	50.0	2.1	42.7	81		44.3	84		4		40-140/30	70-130/30
Benzo[k]fluoranthene	50.0	2.6	45.3	85		52.0	99		14		40-140/30	70-130/30
Benzo[a]pyrene	50.0	2.6	44.7	84		53.1	101		17		40-140/30	70-130/30
Indeno[1,2,3-cd]pyrene	50.0	1.6	46.5	90		51.6	100		10		40-140/30	70-130/30
Dibenz[a,h]anthracene	50.0	0.0	46.4	93		51.4	103		10		40-140/30	70-130/30
Benzo[g,h,i]perylene	50.0	1.5	46.8	91		52.6	102		12		40-140/30	70-130/30

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E15-04181 0023

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C5571.D

Instrument ID: MSDC

Date Extracted: 05/15/15

Matrix: SOIL

Date Analyzed: 05/18/2015

Time Analyzed: 15:09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSS150515-02	05/18/2015	15:24
.	E15-03939-004MS	05/18/2015	15:40
.	E15-03939-004MSD	05/18/2015	15:56
PEX-1/10	E15-03744-001	05/18/2015	16:12
WC-1	E15-03942-001	05/18/2015	16:28
HF-1/6-6	E15-03939-001	05/18/2015	16:43
D1/7.5-8	E15-03939-003	05/18/2015	16:59
D2/7.5-8	E15-03939-004	05/18/2015	17:15
D3/7.5-8	E15-03939-005	05/18/2015	17:31
BG-1	E15-04021-001	05/18/2015	17:47
WC-05131	E15-03988-002	05/18/2015	18:03
BG-1	E15-04019-001	05/18/2015	18:18
N-COMP	E15-03987-001	05/18/2015	18:34
S-COMP	E15-03987-002	05/18/2015	18:50

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C5656.D Instrument ID: MSDC

Date Extracted: 05/21/15 Matrix: SOIL

Date Analyzed: 05/22/2015 Time Analyzed: 12:28

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSS150521-03	05/22/2015	12:43
GPEC-BLD	E15-04196-001	05/22/2015	12:59
POST_EX_	E15-04162-001	05/22/2015	13:15
COMP-1	E15-04183-001	05/22/2015	13:31
COMP-2	E15-04183-002	05/22/2015	13:47
B-495/4.	E15-04181-001	05/22/2015	14:02
B-494/3.	E15-04181-002	05/22/2015	14:18
B-496/4.	E15-04181-003	05/22/2015	14:34
B-493/3.	E15-04181-004	05/22/2015	14:49
B-496/4.	E15-04181-003DL	05/22/2015	15:05

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5339.D

DFTPP Injection Date : 05/06/2015

Inst ID: MSDC

DFTPP Injection Time: 11:23

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	35.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	35.8	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	48.5	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	26.1	
365	Greater than 1.0% of mass 198	2.5	
441	Present, but less than mass 443	12.47	(79.0)3
442	40.0 - 100.0% of mass 198	79.7	
443	17.0 - 23.0% of mass 442	15.8	(19.8)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN008-15	ICC001BNA1	C5340.D	05/06/2015	11:34
ABN009-15	ICC010BNA1	C5341.D	05/06/2015	11:50
ABN010-15	ICC020BNA1	C5342.D	05/06/2015	12:06
ABN011-15	ICC040BNA1	C5343.D	05/06/2015	12:21
ABN012-15	ICC080BNA1	C5344.D	05/06/2015	12:37
ABN013-15	ICC160BNA1	C5345.D	05/06/2015	12:53
ABN004-15	ICV040BNA1	C5346.D	05/06/2015	13:09
ABN019-15	ICC160BNA2	C5347.D	05/06/2015	13:25
ABN018-15	ICC080BNA2	C5348.D	05/06/2015	13:41
ABN017-15	ICC040BNA2	C5349.D	05/06/2015	13:57
ABN016-15	ICC020BNA2	C5350.D	05/06/2015	14:13
ABN015-15	ICC010BNA2	C5351.D	05/06/2015	14:45
ABN014-15	ICC001BNA2	C5352.D	05/06/2015	15:01
ABN031-15	ICV040BNA2	C5353.D	05/06/2015	15:17
.	BLKS150505-02	C5354.D	05/06/2015	15:33
.	LCSS150505-02	C5355.D	05/06/2015	15:49
.	E15-03670-001MS	C5356.D	05/06/2015	16:05
.	E15-03670-001MSD	C5357.D	05/06/2015	16:21
15-059	E15-03670-001	C5358.D	05/06/2015	16:36
SB-12	E15-03420-012	C5359.D	05/06/2015	16:52
GP-1A/8	E15-03433-001	C5360.D	05/06/2015	17:08
GP-1B/10	E15-03433-002	C5361.D	05/06/2015	17:24
GP-1D/14	E15-03433-004	C5362.D	05/06/2015	17:40

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5339.D DFTPP Injection Date : 05/06/2015

Inst ID: MSDC DFTPP Injection Time: 11:23

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	35.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	35.8	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	48.5	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	26.1	
365	Greater than 1.0% of mass 198	2.5	
441	Present, but less than mass 443	12.47	(79.0)3
442	40.0 - 100.0% of mass 198	79.7	
443	17.0 - 23.0% of mass 442	15.8	(19.8)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
GP-1E/18	E15-03433-005	C5363.D	05/06/2015	17:56
GP-2/12	E15-03433-006	C5364.D	05/06/2015	18:12
TR-2/6-6	E15-03609-002	C5365.D	05/06/2015	18:28
GP-1B/10	E15-03433-002DL	C5366.D	05/06/2015	18:44

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5566.D

DFTPP Injection Date : 05/18/2015

Inst ID: MSDC

DFTPP Injection Time: 11:20

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	40.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	41.9	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	40.0 - 60.0% of mass 198	52.1	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.4	
275	10.0 - 30.0% of mass 198	23.5	
365	Greater than 1.0% of mass 198	2.5	
441	Present, but less than mass 443	9.97	(81.4)3
442	40.0 - 100.0% of mass 198	63.8	
443	17.0 - 23.0% of mass 442	12.2	(19.2)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN004-15	CCV040BNA1	C5567.D	05/18/2015	11:30
ABN031-15	CCV040BNA2	C5568.D	05/18/2015	11:47
.	BLKS150515-02	C5571.D	05/18/2015	15:09
.	LCSS150515-02	C5572.D	05/18/2015	15:24
.	E15-03939-004MS	C5573.D	05/18/2015	15:40
.	E15-03939-004MSD	C5574.D	05/18/2015	15:56
PEX-1/10	E15-03744-001	C5575.D	05/18/2015	16:12
WC-1	E15-03942-001	C5576.D	05/18/2015	16:28
HF-1/6-6	E15-03939-001	C5577.D	05/18/2015	16:43
D1/7.5-8	E15-03939-003	C5578.D	05/18/2015	16:59
D2/7.5-8	E15-03939-004	C5579.D	05/18/2015	17:15
D3/7.5-8	E15-03939-005	C5580.D	05/18/2015	17:31
BG-1	E15-04021-001	C5581.D	05/18/2015	17:47
WC-05131	E15-03988-002	C5582.D	05/18/2015	18:03
BG-1	E15-04019-001	C5583.D	05/18/2015	18:18
N-COMP	E15-03987-001	C5584.D	05/18/2015	18:34
S-COMP	E15-03987-002	C5585.D	05/18/2015	18:50

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5623.D

DFTPP Injection Date : 05/20/2015

Inst ID: MSDC

DFTPP Injection Time: 14:20

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	40.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	43.7	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	40.0 - 60.0% of mass 198	54.6	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	21.8	
365	Greater than 1.0% of mass 198	2.1	
441	Present, but less than mass 443	9.14	(77.2)3
442	40.0 - 100.0% of mass 198	57.2	
443	17.0 - 23.0% of mass 442	11.8	(20.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN037-15	ICC001BNA1	C5624.D	05/20/2015	14:37
ABN038-15	ICC010BNA1	C5625.D	05/20/2015	14:53
ABN039-15	ICC020BNA1	C5626.D	05/20/2015	15:09
ABN040-15	ICC040BNA1	C5627.D	05/20/2015	15:25
ABN041-15	ICC080BNA1	C5628.D	05/20/2015	15:41
ABN042-15	ICC160BNA1	C5629.D	05/20/2015	15:57
ABN049-15	ICV040BNA1	C5630.D	05/20/2015	16:13
ABN048-15	ICC160BNA2	C5631.D	05/20/2015	16:28
ABN047-15	ICC080BNA2	C5632.D	05/20/2015	16:44
ABN046-15	ICC040BNA2	C5633.D	05/20/2015	17:00
ABN045-15	ICC020BNA2	C5634.D	05/20/2015	17:16
ABN044-15	ICC010BNA2	C5635.D	05/20/2015	17:32
ABN043-15	ICC001BNA2	C5636.D	05/20/2015	17:48
ABN050-15	ICV040BNA2	C5637.D	05/20/2015	18:03
.	BLKS150519-03	C5638.D	05/20/2015	18:19
.	LCSS150519-03	C5639.D	05/20/2015	18:35
.	E15-04114-001MS	C5640.D	05/20/2015	18:51
.	E15-04114-001MSD	C5641.D	05/20/2015	19:07
ESB-46_(	E15-04114-001	C5642.D	05/20/2015	19:23
ESB-47_(	E15-04114-002	C5643.D	05/20/2015	19:39
ESB-48_(	E15-04114-003	C5644.D	05/20/2015	19:54
ESB-49_(	E15-04114-004	C5645.D	05/20/2015	20:10
ESB-50_(	E15-04114-005	C5646.D	05/20/2015	20:26

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5623.D

DFTPP Injection Date : 05/20/2015

Inst ID: MSDC

DFTPP Injection Time: 14:20

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	40.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	43.7	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	40.0 - 60.0% of mass 198	54.6	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	21.8	
365	Greater than 1.0% of mass 198	2.1	
441	Present, but less than mass 443	9.14	(77.2)3
442	40.0 - 100.0% of mass 198	57.2	
443	17.0 - 23.0% of mass 442	11.8	(20.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ESB-51_(	E15-04114-006	C5647.D	05/20/2015	20:42
S-3	E15-03895-003	C5648.D	05/20/2015	20:58
S-5	E15-03895-005	C5649.D	05/20/2015	21:13
C-L	E15-03903-001	C5650.D	05/20/2015	21:29
S-150515	E15-04095-001	C5651.D	05/20/2015	21:45
WC-1	E15-04112-001	C5652.D	05/20/2015	22:01

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5653.D

DFTPP Injection Date : 05/22/2015

Inst ID: MSDC

DFTPP Injection Time: 10:09

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	46.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	49.0	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	55.6	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	21.9	
365	Greater than 1.0% of mass 198	1.7	
441	Present, but less than mass 443	8.43	(73.0)3
442	40.0 - 100.0% of mass 198	54.7	
443	17.0 - 23.0% of mass 442	11.5	(21.1)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN049-15	CCV040BNA1	C5654.D	05/22/2015	10:19
ABN050-15	CCV040BNA2	C5655.D	05/22/2015	10:34
.	BLKS150521-03	C5656.D	05/22/2015	12:28
.	LCSS150521-03	C5657.D	05/22/2015	12:43
GPEC-BLD	E15-04196-001	C5658.D	05/22/2015	12:59
POST_EX_	E15-04162-001	C5659.D	05/22/2015	13:15
COMP-1	E15-04183-001	C5660.D	05/22/2015	13:31
COMP-2	E15-04183-002	C5661.D	05/22/2015	13:47
B-495/4.	E15-04181-001	C5662.D	05/22/2015	14:02
B-494/3.	E15-04181-002	C5663.D	05/22/2015	14:18
B-496/4.	E15-04181-003	C5664.D	05/22/2015	14:34
B-493/3.	E15-04181-004	C5665.D	05/22/2015	14:49
B-496/4.	E15-04181-003DL	C5666.D	05/22/2015	15:05

Response Factor Report MSD_C

Method Path : C:\MSDCHEM\1\METHODS\
Method File : CS1115.M
Title : BNA 8270.D CALIBRATION METHOD
Last Update : Wed May 06 15:29:27 2015
Response Via : Initial Calibration

Calibration Files
1 =C5340.D 10 =C5341.D 20 =C5342.D
40 =C5343.D 80 =C5344.D 160 =C5345.D

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD							
2)	T	N-Nitrosodimethyl	0.872	0.864	0.876	0.861	0.837	0.804	0.852	3.20
3)	T	Pyridine	0.991	1.006	1.066	0.974	1.014	1.010	1.010	3.09
4)	S	2-Fluorophenol	1.298	1.379	1.421	1.368	1.410	1.362	1.373	3.17
5)	T	Benzaldehyde	0.815	0.776	0.827	0.718	0.750	0.729	0.769	5.85
6)	S	Phenol-d5	1.654	1.780	1.814	1.754	1.739	1.728	1.745	3.11
7)	MC	Phenol	1.827	1.595	1.795	1.894	1.764	1.892	1.795	6.17
8)	T	Aniline	0.734	0.741	0.761	0.723	0.747	0.685	0.732	3.58
9)	T	Bis(2-chloroethyl	1.131	0.995	0.991	1.008	1.000	0.936	1.010	6.39
10)	M	2-Chlorophenol	1.742	1.459	1.523	1.540	1.610	1.498	1.562	6.49
11)	T	1,3-Dichlorobenze	1.687	1.491	1.556	1.551	1.609	1.632	1.588	4.36
12)	MC	1,4-Dichlorobenze	1.942	1.629	1.683	1.698	1.690	1.573	1.702	7.44
13)	T	Benzyl alcohol	1.027	0.884	0.984	0.956	0.924	0.955	0.955	5.15
14)	T	1,2-Dichlorobenze	1.743	1.478	1.537	1.537	1.546	1.482	1.554	6.26
15)	T	2-Methylphenol	1.483	1.299	1.346	1.256	1.325	1.263	1.329	6.26
16)	T	Bis(2-chloroisopr	1.858	1.599	1.689	1.652	1.706	1.671	1.696	5.16
17)	T	4-Methylphenol	1.440	1.265	1.309	1.325	1.364	1.330	1.339	4.41
18)	MP	N-Nitrosodi-n-pro	1.145	0.907	0.996	0.996	1.063	1.016	1.020	7.76
19)	T	Acetophenone	1.935	1.740	1.814	1.811	1.904	1.827	1.838	3.83
20)	T	3-Methylphenol	1.453	1.269	1.314	1.323	1.361	1.330	1.342	4.62
21)	T	Hexachloroethane	0.634	0.540	0.564	0.568	0.568	0.583	0.576	5.50
22)	T	2,6-Dimethylpheno							0.000	-1.00
23)	I	Naphthalene-d8	ISTD							
24)	S	Nitrobenzene-d5	0.388	0.374	0.394	0.476	0.420	0.464	0.419	10.03
25)	T	Nitrobenzene	0.396	0.355	0.355	0.343	0.367	0.332	0.358	6.18
26)	T	Isophorone	0.496	0.642	0.697	0.691	0.670	0.651	0.641	11.59
27)	TC	2-Nitrophenol	0.218	0.197	0.218	0.216	0.210	0.223	0.214	4.31
28)	T	2,4-Dimethylpheno	0.386	0.334	0.350	0.363	0.388	0.391	0.369	6.32
29)	T	Bis(2-chloroethox	0.419	0.373	0.408	0.415	0.399	0.408	0.404	4.10
30)	T	Benzoic acid	0.071	0.075	0.084	0.089	0.089	0.084	0.082	9.05
31)	T	2,4-Dimethylanili	0.445	0.400	0.431	0.398	0.398	0.370	0.407	6.61
32)	TC	2,4-Dichloropheno	0.337	0.296	0.307	0.314	0.305	0.291	0.308	5.25
33)	M	1,2,4-Trichlorobe	0.383	0.314	0.331	0.329	0.341	0.320	0.336	7.39
34)	T	Naphthalene	1.330	1.084	1.155	1.156	1.112	0.954	1.132	10.82
35)	T	4-Chloroaniline	0.599	0.542	0.588	0.571	0.578	0.562	0.573	3.53
36)	T	4-Aminotoluene	0.719	0.610	0.652	0.613	0.591	0.578	0.627	8.21
37)	TC	Hexachlorobutadie	0.206	0.167	0.176	0.171	0.175	0.166	0.177	8.39
38)	T	Caprolactam	0.146	0.125	0.128	0.125	0.131	0.120	0.129	7.02
39)	T	2-Aminotoluene	0.719	0.610	0.652	0.613	0.591	0.578	0.627	8.21
40)	MC	4-Chloro-3-methyl	0.332	0.296	0.312	0.298	0.315	0.288	0.307	5.22
41)	T	2-Methylnaphthale	0.794	0.682	0.723	0.724	0.729	0.717	0.728	5.02
42)	T	2,5-Dimethylpheno							0.000	-1.00
43)	I	Acenaphthene-d10	ISTD							
44)	TP	Hexachlorocyclope	0.186	0.186	0.217	0.218	0.232	0.266	0.217	13.80
45)	TC	2,4,6-Trichloroph	0.369	0.354	0.370	0.371	0.384	0.375	0.371	2.68
46)	T	2,4,5-Trichloroph	0.443	0.378	0.382	0.373	0.374	0.380	0.389	6.98
47)	S	2-Fluorobiphenyl	1.430	1.387	1.412	1.625	1.369	1.427	1.442	6.43
48)	T	1,1'-Biphenyl	1.700	1.419	1.520	1.481	1.529	1.525	1.529	6.11
49)	T	2-Chloronaphthale	1.242	1.104	1.152	1.111	1.146	1.160	1.153	4.18
50)	T	2-Nitroaniline	0.340	0.281	0.299	0.296	0.288	0.287	0.298	7.10
51)	T	Dimethyl phthalat	1.459	1.216	1.262	1.202	1.208	1.196	1.257	8.10

52)	T	2,6-Dinitrotoluen	0.294	0.253	0.269	0.258	0.266	0.263	0.267	5.39
53)	T	Acenaphthylene	2.108	1.800	1.875	1.841	1.877	1.730	1.872	6.83
54)	T	3-Nitroaniline	0.327	0.309	0.303	0.300	0.298	0.300	0.306	3.57
55)	MC	Acenaphthene	1.307	1.159	1.148	1.176	1.163	1.194	1.191	4.93
56)	TP	2,4-Dinitrophenol	0.076	0.066	0.084	0.108	0.093	0.090	0.086	16.82
57)	MP	4-Nitrophenol	0.211	0.209	0.222	0.211	0.214	0.219	0.215	2.41
58)	M	2,4-Dinitrotoluen	0.366	0.317	0.343	0.355	0.358	0.346	0.348	4.94
59)	T	Dibenzofuran	1.822	1.540	1.571	1.561	1.561	1.539	1.599	6.87
60)	T	Diethyl phthalate	1.509	1.192	1.184	1.163	1.146	1.111	1.217	11.98
61)	T	Fluorene	1.485	1.254	1.279	1.254	1.269	1.265	1.301	6.97
62)	T	4-Chlorophenyl ph	0.697	0.583	0.599	0.576	0.574	0.568	0.599	8.18
63)	T	4-Nitroaniline	0.352	0.311	0.299	0.304	0.296	0.316	0.313	6.55
64)		1,2,4,5-Tetrachlo	0.611	0.521	0.542	0.529	0.530	0.549	0.547	6.01
65)	T	2,3,4,6-Tetrachlo	0.297	0.227	0.227	0.272	0.274	0.271	0.261	10.81
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met	0.072	0.083	0.107	0.109	0.095	0.122	0.098	18.71
68)	TC	N-Nitrosodiphenyl	0.669	0.586	0.606	0.629	0.643	0.623	0.626	4.58
69)	T	1,2-Diphenylhydra	0.942	0.845	0.892	0.905	0.940	0.890	0.902	3.99
70)	S	2,4,6-Tribromophe	0.126	0.130	0.131	0.128	0.137	0.128	0.130	3.04
71)	T	4-Bromophenyl phe	0.247	0.224	0.224	0.231	0.239	0.224	0.232	4.08
72)	T	Hexachlorobenzene	0.288	0.250	0.247	0.251	0.255	0.240	0.255	6.51
73)	T	Atrazine	0.248	0.220	0.212	0.204	0.208	0.193	0.214	8.78
74)	MC	Pentachlorophenol	0.102	0.107	0.122	0.137	0.155	0.156	0.130	18.09
75)	T	Phenanthrene	1.371	1.126	1.148	1.147	1.165	1.156	1.185	7.74
76)	T	Anthracene	1.292	1.123	1.123	1.137	1.161	1.144	1.163	5.55
77)	T	Carbazole	1.124	0.984	0.997	0.984	1.027	0.995	1.019	5.29
78)	T	Di-n-butyl phthal	1.433	1.207	1.239	1.253	1.306	1.282	1.287	6.18
79)	TC	Fluoranthene	1.281	1.068	1.096	1.094	1.130	1.104	1.129	6.85
80)	T	Benzidine	0.414	0.511	0.519	0.501	0.460	0.413	0.470	10.28
81)		4-Aminoaniline							0.000	-1.00
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.527	1.333	1.410	1.442	1.437	1.359	1.418	4.85
84)	S	Terphenyl-d14	1.169	1.109	1.150	1.398	1.167	1.073	1.178	9.70
85)	T	3,3'-Dimethylbenz	0.718	0.650	0.779	0.766	0.722	0.506	0.690	14.62
86)	T	Butyl benzyl phth	0.709	0.544	0.610	0.613	0.612	0.588	0.613	8.81
87)	T	3,3'-Dichlorobenz	0.408	0.386	0.408	0.408	0.381	0.326	0.386	8.24
88)	T	Benzo[a]anthracen	1.379	1.128	1.160	1.175	1.155	1.090	1.181	8.59
89)	T	Chrysene	1.221	1.026	1.075	1.069	1.067	1.000	1.076	7.14
90)	T	Bis(2-ethylhexyl)	0.774	0.777	0.813	0.856	0.852	0.822	0.816	4.33
91)	T	3,3'-Dimethoxyben							0.000	-1.00
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	1.804	1.706	1.868	1.729	1.678	1.605	1.732	5.37
94)	T	Benzo[b]fluoranth	1.828	1.396	1.537	1.359	1.564	1.410	1.516	11.44
95)	T	Benzo[k]fluoranth	1.753	1.420	1.478	1.383	1.234	1.303	1.428	12.65
96)	TC	Benzo[a]pyrene	1.642	1.367	1.349	1.315	1.351	1.294	1.386	9.24
97)	T	Indeno[1,2,3-cd]p	1.696	1.496	1.609	1.739	1.752	1.699	1.665	5.81
98)	T	Dibenz[a,h]anthra	1.398	1.234	1.328	1.404	1.425	1.381	1.362	5.19
99)	T	Benzo[g,h,i]peryl	1.439	1.265	1.333	1.444	1.459	1.374	1.386	5.50

(#) = Out of Range

CS1115.M Wed May 06 15:34:32 2015 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-06-15\
Data File : C5346.D
Acq On : 6 May 2015 13:09
Operator : EDM
Sample : ABN004-15,ICV040BNA1
Misc : NA,05/06/15,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: May 06 14:32:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed May 06 14:14:21 2015
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00
2	T	N-Nitrosodimethylamine	0.852	0.871	-2.2	95	-0.01
3	T	Pyridine	1.010	0.985	2.5	95	-0.01
4	S	2-Fluorophenol	1.373	1.352	1.5	93	0.00
5	T	Benzaldehyde	0.769	0.747	2.9	93	0.00
6	S	Phenol-d5	1.745	1.802	-3.3	96	0.00
7	MC	Phenol	1.795	1.885	-5.0	93	0.00
8	T	Aniline	0.732	0.722	1.4	94	0.00
9	T	Bis(2-chloroethyl) ether	1.010	1.011	-0.1	94	0.00
10	M	2-Chlorophenol	1.562	1.547	1.0	94	0.00
11	T	1,3-Dichlorobenzene	1.588	1.543	2.8	93	0.00
12	MC	1,4-Dichlorobenzene	1.702	1.703	-0.1	94	0.00
13	T	Benzyl alcohol	0.955	0.972	-1.8	95	0.00
14	T	1,2-Dichlorobenzene	1.554	1.559	-0.3	95	0.00
15	T	2-Methylphenol	1.329	1.299	2.3	97	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.696	1.677	1.1	95	0.00
17	T	4-Methylphenol	1.339	1.323	1.2	94	0.00
18	MP	N-Nitrosodi-n-propylamine	1.020	1.020	0.0	96	-0.01
19	T	Acetophenone	1.838	1.874	-2.0	97	0.00
20	T	3-Methylphenol	1.342	1.326	1.2	94	0.00
21	T	Hexachloroethane	0.576	0.579	-0.5	96	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	97	0.00
24	S	Nitrobenzene-d5	0.419	0.470	-12.2	96	0.00
25	T	Nitrobenzene	0.358	0.345	3.6	98	0.00
26	T	Isophorone	0.641	0.687	-7.2	96	-0.01
27	TC	2-Nitrophenol	0.214	0.210	1.9	94	0.00
28	T	2,4-Dimethylphenol	0.369	0.365	1.1	97	0.00
29	T	Bis(2-chloroethoxy) methane	0.404	0.404	0.0	94	0.00
30	T	Benzoic acid	0.082	0.093	-13.4	101	-0.03
31	T	2,4-Dimethylaniline	0.407	0.383	5.9	93	0.00
32	TC	2,4-Dichlorophenol	0.308	0.309	-0.3	95	0.00
33	M	1,2,4-Trichlorobenzene	0.336	0.330	1.8	97	0.00
34	T	Naphthalene	1.132	1.115	1.5	93	0.00
35	T	4-Chloroaniline	0.573	0.571	0.3	97	0.00
36	T	4-Aminotoluene	0.627	0.613	2.2	97	0.00
37	TC	Hexachlorobutadiene	0.177	0.175	1.1	99	0.00
38	T	Caprolactam	0.129	0.129	0.0	100	-0.03
39	T	2-Aminotoluene	0.627	0.613	2.2	97	0.00
40	MC	4-Chloro-3-methylphenol	0.307	0.309	-0.7	100	0.00
41	T	2-Methylnaphthalene	0.728	0.721	1.0	96	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	96	0.00
44	TP	Hexachlorocyclopentadiene	0.217	0.245	-12.9	108	0.00
45	TC	2,4,6-Trichlorophenol	0.371	0.381	-2.7	99	0.00

46	T	2,4,5-Trichlorophenol	0.389	0.387	0.5	100	0.00
47	S	2-Fluorobiphenyl	1.442	1.669	-15.7	99	0.00
48	T	1,1'-Biphenyl	1.529	1.452	5.0	94	0.00
49	T	2-Chloronaphthalene	1.153	1.135	1.6	98	0.00
50	T	2-Nitroaniline	0.298	0.310	-4.0	101	0.00
51	T	Dimethyl phthalate	1.257	1.271	-1.1	102	0.00
52	T	2,6-Dinitrotoluene	0.267	0.279	-4.5	104	0.00
53	T	Acenaphthylene	1.872	1.881	-0.5	98	0.00
54	T	3-Nitroaniline	0.306	0.310	-1.3	100	-0.01
55	MC	Acenaphthene	1.191	1.177	1.2	96	-0.01
56	TP	2,4-Dinitrophenol	0.086	0.098	-14.0	87	-0.01
57	MP	4-Nitrophenol	0.215	0.223	-3.7	102	-0.01
58	M	2,4-Dinitrotoluene	0.348	0.358	-2.9	97	0.00
59	T	Dibenzofuran	1.599	1.607	-0.5	99	0.00
60	T	Diethyl phthalate	1.217	1.195	1.8	99	-0.01
61	T	Fluorene	1.301	1.294	0.5	99	-0.01
62	T	4-Chlorophenyl phenyl ether	0.599	0.591	1.3	99	0.00
63	T	4-Nitroaniline	0.313	0.307	1.9	97	-0.02
64		1,2,4,5-Tetrachlorobenzene	0.547	0.543	0.7	99	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.261	0.281	-7.7	99	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	97	-0.01
67	T	4,6-Dinitro-2-methylphenol	0.098	0.117	-19.4	104	-0.01
68	TC	N-Nitrosodiphenylamine	0.626	0.623	0.5	96	-0.01
69	T	1,2-Diphenylhydrazine	0.902	0.913	-1.2	98	-0.01
70	S	2,4,6-Tribromophenol	0.130	0.132	-1.5	100	0.00
71	T	4-Bromophenyl phenyl ether	0.232	0.230	0.9	97	0.00
72	T	Hexachlorobenzene	0.255	0.249	2.4	96	0.00
73	T	Atrazine	0.214	0.207	3.3	99	-0.02
74	MC	Pentachlorophenol	0.130	0.140	-7.7	99	0.00
75	T	Phenanthrene	1.185	1.169	1.4	99	-0.01
76	T	Anthracene	1.163	1.183	-1.7	101	-0.01
77	T	Carbazole	1.019	1.031	-1.2	102	-0.01
78	T	Di-n-butyl phthalate	1.287	1.321	-2.6	102	-0.02
79	TC	Fluoranthene	1.129	1.143	-1.2	102	-0.02
80	T	Benzidine	0.470	0.446	5.1	92	0.05
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	99	-0.01
83	M	Pyrene	1.418	1.482	-4.5	102	-0.02
84	S	Terphenyl-d14	1.178	1.444	-22.6	103	-0.01
85	T	3,3'-Dimethylbenzidine	0.690	0.637	7.7	95	0.06
86	T	Butyl benzyl phthalate	0.613	0.622	-1.5	101	-0.02
87	T	3,3'-Dichlorobenzidine	0.386	0.400	-3.6	98	-0.02
88	T	Benzo[a]anthracene	1.181	1.153	2.4	97	-0.02
89	T	Chrysene	1.076	1.114	-3.5	103	-0.02
90	T	Bis(2-ethylhexyl) phthalate	0.816	0.895	-9.7	104	-0.01
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	99	-0.01
93	TC	Di-n-octyl phthalate	1.732	1.760	-1.6	101	-0.01
94	T	Benzo[b]fluoranthene	1.516	1.355	10.6	99	-0.02
95	T	Benzo[k]fluoranthene	1.428	1.482	-3.8	106	-0.03
96	TC	Benzo[a]pyrene	1.386	1.307	5.7	98	-0.02
97	T	Indeno[1,2,3-cd]pyrene	1.665	1.694	-1.7	96	-0.05
98	T	Dibenz[a,h]anthracene	1.362	1.347	1.1	95	-0.04
99	T	Benzo[g,h,i]perylene	1.386	1.337	3.5	92	-0.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS1115.M Wed May 06 15:16:27 2015 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-18-15\
Data File : C5567.D
Acq On : 18 May 2015 11:30
Operator : EDM
Sample : ABN004-15,CCV040BNA1
Misc : NA,05/18/15,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: May 18 11:42:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed May 06 15:29:27 2015
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	81	0.00
2	T	N-Nitrosodimethylamine	0.852	0.912	-7.0	85	-0.02
3	T	Pyridine	1.010	1.141	-13.0	94	-0.01
4	S	2-Fluorophenol	1.373	1.495	-8.9	88	0.00
5	T	Benzaldehyde	0.769	0.710	7.7	89	0.00
6	S	Phenol-d5	1.745	1.914	-9.7	88	0.00
7	MC	Phenol	1.795	1.992	-11.0	85	0.00
8	T	Aniline	0.732	0.769	-5.1	86	0.00
9	T	Bis(2-chloroethyl) ether	1.010	1.060	-5.0	85	0.00
10	M	2-Chlorophenol	1.562	1.636	-4.7	86	0.00
11	T	1,3-Dichlorobenzene	1.588	1.637	-3.1	85	0.00
12	MC	1,4-Dichlorobenzene	1.702	1.717	-0.9	81	0.00
13	T	Benzyl alcohol	0.955	1.007	-5.4	85	0.00
14	T	1,2-Dichlorobenzene	1.554	1.564	-0.6	82	0.00
15	T	2-Methylphenol	1.329	1.371	-3.2	88	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.696	1.778	-4.8	87	0.00
17	T	4-Methylphenol	1.339	1.427	-6.6	87	0.00
18	MP	N-Nitrosodi-n-propylamine	1.020	1.034	-1.4	84	0.00
19	T	Acetophenone	1.838	1.908	-3.8	85	0.00
20	T	3-Methylphenol	1.342	1.440	-7.3	88	0.00
21	T	Hexachloroethane	0.576	0.594	-3.1	84	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	97	0.00
24	S	Nitrobenzene-d5	0.419	0.400	4.5	82	0.00
25	T	Nitrobenzene	0.358	0.304	15.1	87	0.00
26	T	Isophorone	0.641	0.598	6.7	84	0.00
27	TC	2-Nitrophenol	0.214	0.188	12.1	85	0.00
28	T	2,4-Dimethylphenol	0.369	0.323	12.5	87	0.00
29	T	Bis(2-chloroethoxy) methane	0.404	0.351	13.1	82	0.00
30	T	Benzoic acid	0.082	0.097	-18.3	106	-0.02
31	T	2,4-Dimethylaniline	0.407	0.357	12.3	88	0.00
32	TC	2,4-Dichlorophenol	0.308	0.288	6.5	90	0.00
33	M	1,2,4-Trichlorobenzene	0.336	0.298	11.3	88	0.00
34	T	Naphthalene	1.132	1.102	2.7	93	0.00
35	T	4-Chloroaniline	0.573	0.556	3.0	95	0.00
36	T	4-Aminotoluene	0.627	0.546	12.9	87	0.00
37	TC	Hexachlorobutadiene	0.177	0.153	13.6	87	0.00
38	T	Caprolactam	0.129	0.133	-3.1	104	-0.02
39	T	2-Aminotoluene	0.627	0.546	12.9	87	0.00
40	MC	4-Chloro-3-methylphenol	0.307	0.301	2.0	99	0.00
41	T	2-Methylnaphthalene	0.728	0.679	6.7	91	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	95	0.00
44	TP	Hexachlorocyclopentadiene	0.217	0.165	24.0	71	0.00
45	TC	2,4,6-Trichlorophenol	0.371	0.354	4.6	90	0.00

46	T	2,4,5-Trichlorophenol	0.389	0.358	8.0	91	0.00
47	S	2-Fluorobiphenyl	1.442	1.574	-9.2	92	0.00
48	T	1,1'-Biphenyl	1.529	1.467	4.1	94	0.00
49	T	2-Chloronaphthalene	1.153	1.115	3.3	95	0.00
50	T	2-Nitroaniline	0.298	0.302	-1.3	96	0.00
51	T	Dimethyl phthalate	1.257	1.251	0.5	99	0.00
52	T	2,6-Dinitrotoluene	0.267	0.272	-1.9	100	0.00
53	T	Acenaphthylene	1.872	1.838	1.8	94	-0.01
54	T	3-Nitroaniline	0.306	0.310	-1.3	98	-0.01
55	MC	Acenaphthene	1.191	1.172	1.6	94	-0.01
56	TP	2,4-Dinitrophenol	0.086	0.101	-17.4	88	0.00
57	MP	4-Nitrophenol	0.215	0.200	7.0	90	0.00
58	M	2,4-Dinitrotoluene	0.348	0.356	-2.3	95	0.00
59	T	Dibenzofuran	1.599	1.566	2.1	95	0.00
60	T	Diethyl phthalate	1.217	1.186	2.5	96	-0.02
61	T	Fluorene	1.301	1.292	0.7	97	-0.01
62	T	4-Chlorophenyl phenyl ether	0.599	0.576	3.8	95	-0.01
63	T	4-Nitroaniline	0.313	0.334	-6.7	104	-0.02
64		1,2,4,5-Tetrachlorobenzene	0.547	0.502	8.2	90	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.261	0.259	0.8	90	-0.01
66	I	Phenanthrene-d10	1.000	1.000	0.0	100	-0.02
67	T	4,6-Dinitro-2-methylphenol	0.098	0.116	-18.4	106	-0.01
68	TC	N-Nitrosodiphenylamine	0.626	0.601	4.0	96	-0.02
69	T	1,2-Diphenylhydrazine	0.902	0.875	3.0	97	-0.02
70	S	2,4,6-Tribromophenol	0.130	0.121	6.9	95	-0.01
71	T	4-Bromophenyl phenyl ether	0.232	0.212	8.6	92	-0.02
72	T	Hexachlorobenzene	0.255	0.228	10.6	91	-0.01
73	T	Atrazine	0.214	0.182	15.0	89	-0.02
74	MC	Pentachlorophenol	0.130	0.116	10.8	85	-0.01
75	T	Phenanthrene	1.185	1.134	4.3	99	-0.02
76	T	Anthracene	1.163	1.141	1.9	100	-0.02
77	T	Carbazole	1.019	1.032	-1.3	105	-0.01
78	T	Di-n-butyl phthalate	1.287	1.270	1.3	101	-0.03
79	TC	Fluoranthene	1.129	1.112	1.5	102	-0.03
80	T	Benzidine	0.470	0.556	-18.3	124	0.04
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	104	-0.03
83	M	Pyrene	1.418	1.394	1.7	101	-0.03
84	S	Terphenyl-d14	1.178	1.345	-14.2	100	-0.03
85	T	3,3'-Dimethylbenzidine	0.690	0.716	-3.8	115	0.06
86	T	Butyl benzyl phthalate	0.613	0.665	-8.5	113	-0.04
87	T	3,3'-Dichlorobenzidine	0.386	0.419	-8.5	107	-0.03
88	T	Benzo[a]anthracene	1.181	1.183	-0.2	105	-0.03
89	T	Chrysene	1.076	1.096	-1.9	107	-0.03
90	T	Bis(2-ethylhexyl) phthalate	0.816	0.886	-8.6	108	-0.03
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	111	0.02
93	TC	Di-n-octyl phthalate	1.732	1.754	-1.3	112	-0.02
94	T	Benzo[b]fluoranthene	1.516	1.408	7.1	115	0.00
95	T	Benzo[k]fluoranthene	1.428	1.382	3.2	110	-0.01
96	TC	Benzo[a]pyrene	1.386	1.345	3.0	113	0.00
97	T	Indeno[1,2,3-cd]pyrene	1.665	1.743	-4.7	111	0.02
98	T	Dibenz[a,h]anthracene	1.362	1.408	-3.4	111	0.03
99	T	Benzo[g,h,i]perylene	1.386	1.410	-1.7	108	0.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS1115.M Mon May 18 12:43:03 2015 RPT1

Response Factor Report MSD_C

Method Path : C:\MSDCHEM\1\METHODS\
Method File : CS1215.M
Title : BNA CALIBRATION METHOD
Last Update : Thu May 21 08:45:42 2015
Response Via : Initial Calibration

Calibration Files
1 =C5624.D 10 =C5625.D 20 =C5626.D
40 =C5627.D 80 =C5628.D 160 =C5629.D

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)	T	N-Nitrosodimethyl	1.012	0.917	0.857	0.917	0.902	1.035	0.940	7.30
3)	T	Pyridine	1.202	1.114	1.020	1.070	1.112	1.203	1.120	6.44
4)	S	2-Fluorophenol	1.444	1.408	1.411	1.493	1.466	1.588	1.469	4.57
5)	T	Benzaldehyde	0.700	0.932	0.959	0.936	0.714	0.612	0.809	18.61
6)	S	Phenol-d5	1.766	1.714	1.711	1.763	1.797	1.920	1.778	4.32
7)	MC	Phenol	2.250	2.045	1.948	1.876	2.036	2.004	2.026	6.23
8)	T	Aniline	0.793	0.782	0.807	0.825	0.855	0.869	0.822	4.20
9)	T	Bis(2-chloroethyl	1.234	1.087	1.096	1.087	1.082	1.161	1.125	5.46
10)	M	2-Chlorophenol	1.768	1.496	1.435	1.545	1.625	1.658	1.588	7.56
11)	T	1,3-Dichlorobenze	1.765	1.650	1.604	1.589	1.666	1.730	1.667	4.15
12)	MC	1,4-Dichlorobenze	1.741	1.564	1.546	1.556	1.683	1.669	1.627	5.03
13)	T	Benzyl alcohol	1.173	1.046	0.979	0.993	1.053	1.039	1.047	6.57
14)	T	1,2-Dichlorobenze	1.670	1.551	1.458	1.489	1.591	1.623	1.564	5.15
15)	T	2-Methylphenol	1.486	1.418	1.330	1.353	1.388	1.471	1.408	4.45
16)	T	Bis(2-chloroisopr	2.067	1.916	1.862	1.868	1.861	2.001	1.929	4.47
17)	T	4-Methylphenol	1.520	1.426	1.350	1.400	1.406	1.512	1.435	4.68
18)	MP	N-Nitrosodi-n-pro	1.196	1.114	1.034	1.083	1.076	1.146	1.108	5.17
19)	T	Acetophenone	2.431	2.204	2.105	2.149	2.190	2.301	2.230	5.30
20)	T	3-Methylphenol	1.520	1.427	1.350	1.399	1.405	1.511	1.435	4.68
21)	T	Hexachloroethane	0.640	0.585	0.547	0.562	0.594	0.620	0.591	5.90
22)	T	2,6-Dimethylpheno							0.000	-1.00
23)	I	Naphthalene-d8	----------ISTD----------							
24)	S	Nitrobenzene-d5	0.345	0.351	0.356	0.357	0.389	0.430	0.371	8.77
25)	T	Nitrobenzene	0.458	0.357	0.345	0.363	0.373	0.380	0.380	10.67
26)	T	Isophorone	0.740	0.696	0.677	0.671	0.709	0.728	0.703	3.93
27)	TC	2-Nitrophenol	0.202	0.202	0.191	0.188	0.206	0.214	0.201	4.72
28)	T	2,4-Dimethylpheno	0.371	0.352	0.345	0.341	0.379	0.380	0.361	4.83
29)	T	Bis(2-chloroethox	0.451	0.436	0.416	0.407	0.423	0.439	0.429	3.83
30)	T	Benzoic acid	0.073	0.097	0.078	0.115	0.102	0.116	0.097	18.96
31)	T	2,4-Dimethylanili	0.380	0.382	0.403	0.405	0.447	0.440	0.410	6.90
32)	TC	2,4-Dichloropheno	0.284	0.275	0.272	0.278	0.300	0.304	0.285	4.69
33)	M	1,2,4-Trichlorobe	0.315	0.303	0.297	0.300	0.321	0.307	0.307	3.04
34)	T	Naphthalene	1.163	1.078	1.066	1.067	1.108	1.069	1.092	3.49
35)	T	4-Chloroaniline	0.557	0.545	0.542	0.556	0.575	0.550	0.554	2.10
36)	T	4-Aminotoluene	0.597	0.607	0.610	0.625	0.670	0.658	0.628	4.73
37)	TC	Hexachlorobutadie	0.163	0.153	0.153	0.151	0.159	0.159	0.156	2.93
38)	T	Caprolactam	0.165	0.151	0.150	0.150	0.159	0.165	0.157	4.64
39)	T	2-Aminotoluene	0.597	0.607	0.610	0.625	0.670	0.658	0.628	4.73
40)	MC	4-Chloro-3-methyl	0.327	0.289	0.296	0.292	0.309	0.315	0.305	4.85
41)	T	2-Methylnaphthale	0.743	0.688	0.669	0.663	0.708	0.710	0.697	4.27
42)	T	2,5-Dimethylpheno							0.000	-1.00
43)	I	Acenaphthene-d10	----------ISTD----------							
44)	TP	Hexachlorocyclope	0.258	0.241	0.231	0.251	0.291	0.285	0.260	9.25
45)	TC	2,4,6-Trichloroph	0.346	0.342	0.328	0.319	0.362	0.344	0.340	4.37
46)	T	2,4,5-Trichloroph	0.374	0.351	0.329	0.332	0.360	0.353	0.350	4.86
47)	S	2-Fluorobiphenyl	1.244	1.229	1.193	1.164	1.258	1.200	1.215	2.89
48)	T	1,1'-Biphenyl	1.635	1.552	1.474	1.444	1.658	1.526	1.548	5.53
49)	T	2-Chloronaphthale	1.160	1.085	1.061	1.058	1.168	1.098	1.105	4.16
50)	T	2-Nitroaniline	0.268	0.277	0.275	0.291	0.317	0.298	0.288	6.22
51)	T	Dimethyl phthalat	1.364	1.265	1.205	1.193	1.329	1.249	1.267	5.34

52)	T	2,6-Dinitrotoluen	0.215	0.238	0.233	0.245	0.276	0.299	0.251	12.26
53)	T	Acenaphthylene	1.771	1.767	1.697	1.712	1.877	1.761	1.764	3.60
54)	T	3-Nitroaniline	0.274	0.292	0.291	0.299	0.328	0.341	0.304	8.25
55)	MC	Acenaphthene	1.181	1.137	1.091	1.116	1.171	1.194	1.148	3.50
56)	TP	2,4-Dinitrophenol	0.069	0.060	0.067	0.093	0.079	0.082	0.075	16.14
57)	MP	4-Nitrophenol	0.224	0.232	0.221	0.232	0.243	0.245	0.233	4.10
58)	M	2,4-Dinitrotoluen	0.261	0.303	0.320	0.340	0.378	0.374	0.329	13.57
59)	T	Dibenzofuran	1.633	1.504	1.465	1.470	1.549	1.563	1.531	4.20
60)	T	Diethyl phthalate	1.239	1.203	1.133	1.192	1.238	1.262	1.211	3.81
61)	T	Fluorene	1.293	1.285	1.192	1.206	1.320	1.273	1.262	4.04
62)	T	4-Chlorophenyl ph	0.613	0.573	0.539	0.549	0.576	0.565	0.569	4.53
63)	T	4-Nitroaniline	0.283	0.297	0.286	0.292	0.329	0.326	0.302	6.70
64)		1,2,4,5-Tetrachlo	1.047	0.975	0.924	0.911	1.027	0.996	0.980	5.55
65)	T	2,3,4,6-Tetrachlo	0.221	0.254	0.252	0.248	0.256	0.247	0.246	5.27
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met		0.072	0.094	0.104	0.097	0.125	0.098	19.43
68)	TC	N-Nitrosodiphenyl	0.597	0.583	0.577	0.617	0.626	0.649	0.608	4.55
69)	T	1,2-Diphenylhydra	0.920	0.911	0.895	0.954	0.979	1.022	0.947	5.07
70)	S	2,4,6-Tribromophe	0.108	0.115	0.113	0.116	0.112	0.117	0.113	2.90
71)	T	4-Bromophenyl phe	0.205	0.210	0.199	0.207	0.216	0.220	0.210	3.58
72)	T	Hexachlorobenzene	0.253	0.239	0.220	0.224	0.236	0.232	0.234	5.00
73)	T	Atrazine	0.228	0.226	0.214	0.227	0.243	0.237	0.229	4.33
74)	MC	Pentachlorophenol	0.130	0.121	0.134	0.146	0.155	0.158	0.141	10.40
75)	T	Phenanthrene	1.166	1.151	1.131	1.150	1.213	1.169	1.163	2.41
76)	T	Anthracene	1.101	1.128	1.118	1.139	1.177	1.200	1.144	3.27
77)	T	Carbazole	1.070	1.020	1.017	1.058	1.080	1.073	1.053	2.63
78)	T	Di-n-butyl phthal	1.194	1.274	1.241	1.330	1.365	1.302	1.284	4.79
79)	TC	Fluoranthene	1.070	1.118	1.086	1.121	1.129	1.110	1.105	2.06
80)	T	Benzidine	0.368	0.361	0.423	0.501	0.430	0.350	0.405	14.18
81)		4-Aminoaniline							0.000	-1.00
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.319	1.317	1.309	1.347	1.480	1.465	1.373	5.71
84)	S	Terphenyl-d14	1.014	1.000	1.006	1.034	1.032	1.004	1.015	1.45
85)	T	3,3'-Dimethylbenz	0.496	0.579	0.682	0.785	0.727	0.555	0.637	17.45
86)	T	Butyl benzyl phth	0.591	0.631	0.631	0.664	0.699	0.745	0.660	8.35
87)	T	3,3'-Dichlorobenz	0.347	0.359	0.354	0.351	0.395	0.351	0.360	4.99
88)	T	Benzo[a]anthracen	1.237	1.124	1.105	1.118	1.209	1.220	1.169	5.06
89)	T	Chrysene	1.121	1.086	1.057	1.030	1.141	1.145	1.097	4.28
90)	T	Bis(2-ethylhexyl)	0.694	0.795	0.829	0.866	0.932	1.019	0.856	13.13
91)	T	3,3'-Dimethoxyben							0.000	-1.00
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	1.449	1.893	1.916	1.961	1.930	2.081	1.872	11.62
94)	T	Benzo[b]fluoranth	1.638	1.442	1.418	1.402	1.684	1.649	1.539	8.51
95)	T	Benzo[k]fluoranth	1.515	1.750	1.648	1.612	1.580	1.653	1.627	4.86
96)	TC	Benzo[a]pyrene	1.372	1.455	1.410	1.448	1.585	1.636	1.484	6.96
97)	T	Indeno[1,2,3-cd]p	1.210	1.617	1.690	1.790	1.858	1.966	1.688	15.66
98)	T	Dibenz[a,h]anthra	1.013	1.277	1.286	1.471	1.473	1.585	1.351	15.08
99)	T	Benzo[g,h,i]peryl	1.160	1.361	1.452	1.501	1.530	1.605	1.435	10.95

(#) = Out of Range

CS1215.M Thu May 21 09:03:11 2015 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-20-15\
Data File : C5630.D
Acq On : 20 May 2015 16:13
Operator : EDM
Sample : ABN049-15,ICV040BNA1
Misc : NA,05/20/15,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: May 20 16:24:31 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed May 20 16:10:41 2015
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00
2	T	N-Nitrosodimethylamine	0.940	0.918	2.3	98	-0.01
3	T	Pyridine	1.120	1.078	3.8	99	0.00
4	S	2-Fluorophenol	1.469	1.462	0.5	96	0.00
5	T	Benzaldehyde	0.809	0.913	-12.9	100	0.00
6	S	Phenol-d5	1.778	1.760	1.0	98	0.00
7	MC	Phenol	2.026	1.901	6.2	99	0.00
8	T	Aniline	0.822	0.838	-1.9	99	0.00
9	T	Bis(2-chloroethyl) ether	1.125	1.110	1.3	100	0.00
10	M	2-Chlorophenol	1.588	1.541	3.0	98	0.00
11	T	1,3-Dichlorobenzene	1.667	1.585	4.9	98	0.00
12	MC	1,4-Dichlorobenzene	1.627	1.572	3.4	99	0.00
13	T	Benzyl alcohol	1.047	0.993	5.2	98	0.00
14	T	1,2-Dichlorobenzene	1.564	1.462	6.5	96	0.00
15	T	2-Methylphenol	1.408	1.332	5.4	96	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.929	1.816	5.9	95	0.00
17	T	4-Methylphenol	1.435	1.356	5.5	95	0.00
18	MP	N-Nitrosodi-n-propylamine	1.108	1.052	5.1	95	0.00
19	T	Acetophenone	2.230	2.180	2.2	99	0.00
20	T	3-Methylphenol	1.435	1.355	5.6	95	0.00
21	T	Hexachloroethane	0.591	0.557	5.8	97	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	96	0.00
24	S	Nitrobenzene-d5	0.371	0.361	2.7	97	0.00
25	T	Nitrobenzene	0.380	0.354	6.8	94	0.00
26	T	Isophorone	0.703	0.647	8.0	93	-0.01
27	TC	2-Nitrophenol	0.201	0.193	4.0	99	0.00
28	T	2,4-Dimethylphenol	0.361	0.346	4.2	98	-0.01
29	T	Bis(2-chloroethoxy) methane	0.429	0.413	3.7	98	0.00
30	T	Benzoic acid	0.097	0.125	-28.9	105	-0.03
31	T	2,4-Dimethylaniline	0.410	0.410	0.0	98	0.00
32	TC	2,4-Dichlorophenol	0.285	0.271	4.9	94	0.00
33	M	1,2,4-Trichlorobenzene	0.307	0.295	3.9	95	0.00
34	T	Naphthalene	1.092	1.066	2.4	96	0.00
35	T	4-Chloroaniline	0.554	0.550	0.7	95	0.00
36	T	4-Aminotoluene	0.628	0.615	2.1	95	-0.01
37	TC	Hexachlorobutadiene	0.156	0.149	4.5	95	0.00
38	T	Caprolactam	0.157	0.154	1.9	99	-0.03
39	T	2-Aminotoluene	0.628	0.615	2.1	95	-0.01
40	MC	4-Chloro-3-methylphenol	0.305	0.300	1.6	99	0.00
41	T	2-Methylnaphthalene	0.697	0.673	3.4	98	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	92	0.00
44	TP	Hexachlorocyclopentadiene	0.260	0.259	0.4	95	0.00
45	TC	2,4,6-Trichlorophenol	0.340	0.325	4.4	94	0.00

46	T	2,4,5-Trichlorophenol	0.350	0.339	3.1	94	0.00
47	S	2-Fluorobiphenyl	1.215	1.240	-2.1	98	0.00
48	T	1,1'-Biphenyl	1.548	1.519	1.9	97	0.00
49	T	2-Chloronaphthalene	1.105	1.072	3.0	93	0.00
50	T	2-Nitroaniline	0.288	0.292	-1.4	92	0.00
51	T	Dimethyl phthalate	1.267	1.202	5.1	93	0.00
52	T	2,6-Dinitrotoluene	0.251	0.257	-2.4	96	0.00
53	T	Acenaphthylene	1.764	1.775	-0.6	95	0.00
54	T	3-Nitroaniline	0.304	0.309	-1.6	95	-0.01
55	MC	Acenaphthene	1.148	1.130	1.6	93	0.00
56	TP	2,4-Dinitrophenol	0.075	0.087	-16.0	86	-0.01
57	MP	4-Nitrophenol	0.233	0.239	-2.6	95	-0.01
58	M	2,4-Dinitrotoluene	0.329	0.351	-6.7	95	0.00
59	T	Dibenzofuran	1.531	1.522	0.6	95	0.00
60	T	Diethyl phthalate	1.211	1.187	2.0	91	0.00
61	T	Fluorene	1.262	1.256	0.5	96	0.00
62	T	4-Chlorophenyl phenyl ether	0.569	0.552	3.0	92	0.00
63	T	4-Nitroaniline	0.302	0.307	-1.7	97	-0.01
64		1,2,4,5-Tetrachlorobenzene	0.980	0.982	-0.2	99	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.246	0.252	-2.4	93	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	96	0.00
67	T	4,6-Dinitro-2-methylphenol	0.098	0.118	-20.4	109	-0.01
68	TC	N-Nitrosodiphenylamine	0.608	0.598	1.6	93	-0.01
69	T	1,2-Diphenylhydrazine	0.947	0.929	1.9	93	0.00
70	S	2,4,6-Tribromophenol	0.113	0.113	0.0	93	0.00
71	T	4-Bromophenyl phenyl ether	0.210	0.202	3.8	93	0.00
72	T	Hexachlorobenzene	0.234	0.219	6.4	94	0.00
73	T	Atrazine	0.229	0.218	4.8	92	-0.01
74	MC	Pentachlorophenol	0.141	0.144	-2.1	95	0.00
75	T	Phenanthrene	1.163	1.150	1.1	96	0.00
76	T	Anthracene	1.144	1.128	1.4	95	-0.01
77	T	Carbazole	1.053	1.039	1.3	94	-0.01
78	T	Di-n-butyl phthalate	1.284	1.292	-0.6	93	0.00
79	TC	Fluoranthene	1.105	1.096	0.8	94	-0.01
80	T	Benzidine	0.405	0.420	-3.7	89	-0.02
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	93	0.00
83	M	Pyrene	1.373	1.344	2.1	93	-0.01
84	S	Terphenyl-d14	1.015	1.019	-0.4	92	0.00
85	T	3,3'-Dimethylbenzidine	0.637	0.656	-3.0	92	-0.03
86	T	Butyl benzyl phthalate	0.660	0.649	1.7	91	-0.01
87	T	3,3'-Dichlorobenzidine	0.360	0.357	0.8	95	-0.01
88	T	Benzo[a]anthracene	1.169	1.112	4.9	93	0.00
89	T	Chrysene	1.097	1.025	6.6	93	-0.01
90	T	Bis(2-ethylhexyl) phthalate	0.856	0.843	1.5	91	0.00
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	102	-0.02
93	TC	Di-n-octyl phthalate	1.872	1.812	3.2	95	-0.01
94	T	Benzo[b]fluoranthene	1.539	1.471	4.4	107	-0.02
95	T	Benzo[k]fluoranthene	1.627	1.516	6.8	96	-0.03
96	TC	Benzo[a]pyrene	1.484	1.442	2.8	102	-0.03
97	T	Indeno[1,2,3-cd]pyrene	1.688	1.729	-2.4	99	-0.06
98	T	Dibenz[a,h]anthracene	1.351	1.391	-3.0	97	-0.06
99	T	Benzo[g,h,i]perylene	1.435	1.486	-3.6	101	-0.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS1215.M Thu May 21 09:04:41 2015 RPT1

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5654.D
Acq On : 22 May 2015 10:19
Operator : EDM
Sample : ABN049-15,CCV040BNA1
Misc : NA,05/22/15,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: May 22 10:33:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	128	0.00
2	T	N-Nitrosodimethylamine	0.940	0.926	1.5	130	0.00
3	T	Pyridine	1.120	1.101	1.7	132	0.00
4	S	2-Fluorophenol	1.469	1.401	4.6	120	0.00
5	T	Benzaldehyde	0.809	0.996	-23.1	123	0.00
6	S	Phenol-d5	1.778	1.737	2.3	126	0.00
7	MC	Phenol	2.026	1.865	7.9	127	0.00
8	T	Aniline	0.822	0.810	1.5	126	0.00
9	T	Bis(2-chloroethyl) ether	1.125	1.074	4.5	127	0.00
10	M	2-Chlorophenol	1.588	1.574	0.9	131	0.00
11	T	1,3-Dichlorobenzene	1.667	1.609	3.5	130	0.00
12	MC	1,4-Dichlorobenzene	1.627	1.601	1.6	132	0.00
13	T	Benzyl alcohol	1.047	0.965	7.8	125	0.00
14	T	1,2-Dichlorobenzene	1.564	1.520	2.8	131	0.00
15	T	2-Methylphenol	1.408	1.317	6.5	125	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.929	1.823	5.5	125	0.00
17	T	4-Methylphenol	1.435	1.410	1.7	129	0.00
18	MP	N-Nitrosodi-n-propylamine	1.108	1.064	4.0	126	0.00
19	T	Acetophenone	2.230	2.071	7.1	124	0.00
20	T	3-Methylphenol	1.435	1.409	1.8	129	0.00
21	T	Hexachloroethane	0.591	0.577	2.4	132	0.00
22	T	2,6-Dimethylphenol					
23	I	Naphthalene-d8	1.000	1.000	0.0	124	0.00
24	S	Nitrobenzene-d5	0.371	0.361	2.7	126	0.00
25	T	Nitrobenzene	0.380	0.364	4.2	125	0.00
26	T	Isophorone	0.703	0.672	4.4	124	0.00
27	TC	2-Nitrophenol	0.201	0.202	-0.5	133	0.00
28	T	2,4-Dimethylphenol	0.361	0.353	2.2	129	0.00
29	T	Bis(2-chloroethoxy) methane	0.429	0.409	4.7	125	0.00
30	T	Benzoic acid	0.097	0.122	-25.8	131	-0.02
31	T	2,4-Dimethylaniline	0.410	0.416	-1.5	127	0.00
32	TC	2,4-Dichlorophenol	0.285	0.272	4.6	122	0.00
33	M	1,2,4-Trichlorobenzene	0.307	0.303	1.3	126	0.00
34	T	Naphthalene	1.092	1.072	1.8	125	0.00
35	T	4-Chloroaniline	0.554	0.547	1.3	122	0.00
36	T	4-Aminotoluene	0.628	0.630	-0.3	125	0.00
37	TC	Hexachlorobutadiene	0.156	0.153	1.9	126	0.00
38	T	Caprolactam	0.157	0.139	11.5	115	-0.02
39	T	2-Aminotoluene	0.628	0.630	-0.3	125	0.00
40	MC	4-Chloro-3-methylphenol	0.305	0.287	5.9	122	0.00
41	T	2-Methylnaphthalene	0.697	0.681	2.3	128	0.00
42	T	2,5-Dimethylphenol					
43	I	Acenaphthene-d10	1.000	1.000	0.0	110	0.02
44	TP	Hexachlorocyclopentadiene	0.260	0.284	-9.2	125	0.01
45	TC	2,4,6-Trichlorophenol	0.340	0.360	-5.9	124	0.01
46	T	2,4,5-Trichlorophenol	0.350	0.361	-3.1	119	0.01

47	S	2-Fluorobiphenyl	1.215	1.261	-3.8	119	0.01
48	T	1,1'-Biphenyl	1.548	1.613	-4.2	123	0.01
49	T	2-Chloronaphthalene	1.105	1.125	-1.8	117	0.01
50	T	2-Nitroaniline	0.288	0.297	-3.1	112	0.01
51	T	Dimethyl phthalate	1.267	1.243	1.9	115	0.02
52	T	2,6-Dinitrotoluene	0.251	0.269	-7.2	121	0.01
53	T	Acenaphthylene	1.764	1.815	-2.9	117	0.02
54	T	3-Nitroaniline	0.304	0.306	-0.7	112	0.01
55	MC	Acenaphthene	1.148	1.154	-0.5	114	0.02
56	TP	2,4-Dinitrophenol	0.075	0.093	-24.0	109	0.02
57	MP	4-Nitrophenol	0.233	0.221	5.2	105	0.02
58	M	2,4-Dinitrotoluene	0.329	0.347	-5.5	112	0.02
59	T	Dibenzofuran	1.531	1.513	1.2	113	0.02
60	T	Diethyl phthalate	1.211	1.153	4.8	106	0.02
61	T	Fluorene	1.262	1.245	1.3	113	0.03
62	T	4-Chlorophenyl phenyl ether	0.569	0.563	1.1	113	0.03
63	T	4-Nitroaniline	0.302	0.294	2.6	111	0.02
64		1,2,4,5-Tetrachlorobenzene	0.980	1.031	-5.2	124	0.01
65	T	2,3,4,6-Tetrachlorophenol	0.246	0.248	-0.8	110	0.03
66	I	Phenanthrene-d10	1.000	1.000	0.0	107	0.04
67	T	4,6-Dinitro-2-methylphenol	0.098	0.122	-24.5	126	0.02
68	TC	N-Nitrosodiphenylamine	0.608	0.627	-3.1	108	0.02
69	T	1,2-Diphenylhydrazine	0.947	0.982	-3.7	110	0.03
70	S	2,4,6-Tribromophenol	0.113	0.119	-5.3	109	0.03
71	T	4-Bromophenyl phenyl ether	0.210	0.219	-4.3	113	0.04
72	T	Hexachlorobenzene	0.234	0.236	-0.9	112	0.04
73	T	Atrazine	0.229	0.220	3.9	103	0.04
74	MC	Pentachlorophenol	0.141	0.147	-4.3	108	0.04
75	T	Phenanthrene	1.163	1.159	0.3	107	0.04
76	T	Anthracene	1.144	1.172	-2.4	110	0.04
77	T	Carbazole	1.053	1.023	2.8	103	0.04
78	T	Di-n-butyl phthalate	1.284	1.284	0.0	103	0.05
79	TC	Fluoranthene	1.105	1.060	4.1	101	0.06
80	T	Benzidine	0.405	0.471	-16.3	109	0.10
81		4-Aminoaniline					
82	I	Chrysene-d12	1.000	1.000	0.0	91	0.07
83	M	Pyrene	1.373	1.541	-12.2	104	0.07
84	S	Terphenyl-d14	1.015	1.125	-10.8	99	0.09
85	T	3,3'-Dimethylbenzidine	0.637	0.736	-15.5	102	0.12
86	T	Butyl benzyl phthalate	0.660	0.709	-7.4	97	0.09
87	T	3,3'-Dichlorobenzidine	0.360	0.393	-9.2	102	0.06
88	T	Benzo[a]anthracene	1.169	1.173	-0.3	95	0.07
89	T	Chrysene	1.097	1.106	-0.8	98	0.06
90	T	Bis(2-ethylhexyl) phthalate	0.856	0.960	-12.1	101	0.06
91	T	3,3'-Dimethoxybenzidine					
92	I	Perylene-d12	1.000	1.000	0.0	105	0.05
93	TC	Di-n-octyl phthalate	1.872	2.044	-9.2	110	0.06
94	T	Benzo[b]fluoranthene	1.539	1.632	-6.0	123	0.05
95	T	Benzo[k]fluoranthene	1.627	1.404	13.7	92	0.04
96	TC	Benzo[a]pyrene	1.484	1.458	1.8	106	0.04
97	T	Indeno[1,2,3-cd]pyrene	1.688	1.920	-13.7	113	0.00
98	T	Dibenz[a,h]anthracene	1.351	1.546	-14.4	111	0.00
99	T	Benzo[g,h,i]perylene	1.435	1.594	-11.1	112	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CS1215.M Fri May 22 12:35:23 2015 RPT1

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5340.D

Date Analyzed: 05/06/2015

Instrument ID: MSDC

Time Analyzed: 11:34

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	336783		2.44		1332555		3.00		792065		3.83	
	UPPER LIMIT	673566		2.94		2665110		3.50		1584130		4.33	
	LOWER LIMIT	168392		1.94		666278		2.50		396033		3.33	
	LAB SAMPLE ID												
01	ICC010BNA1	315693		2.44		1252056		2.99		722828		3.82	
02	ICC020BNA1	334861		2.44		1293731		2.99		763487		3.82	
03	ICC040BNA1	322426		2.44		1245877		2.99		718018		3.82	
04	ICC080BNA1	292543		2.44		1154574		2.99		677340		3.82	
05	ICC160BNA1	296686		2.45		1151719		3.00		621058		3.83	
06	ICV040BNA1	302618		2.45		1206332		3.00		691328		3.82	
07	ICC160BNA2	343154		2.45		1411321		2.99		794517		3.82	
08	ICC080BNA2	308208		2.44		1256407		2.99		745100		3.82	
09	ICC040BNA2	319597		2.44		1271102		2.99		757353		3.83	
10	ICC020BNA2	291643		2.44		1186383		2.99		705454		3.82	
11	ICC010BNA2	368081		2.45		1510185		2.99		860271		3.83	
12	ICC001BNA2	295868		2.44		1207928		2.99		704942		3.81	
13	ICV040BNA2	286979		2.45		1185466		2.99		703313		3.81	
14	BLKS150505-02	398877		2.44		1649503		2.99		975632		3.81	
15	LCSS150505-02	548731		2.44		2154893		2.99		1291219		3.81	
16	E15-03670-001MS	386700		2.44		1550889		2.99		910654		3.80	
17	E15-03670-001MSD	357536		2.45		1516150		2.99		933544		3.81	
18	E15-03670-001	447520		2.44		1871618		2.99		1169430		3.81	
19	E15-03420-012	427774		2.44		1759857		2.99		1064103		3.80	
20	E15-03433-001	390244		2.45		1556245		3.00		848246		3.82	
21	E15-03433-002	332982		2.44		1278513		3.01		828572		3.88	
22	E15-03433-004	393234		2.45		1589308		3.00		830300		3.84	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5340.D

Date Analyzed: 05/06/2015

Instrument ID: MSDC

Time Analyzed: 11:34

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	1263204		4.62		1104724		6.40		625170		7.73	
	UPPER LIMIT	2526408		5.12		2209448		6.90		1250340		8.23	
	LOWER LIMIT	631602		4.12		552362		5.90		312585		7.23	
	LAB SAMPLE ID												
01	ICC010BNA1	1102125		4.60		910816		6.38		612295		7.71	
02	ICC020BNA1	1151502		4.60		906195		6.37		583480		7.70	
03	ICC040BNA1	1030371		4.59		789231		6.36		591671		7.69	
04	ICC080BNA1	927563		4.60		722596		6.37		556272		7.70	
05	ICC160BNA1	886149		4.62		730490		6.40		586294		7.70	
06	ICV040BNA1	1001432		4.61		783827		6.39		585730		7.69	
07	ICC160BNA2	1202991		4.60		912877		6.37		480351		7.70	
08	ICC080BNA2	1155811		4.59		933315		6.36		653937		7.70	
09	ICC040BNA2	1181661		4.61		911667		6.39		680700		7.72	
10	ICC020BNA2	1108440		4.60		925263		6.38		650981		7.67	
11	ICC010BNA2	1372029		4.62		951666		6.40		686721		7.71	
12	ICC001BNA2	1104067		4.59		943679		6.34		670537		7.68	
13	ICV040BNA2	1066151		4.59		898409		6.36		649373		7.69	
14	BLKS150505-02	1623161		4.59		1263963		6.37		645854		7.66	
15	LCSS150505-02	1946818		4.59		1412170		6.36		717216		7.66	
16	E15-03670-001MS	1425700		4.57		1083288		6.33		530228		7.63	
17	E15-03670-001MSD	1559199		4.58		1239682		6.34		586532		7.64	
18	E15-03670-001	2023853		4.57		1752414		6.33		779327		7.64	
19	E15-03420-012	1712285		4.57		1095793		6.33		682721		7.63	
20	E15-03433-001	1131061		4.59		1205499		6.33		812086		7.62	
21	E15-03433-002	1059674		4.70		753201		6.49		453343		7.79	
22	E15-03433-004	1259688		4.63		1137160		6.39		688623		7.72	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5340.D

Date Analyzed: 05/06/2015

Instrument ID: MSDC

Time Analyzed: 11:34

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	336783		2.44		1332555		3.00		792065		3.83	
	UPPER LIMIT	673566		2.94		2665110		3.50		1584130		4.33	
	LOWER LIMIT	168392		1.94		666278		2.50		396033		3.33	
	LAB SAMPLE ID												
01	E15-03433-005	470643		2.44		1747795		2.99		964158		3.81	
02	E15-03433-006	494800		2.45		1964782		2.98		1267985		3.8	
03	E15-03609-002	392759		2.45		1668323		3		950404		3.83	
04	E15-03433-002DL	388130		2.45		1307658		3		784541		3.84	
05													
06													
07													
08													
09													
10													
11													
12													
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14													
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16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5340.D

Date Analyzed: 05/06/2015

Instrument ID: MSDC

Time Analyzed: 11:34

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	1263204	4.62	1104724	6.40	625170	7.73
	UPPER LIMIT	2526408	5.12	2209448	6.90	1250340	8.23
	LOWER LIMIT	631602	4.12	552362	5.90	312585	7.23
	LAB SAMPLE ID						
01	E15-03433-005	1518493	4.58	1310055	6.33	753012	7.63
02	E15-03433-006	2006394	4.56	1320754	6.32	661530	7.63
03	E15-03609-002	1411249	4.62	859133	6.41	496644	7.71
04	E15-03433-002DL	1224446	4.65	772145	6.43	443757	7.73
05							
06							
07							
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17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5567.D

Date Analyzed: 05/18/2015

Instrument ID: MSDC

Time Analyzed: 11:30

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	259682		2.44		1214415		3.00		679264		3.82	
	UPPER LIMIT	519364		2.94		2428830		3.50		1358528		4.32	
	LOWER LIMIT	129841		1.94		607208		2.50		339632		3.32	
	LAB SAMPLE ID												
01	CCV040BNA2	289910		2.45		1210570		3.00		727080		3.83	
02	BLKS150515-02	260137		2.44		1070501		3.00		617880		3.82	
03	LCSS150515-02	306063		2.45		1274983		2.99		761798		3.80	
04	E15-03939-004MS	290886		2.45		1186872		2.99		713294		3.80	
05	E15-03939-004MSD	318980		2.45		1361567		2.99		815461		3.80	
06	E15-03744-001	343900		2.45		1546917		2.99		721774		3.80	
07	E15-03942-001	415827		2.45		1514516		3.00		755266		3.79	
08	E15-03939-001	456892		2.44		1838013		2.99		1013187		3.80	
09	E15-03939-003	316760		2.45		1403633		2.99		794975		3.79	
10	E15-03939-004	337534		2.45		1459027		2.99		833373		3.79	
11	E15-03939-005	359667		2.45		1475587		2.99		900955		3.79	
12	E15-04021-001	382060		2.45		1637589		2.99		899566		3.79	
13	E15-03988-002	358611		2.44		1445846		2.99		828735		3.79	
14	E15-04019-001	313554		2.44		1392322		3.00		774765		3.82	
15	E15-03987-001	348296		2.44		1335846		2.99		695949		3.80	
16	E15-03987-002	353563		2.45		1463843		2.99		803078		3.80	
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5567.D

Date Analyzed: 05/18/2015

Instrument ID: MSDC

Time Analyzed: 11:30

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	1030446	4.60	821025	6.38	654050	7.72
	UPPER LIMIT	2060892	5.10	1642050	6.88	1308100	8.22
	LOWER LIMIT	515223	4.10	410513	5.88	327025	7.22
	LAB SAMPLE ID						
01	CCV040BNA2	1153164	4.62	973589	6.40	683919	7.72
02	BLKS150515-02	976774	4.60	788905	6.37	358047	7.70
03	LCSS150515-02	1222716	4.56	848124	6.32	406114	7.66
04	E15-03939-004MS	1157031	4.56	972310	6.31	503934	7.64
05	E15-03939-004MSD	1291162	4.54	974051	6.30	516869	7.62
06	E15-03744-001	1033631	4.54	803646	6.29	417239	7.62
07	E15-03942-001	1060652	4.53	911280	6.29	555617	7.63
08	E15-03939-001	1463740	4.55	947864	6.31	567901	7.63
09	E15-03939-003	1197370	4.53	814112	6.29	486275	7.61
10	E15-03939-004	1310350	4.53	901926	6.27	494690	7.62
11	E15-03939-005	1270924	4.53	959000	6.29	525930	7.61
12	E15-04021-001	1251637	4.53	971232	6.29	554219	7.60
13	E15-03988-002	1113850	4.54	919193	6.29	524919	7.62
14	E15-04019-001	1148227	4.60	974749	6.39	558687	7.72
15	E15-03987-001	1025337	4.55	927623	6.31	542305	7.63
16	E15-03987-002	1132466	4.55	1017558	6.31	595615	7.63
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5624.D

Date Analyzed: 05/20/2015

Instrument ID: MSDC

Time Analyzed: 14:37

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	250783		2.46		1066696		3.00		624765		3.81	
	UPPER LIMIT	501566		2.96		2133392		3.50		1249530		4.31	
	LOWER LIMIT	125392		1.96		533348		2.50		312383		3.31	
	LAB SAMPLE ID												
01	ICC010BNA1	271412		2.46		1153358		3.00		682599		3.81	
02	ICC020BNA1	260426		2.46		1069071		3.00		644780		3.82	
03	ICC040BNA1	253591		2.46		1064320		3.00		647070		3.82	
04	ICC080BNA1	246374		2.46		1012531		3.00		583700		3.81	
05	ICC160BNA1	248341		2.46		1069066		3.01		621030		3.81	
06	ICV040BNA1	248395		2.46		1026865		3.00		594577		3.81	
07	ICC160BNA2	267102		2.46		1150000		3.00		652088		3.80	
08	ICC080BNA2	260091		2.46		1069590		3.00		636310		3.81	
09	ICC040BNA2	254992		2.46		1079695		3.00		632171		3.81	
10	ICC020BNA2	261857		2.46		1117529		3.00		645945		3.81	
11	ICC010BNA2	276331		2.46		1120815		3.00		657701		3.80	
12	ICC001BNA2	273216		2.46		1085557		3.00		650542		3.80	
13	ICV040BNA2	259208		2.46		1078030		3.00		625671		3.80	
14	BLKS150519-03	294955		2.46		1209246		3.00		732775		3.80	
15	LCSS150519-03	287169		2.46		1229754		3.00		641856		3.80	
16	E15-04114-001MS	271201		2.46		1142225		3.00		580897		3.80	
17	E15-04114-001MSD	280150		2.46		1196851		3.00		592623		3.80	
18	E15-04114-001	286177		2.46		1189044		3.00		674767		3.81	
19	E15-04114-002	285083		2.46		1190555		3.00		683790		3.80	
20	E15-04114-003	271125		2.46		1159738		3.00		652914		3.81	
21	E15-04114-004	261465		2.46		1098788		3.00		624138		3.81	
22	E15-04114-005	271565		2.46		1124046		3.00		641278		3.81	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5624.D

Date Analyzed: 05/20/2015

Instrument ID: MSDC

Time Analyzed: 14:37

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	981443		4.57		846707		6.32		513650		7.65	
	UPPER LIMIT	1962886		5.07		1693414		6.82		1027300		8.15	
	LOWER LIMIT	490722		4.07		423354		5.82		256825		7.15	
	LAB SAMPLE ID												
01	ICC010BNA1	1035332		4.57		894417		6.33		490566		7.64	
02	ICC020BNA1	979213		4.58		829608		6.34		460563		7.65	
03	ICC040BNA1	932895		4.58		794393		6.34		463590		7.66	
04	ICC080BNA1	855284		4.57		667817		6.33		488589		7.66	
05	ICC160BNA1	890655		4.57		673614		6.33		486681		7.67	
06	ICV040BNA1	892123		4.57		741491		6.32		474755		7.65	
07	ICC160BNA2	1011663		4.55		804389		6.31		564722		7.62	
08	ICC080BNA2	964672		4.56		814567		6.31		499319		7.63	
09	ICC040BNA2	1012138		4.57		906895		6.32		563080		7.66	
10	ICC020BNA2	1037824		4.56		913987		6.30		573039		7.64	
11	ICC010BNA2	1076211		4.55		953350		6.30		588945		7.64	
12	ICC001BNA2	1066275		4.54		932932		6.29		585872		7.62	
13	ICV040BNA2	994724		4.54		873279		6.30		572760		7.62	
14	BLKS150519-03	1189388		4.54		1018198		6.29		461282		7.63	
15	LCSS150519-03	1138439		4.54		863678		6.29		397682		7.60	
16	E15-04114-001MS	1071817		4.55		744374		6.30		400272		7.63	
17	E15-04114-001MSD	1078394		4.55		743311		6.30		422086		7.62	
18	E15-04114-001	1045840		4.56		722501		6.30		412691		7.64	
19	E15-04114-002	1062808		4.55		756938		6.30		452223		7.63	
20	E15-04114-003	987540		4.56		734588		6.31		425343		7.65	
21	E15-04114-004	944424		4.57		721878		6.33		412052		7.66	
22	E15-04114-005	928344		4.57		771928		6.32		462262		7.66	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5624.D

Date Analyzed: 05/20/2015

Instrument ID: MSDC

Time Analyzed: 14:37

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	250783		2.46		1066696		3.00		624765		3.81	
	UPPER LIMIT	501566		2.96		2133392		3.50		1249530		4.31	
	LOWER LIMIT	125392		1.96		533348		2.50		312383		3.31	
	LAB SAMPLE ID												
01	E15-04114-006	281163		2.46		1175236		3.00		632426		3.8	
02	E15-03895-003	278193		2.46		1114445		3.01		611244		3.83	
03	E15-03895-005	294300		2.46		1164035		3		622986		3.82	
04	E15-03903-001	237522		2.46		954489		3		589238		3.81	
05	E15-04095-001	402611		2.46		1252111		3.01		649734		3.85	
06	E15-04112-001	281682		2.46		1197047		3		669571		3.8	
07													
08													
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16													
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18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5624.D

Date Analyzed: 05/20/2015

Instrument ID: MSDC

Time Analyzed: 14:37

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	981443		4.57		846707		6.32		513650		7.65	
	UPPER LIMIT	1962886		5.07		1693414		6.82		1027300		8.15	
	LOWER LIMIT	490722		4.07		423354		5.82		256825		7.15	
	LAB SAMPLE ID												
01	E15-04114-006	922139		4.55		790206		6.31		463539		7.63	
02	E15-03895-003	894437		4.60		781836		6.37		459942		7.72	
03	E15-03895-005	875080		4.58		819107		6.34		477830		7.69	
04	E15-03903-001	819063		4.56		798325		6.30		439601		7.63	
05	E15-04095-001	948657		4.64		894807		6.43		487288		7.77	
06	E15-04112-001	954526		4.54		838295		6.29		500674		7.63	
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5654.D

Date Analyzed: 05/22/2015

Instrument ID: MSDC

Time Analyzed: 10:19

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	325130		2.46		1322283		3.01		711359		3.83	
	UPPER LIMIT	650260		2.96		2644566		3.51		1422718		4.33	
	LOWER LIMIT	162565		1.96		661142		2.51		355680		3.33	
	LAB SAMPLE ID												
01	CCV040BNA2	292174		2.46		1200152		3.01		703620		3.83	
02	BLKS150521-03	291525		2.46		1221363		3.01		712887		3.83	
03	LCSS150521-03	269696		2.46		1131813		3.01		643158		3.83	
04	E15-04196-001	333245		2.46		1281724		3.00		667830		3.82	
05	E15-04162-001	348987		2.46		1409719		3.01		757945		3.84	
06	E15-04183-001	364075		2.46		1477899		3.00		792836		3.81	
07	E15-04183-002	336353		2.46		1409147		3.01		743603		3.83	
08	E15-04181-001	327318		2.46		1301990		3.01		691723		3.82	
09	E15-04181-002	308368		2.46		1270613		3.01		668330		3.83	
10	E15-04181-003	371004		2.46		1425749		3.00		747496		3.82	
11	E15-04181-004	346970		2.46		1390266		3.00		743303		3.82	
12	E15-04181-003DL	367383		2.46		1445669		3.00		781185		3.82	
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5654.D

Date Analyzed: 05/22/2015

Instrument ID: MSDC

Time Analyzed: 10:19

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	993982		4.61		721801		6.40		488967		7.72	
	UPPER LIMIT	1987964		5.11		1443602		6.90		977934		8.22	
	LOWER LIMIT	496991		4.11		360901		5.90		244484		7.22	
	LAB SAMPLE ID												
01	CCV040BNA2	1079811		4.61		866376		6.40		604281		7.73	
02	BLKS150521-03	1121787		4.61		819750		6.39		390227		7.70	
03	LCSS150521-03	992378		4.62		737897		6.40		380119		7.74	
04	E15-04196-001	929175		4.59		877385		6.35		531936		7.69	
05	E15-04162-001	1007264		4.62		760318		6.39		462223		7.73	
06	E15-04183-001	1091523		4.57		918981		6.32		550102		7.66	
07	E15-04183-002	1009850		4.62		816601		6.40		454010		7.72	
08	E15-04181-001	926967		4.60		764534		6.37		444517		7.71	
09	E15-04181-002	885327		4.61		722106		6.38		422029		7.72	
10	E15-04181-003	1026960		4.59		885040		6.36		544654		7.71	
11	E15-04181-004	1035528		4.59		851550		6.35		494796		7.68	
12	E15-04181-003DL	1069455		4.58		918020		6.34		540528		7.68	
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMI-VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5662.D
Acq On : 22 May 2015 14:02
Operator : EDM
Sample : B-495/4.,E15-04181-001,S,15.41g,11.2,0.5
Misc : 150521-03,05/21/15,05/20/15,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 22 14:31:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration

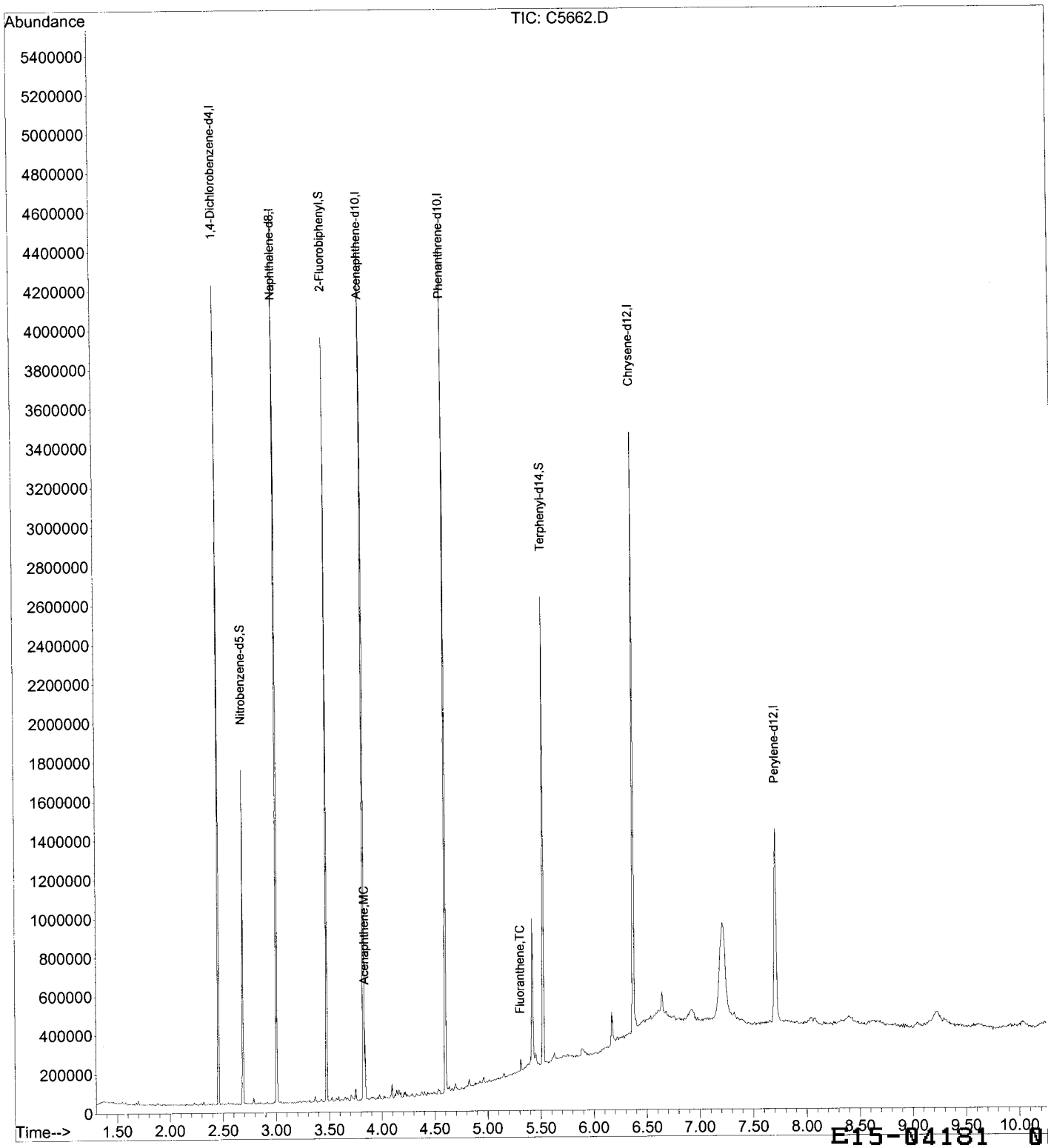
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.46	152	327318	40.00	UG	0.00
23) Naphthalene-d8	3.01	136	1301990	40.00	UG	0.00
43) Acenaphthene-d10	3.82	164	691723	40.00	UG	0.01
66) Phenanthrene-d10	4.60	188	926967	40.00	UG	0.03
82) Chrysene-d12	6.37	240	764534	40.00	UG	0.04
92) Perylene-d12	7.71	264	444517	40.00	UG	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.69	82	274424	22.70	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	45.40%		
47) 2-Fluorobiphenyl	3.48	172	602970	28.70	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery =	57.40%		
70) 2,4,6-Tribromophenol	4.22	330	240	0.09	UG	0.02
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.09%#		
84) Terphenyl-d14	5.52	244	588904m	30.36	UG	0.06
Spiked Amount 50.000	Range 19 - 118		Recovery =	60.72%		
Target Compounds						Qvalue
55) Acenaphthene	3.84	153	52844	2.66	UG	94
79) Fluoranthene	5.31	202	17896	0.70	UG	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5662.D
Acq On : 22 May 2015 14:02
Operator : EDM
Sample : B-495/4.,E15-04181-001,S,15.41g,11.2,0.5
Misc : 150521-03,05/21/15,05/20/15,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 22 14:31:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5663.D
Acq On : 22 May 2015 14:18
Operator : EDM
Sample : B-494/3.,E15-04181-002,S,15.58g,15.9,0.5
Misc : 150521-03,05/21/15,05/20/15,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 22 14:32:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.46	152	308368	40.00	UG	0.00
23) Naphthalene-d8	3.01	136	1270613	40.00	UG	0.00
43) Acenaphthene-d10	3.83	164	668330	40.00	UG	0.02
66) Phenanthrene-d10	4.61	188	885327	40.00	UG	0.04
82) Chrysene-d12	6.38	240	722106	40.00	UG	0.05
92) Perylene-d12	7.72	264	422029	40.00	UG	0.05

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.69	82	269392	22.83	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery = 45.66%			
47) 2-Fluorobiphenyl	3.48	172	595931	29.36	UG	0.01
Spiked Amount 50.000	Range 34 - 96		Recovery = 58.72%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery = 0.00%#			
84) Terphenyl-d14	5.54	244	595343	32.49	UG	0.07
Spiked Amount 50.000	Range 19 - 118		Recovery = 64.98%			

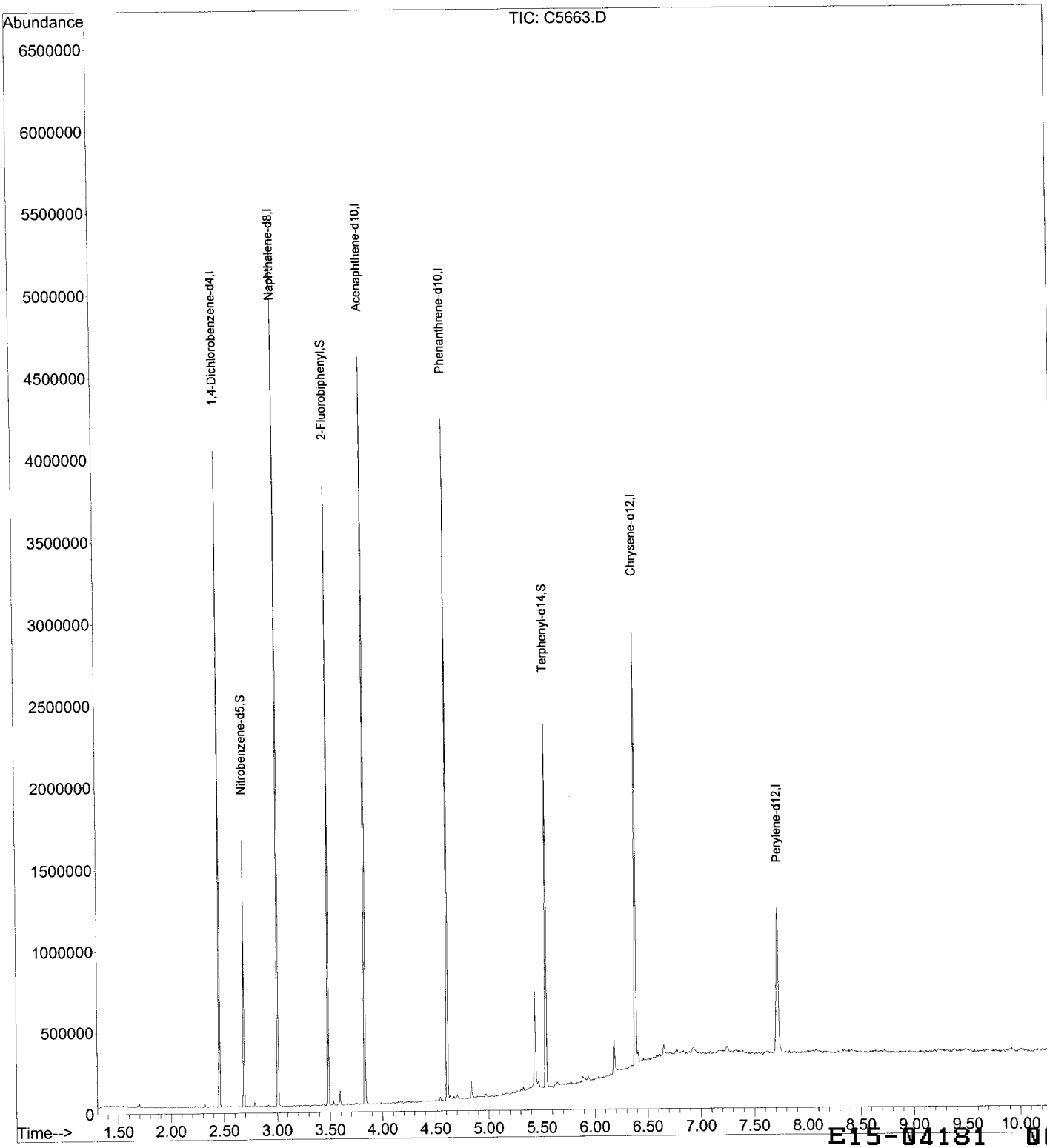
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5663.D
Acq On : 22 May 2015 14:18
Operator : EDM
Sample : B-494/3.,E15-04181-002,S,15.58g,15.9,0.5
Misc : 150521-03,05/21/15,05/20/15,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 22 14:32:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5664.D
Acq On : 22 May 2015 14:34
Operator : EDM
Sample : B-496/4.,E15-04181-003,S,15.52g,51.9,1
Misc : 150521-03,05/21/15,05/20/15,5
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 22 14:54:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration

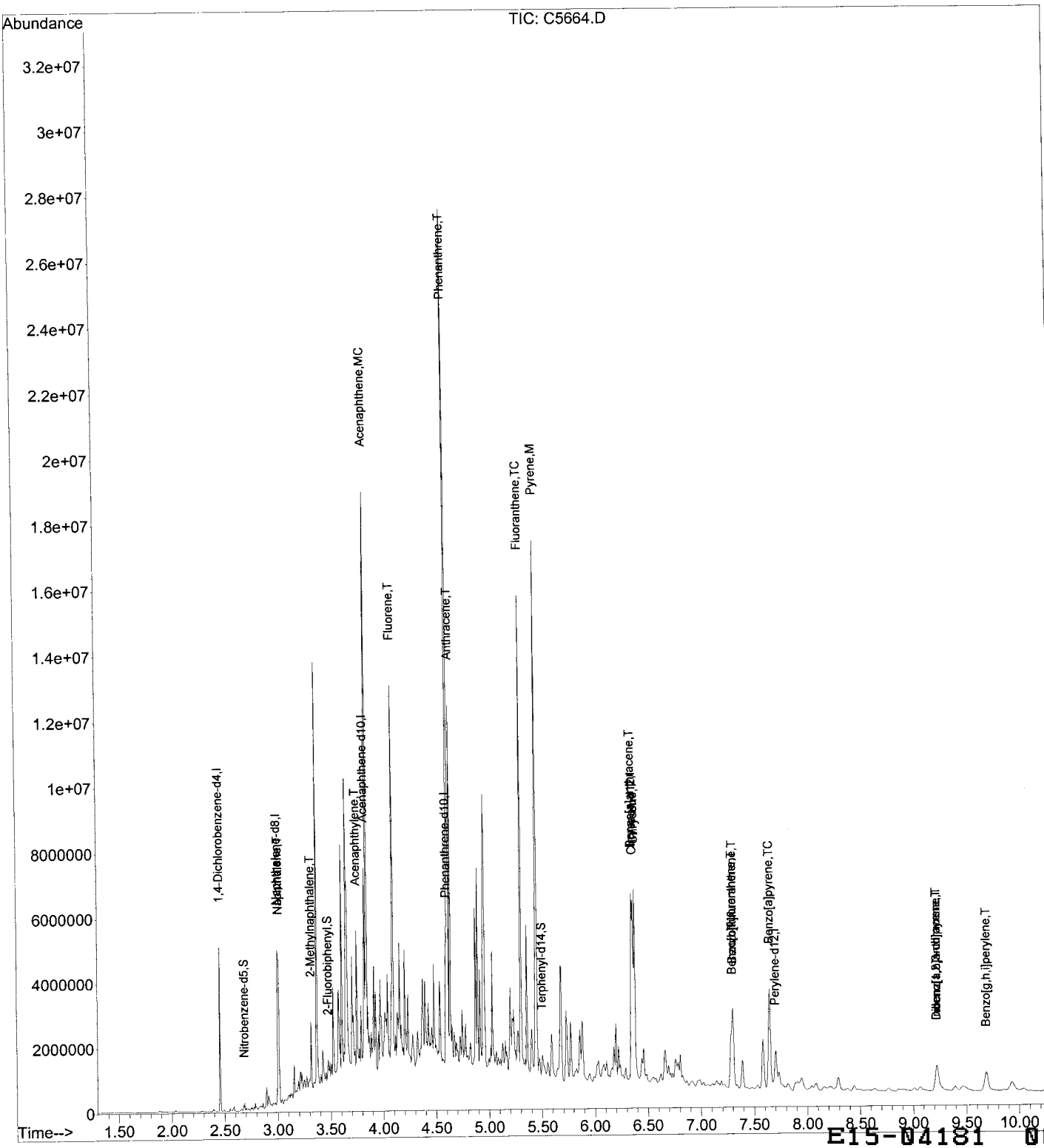
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.46	152	371004	40.00	UG	0.00
23) Naphthalene-d8	3.00	136	1425749	40.00	UG	0.00
43) Acenaphthene-d10	3.82	164	747496	40.00	UG	0.01
66) Phenanthrene-d10	4.59	188	1026960	40.00	UG	0.02
82) Chrysene-d12	6.36	240	885040	40.00	UG	0.03
92) Perylene-d12	7.71	264	544654	40.00	UG	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.69	82	36686	2.77	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	5.54%#		
47) 2-Fluorobiphenyl	3.48	172	79234	3.49	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery =	6.98%#		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.50	244	73333	3.27	UG	0.04
Spiked Amount 50.000	Range 19 - 118		Recovery =	6.54%#		
Target Compounds						Qvalue
34) Naphthalene	3.01	128	935225	24.03	UG	# 54
41) 2-Methylnaphthalene	3.32	142	253689	10.21	UG	99
53) Acenaphthylene	3.75	152	453156	13.75	UG	# 87
55) Acenaphthene	3.84	153	3079852	143.52	UG	93
61) Fluorene	4.09	166	1983501	84.12	UG	94
75) Phenanthrene	4.61	178	6877542m	230.24	UG	
76) Anthracene	4.64	178	2679572	91.24	UG	# 94
79) Fluoranthene	5.30	202	3666197	129.18	UG	90
83) Pyrene	5.45	202	4893397	161.08	UG	85
88) Benzo[a]anthracene	6.35	228	1706707	66.00	UG	# 81
89) Chrysene	6.38	228	1670779	68.86	UG	# 86
94) Benzo[b]fluoranthene	7.29	252	780884m	37.27	UG	
95) Benzo[k]fluoranthene	7.30	252	961549m	43.42	UG	
96) Benzo[a]pyrene	7.65	252	1477806	73.12	UG	# 93
97) Indeno[1,2,3-cd]pyrene	9.22	276	581200	25.28	UG	77
98) Dibenz[a,h]anthracene	9.22	278	153261m	8.33	UG	
99) Benzo[g,h,i]perylene	9.69	276	576210	29.49	UG	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5664.D
Acq On : 22 May 2015 14:34
Operator : EDM
Sample : B-496/4.,E15-04181-003,S,15.52g,51.9,1
Misc : 150521-03,05/21/15,05/20/15,5
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 22 14:54:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5666.D
Acq On : 22 May 2015 15:05
Operator : EDM
Sample : B-496/4.,E15-04181-003DL,S,15.52g,51.9,1
Misc : 150521-03,05/21/15,05/20/15,10
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 22 15:59:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration

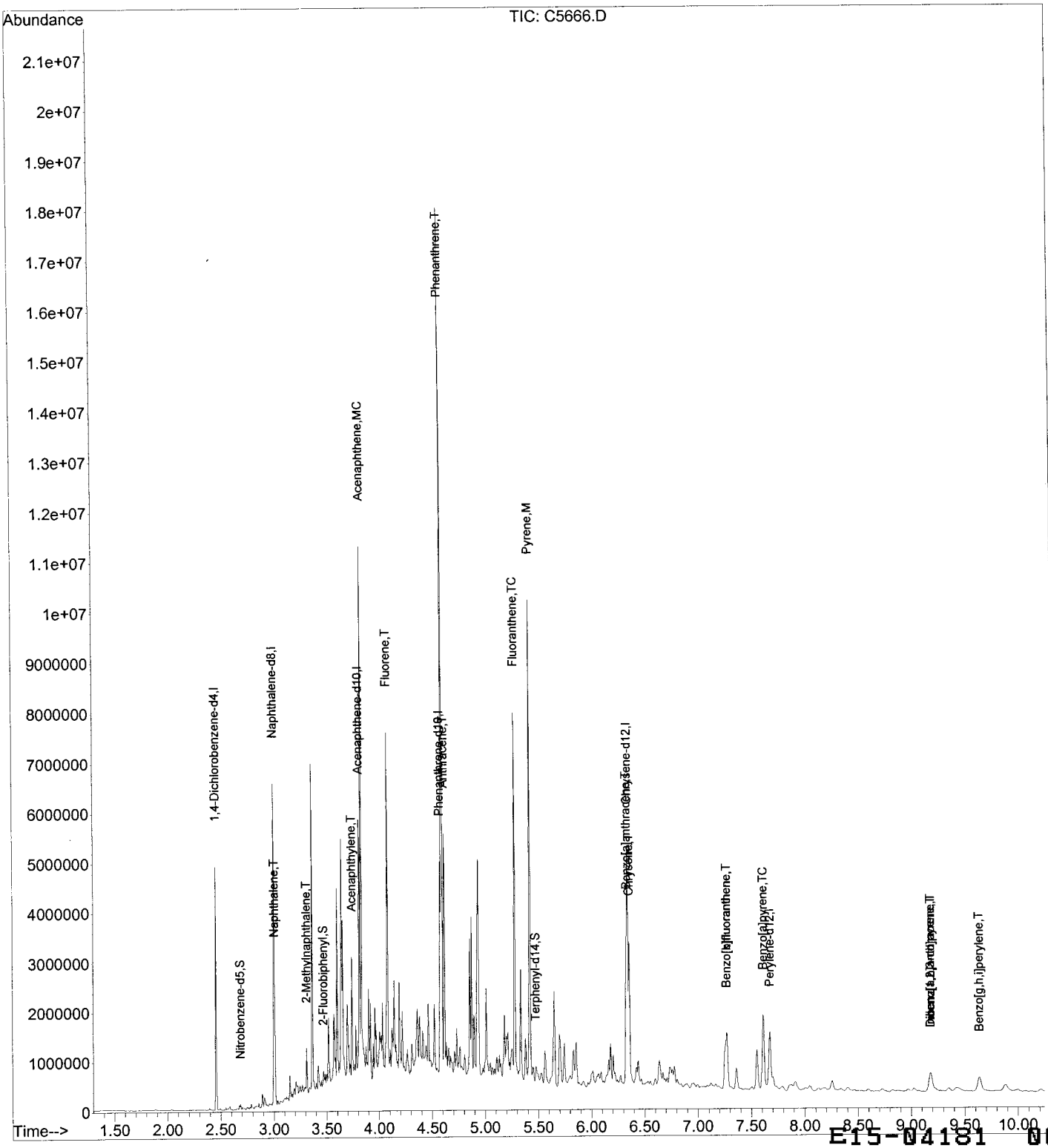
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.46	152	367383	40.00	UG	0.00
23) Naphthalene-d8	3.00	136	1445669	40.00	UG	0.00
43) Acenaphthene-d10	3.82	164	781185	40.00	UG	0.00
66) Phenanthrene-d10	4.58	188	1069455	40.00	UG	0.00
82) Chrysene-d12	6.34	240	918020	40.00	UG	0.01
92) Perylene-d12	7.68	264	540528	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery =	0.00%#		
24) Nitrobenzene-d5	2.69	82	20203m	1.51	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery =	3.02%#		
47) 2-Fluorobiphenyl	3.47	172	44274m	1.87	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery =	3.74%#		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery =	0.00%#		
84) Terphenyl-d14	5.47	244	36043	1.55	UG	0.01
Spiked Amount 50.000	Range 19 - 118		Recovery =	3.10%#		
Target Compounds						Qvalue
34) Naphthalene	3.01	128	459554	11.65	UG	# 54
41) 2-Methylnaphthalene	3.31	142	122604	4.87	UG	98
53) Acenaphthylene	3.74	152	221980	6.44	UG	# 88
55) Acenaphthene	3.83	153	1577579	70.34	UG	93
61) Fluorene	4.08	166	1018919	41.35	UG	95
75) Phenanthrene	4.59	178	4149095	133.38	UG	99
76) Anthracene	4.61	178	1275173m	41.69	UG	
79) Fluoranthene	5.28	202	1819006	61.55	UG	89
83) Pyrene	5.42	202	2492397	79.10	UG	86
88) Benzo[a]anthracene	6.33	228	817408	30.48	UG	# 69
89) Chrysene	6.36	228	827504	32.88	UG	# 39
94) Benzo[b]fluoranthene	7.26	252	422416m	20.32	UG	
95) Benzo[k]fluoranthene	7.27	252	421878m	19.19	UG	
96) Benzo[a]pyrene	7.61	252	705029	35.15	UG	# 94
97) Indeno[1,2,3-cd]pyrene	9.18	276	286804	12.57	UG	73
98) Dibenz[a,h]anthracene	9.18	278	80495	4.41	UG	83
99) Benzo[g,h,i]perylene	9.64	276	287085	14.81	UG	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5666.D
Acq On : 22 May 2015 15:05
Operator : EDM
Sample : B-496/4.,E15-04181-003DL,S,15.52g,51.9,1
Misc : 150521-03,05/21/15,05/20/15,10
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 22 15:59:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5665.D
Acq On : 22 May 2015 14:49
Operator : EDM
Sample : B-493/3.,E15-04181-004,S,15.63g,18.7,0.5
Misc : 150521-03,05/21/15,05/20/15,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 22 15:01:06 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.46	152	346970	40.00	UG	0.00
23) Naphthalene-d8	3.00	136	1390266	40.00	UG	0.00
43) Acenaphthene-d10	3.82	164	743303	40.00	UG	0.01
66) Phenanthrene-d10	4.59	188	1035528	40.00	UG	0.02
82) Chrysene-d12	6.35	240	851550	40.00	UG	0.02
92) Perylene-d12	7.68	264	494796	40.00	UG	0.01

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 24 - 101		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 23 - 108		Recovery = 0.00%#			
24) Nitrobenzene-d5	2.69	82	370485	28.70	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery = 57.40%			
47) 2-Fluorobiphenyl	3.48	172	804265	35.63	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery = 71.26%			
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 32 - 112		Recovery = 0.00%#			
84) Terphenyl-d14	5.49	244	793732	36.74	UG	0.03
Spiked Amount 50.000	Range 19 - 118		Recovery = 73.48%			

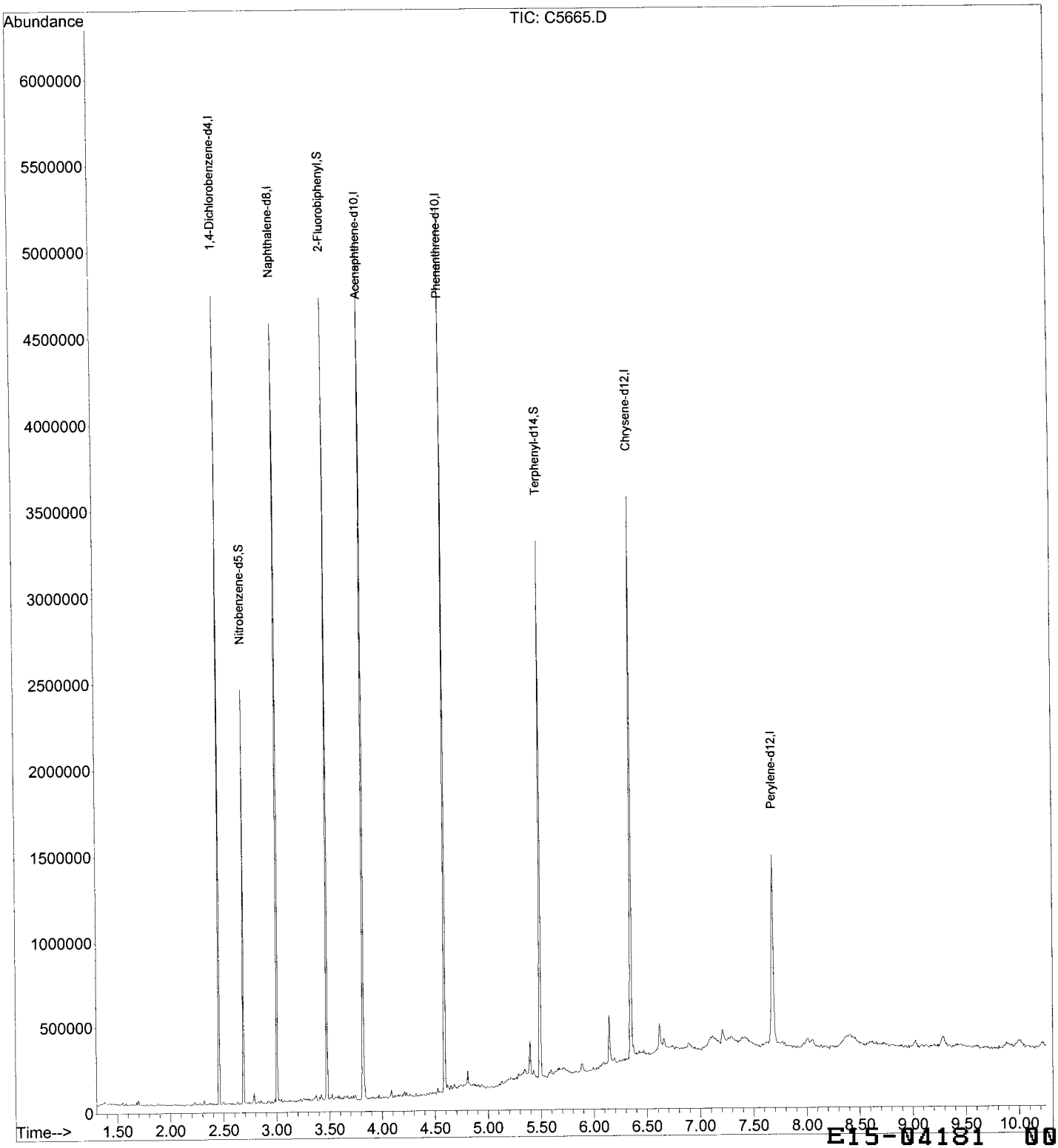
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5665.D
Acq On : 22 May 2015 14:49
Operator : EDM
Sample : B-493/3.,E15-04181-004,S,15.63g,18.7,0.5
Misc : 150521-03,05/21/15,05/20/15,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 22 15:01:06 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration



E15-04181 0066

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS150515-02
Client ID: .
Date Received: NA
Date Extracted: 05/15/2015
Date Analyzed: 05/18/2015
Data file: C5571.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		0.033	0.028
Pyridine	ND		0.033	0.031
Benzaldehyde	ND		0.033	0.020
Phenol	ND		0.033	0.021
Aniline	ND		0.033	0.020
Bis(2-chloroethyl) ether	ND		0.033	0.020
2-Chlorophenol	ND		0.033	0.020
1,3-Dichlorobenzene	ND		0.033	0.020
1,4-Dichlorobenzene	ND		0.033	0.027
Benzyl alcohol	ND		0.033	0.020
1,2-Dichlorobenzene	ND		0.033	0.029
2-Methylphenol	ND		0.033	0.023
Bis(2-chloroisopropyl) ether	ND		0.033	0.020
4-Methylphenol **	ND		0.033	0.027
N-Nitrosodi-n-propylamine	ND		0.033	0.027
Acetophenone	ND		0.033	0.027
3-Methylphenol	ND		0.033	0.029
Hexachloroethane	ND		0.033	0.020
Nitrobenzene	ND		0.033	0.028
Isophorone	ND		0.033	0.030
2-Nitrophenol	ND		0.033	0.020
2,4-Dimethylphenol	ND		0.033	0.023
Bis(2-chloroethoxy) methane	ND		0.033	0.020
Benzoic acid	ND		0.033	0.020
2,4-Dimethylaniline	ND		0.033	0.020
2,4-Dichlorophenol	ND		0.033	0.020
1,2,4-Trichlorobenzene	ND		0.033	0.021
Naphthalene	ND		0.033	0.020
4-Chloroaniline	ND		0.033	0.020
4-Aminotoluene	ND		0.033	0.032
Hexachlorobutadiene	ND		0.033	0.020
Caprolactam	ND		0.033	0.021
2-Aminotoluene	ND		0.033	0.029
4-Chloro-3-methylphenol	ND		0.033	0.020
2-Methylnaphthalene	ND		0.033	0.020
Hexachlorocyclopentadiene	ND		0.033	0.020
2,4,6-Trichlorophenol	ND		0.033	0.020
2,4,5-Trichlorophenol	ND		0.033	0.020
1,1'-Biphenyl	ND		0.033	0.020
2-Chloronaphthalene	ND		0.033	0.020
2-Nitroaniline	ND		0.033	0.020
Dimethyl phthalate	ND		0.033	0.025

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS150515-02
Client ID: .
Date Received: NA
Date Extracted: 05/15/2015
Date Analyzed: 05/18/2015
Data file: C5571.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		0.033	0.020
Acenaphthylene	ND		0.033	0.023
3-Nitroaniline	ND		0.033	0.025
Acenaphthene	ND		0.033	0.025
2,4-Dinitrophenol	ND		0.033	0.024
4-Nitrophenol	ND		0.033	0.027
2,4-Dinitrotoluene	ND		0.033	0.020
Dibenzofuran	ND		0.033	0.020
Diethyl phthalate	ND		0.033	0.031
Fluorene	ND		0.033	0.020
4-Chlorophenyl phenyl ether	ND		0.033	0.020
4-Nitroaniline	ND		0.033	0.020
1,2,4,5-Tetrachlorobenzene	ND		0.033	0.020
2,3,4,6-Tetrachlorophenol	ND		0.033	0.020
4,6-Dinitro-2-methylphenol	ND		0.033	0.020
N-Nitrosodiphenylamine	ND		0.033	0.020
1,2-Diphenylhydrazine	ND		0.033	0.020
4-Bromophenyl phenyl ether	ND		0.033	0.020
Hexachlorobenzene	ND		0.033	0.020
Atrazine	ND		0.033	0.020
Pentachlorophenol	ND		0.033	0.020
Phenanthrene	ND		0.033	0.020
Anthracene	ND		0.033	0.020
Carbazole	ND		0.033	0.020
Di-n-butyl phthalate	ND		0.033	0.020
Fluoranthene	ND		0.033	0.020
Benzidine	ND		0.033	0.020
Pyrene	ND		0.033	0.020
3,3'-Dimethylbenzidine	ND		0.033	0.020
Butyl benzyl phthalate	ND		0.033	0.020
3,3'-Dichlorobenzidine	ND		0.033	0.023
Benzo[a]anthracene	ND		0.033	0.020
Chrysene	ND		0.033	0.020
Bis(2-ethylhexyl) phthalate	ND		0.033	0.020
Di-n-octyl phthalate	ND		0.033	0.024
Benzo[b]fluoranthene	ND		0.033	0.020
Benzo[k]fluoranthene	ND		0.033	0.020
Benzo[a]pyrene	ND		0.033	0.020
Indeno[1,2,3-cd]pyrene	ND		0.033	0.029
Dibenz[a,h]anthracene	ND		0.033	0.020
Benzo[g,h,i]perylene	ND		0.033	0.020

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total for 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKS150515-02
Client ID: .
Date Received: NA
Date Extracted: 05/15/2015
Date Analyzed: 05/18/2015
Data file: C5571.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS150521-03
Client ID: .
Date Received: NA
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5656.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		0.033	0.028
Pyridine	ND		0.033	0.031
Benzaldehyde	ND		0.033	0.020
Phenol	ND		0.033	0.021
Aniline	ND		0.033	0.020
Bis(2-chloroethyl) ether	ND		0.033	0.020
2-Chlorophenol	ND		0.033	0.020
1,3-Dichlorobenzene	ND		0.033	0.020
1,4-Dichlorobenzene	ND		0.033	0.027
Benzyl alcohol	ND		0.033	0.020
1,2-Dichlorobenzene	ND		0.033	0.029
2-Methylphenol	ND		0.033	0.023
Bis(2-chloroisopropyl) ether	ND		0.033	0.020
4-Methylphenol **	ND		0.033	0.027
N-Nitrosodi-n-propylamine	ND		0.033	0.027
Acetophenone	ND		0.033	0.027
3-Methylphenol	ND		0.033	0.029
Hexachloroethane	ND		0.033	0.020
Nitrobenzene	ND		0.033	0.028
Isophorone	ND		0.033	0.030
2-Nitrophenol	ND		0.033	0.020
2,4-Dimethylphenol	ND		0.033	0.023
Bis(2-chloroethoxy) methane	ND		0.033	0.020
Benzoic acid	ND		0.033	0.020
2,4-Dimethylaniline	ND		0.033	0.020
2,4-Dichlorophenol	ND		0.033	0.020
1,2,4-Trichlorobenzene	ND		0.033	0.021
Naphthalene	ND		0.033	0.020
4-Chloroaniline	ND		0.033	0.020
4-Aminotoluene	ND		0.033	0.032
Hexachlorobutadiene	ND		0.033	0.020
Caprolactam	ND		0.033	0.021
2-Aminotoluene	ND		0.033	0.029
4-Chloro-3-methylphenol	ND		0.033	0.020
2-Methylnaphthalene	ND		0.033	0.020
Hexachlorocyclopentadiene	ND		0.033	0.020
2,4,6-Trichlorophenol	ND		0.033	0.020
2,4,5-Trichlorophenol	ND		0.033	0.020
1,1'-Biphenyl	ND		0.033	0.020
2-Chloronaphthalene	ND		0.033	0.020
2-Nitroaniline	ND		0.033	0.020
Dimethyl phthalate	ND		0.033	0.025

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKS150521-03
Client ID: .
Date Received: NA
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5656.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		0.033	0.020
Acenaphthylene	ND		0.033	0.023
3-Nitroaniline	ND		0.033	0.025
Acenaphthene	ND		0.033	0.025
2,4-Dinitrophenol	ND		0.033	0.024
4-Nitrophenol	ND		0.033	0.027
2,4-Dinitrotoluene	ND		0.033	0.020
Dibenzofuran	ND		0.033	0.020
Diethyl phthalate	ND		0.033	0.031
Fluorene	ND		0.033	0.020
4-Chlorophenyl phenyl ether	ND		0.033	0.020
4-Nitroaniline	ND		0.033	0.020
1,2,4,5-Tetrachlorobenzene	ND		0.033	0.020
2,3,4,6-Tetrachlorophenol	ND		0.033	0.020
4,6-Dinitro-2-methylphenol	ND		0.333	0.020
N-Nitrosodiphenylamine	ND		0.033	0.020
1,2-Diphenylhydrazine	ND		0.033	0.020
4-Bromophenyl phenyl ether	ND		0.033	0.020
Hexachlorobenzene	ND		0.033	0.020
Atrazine	ND		0.033	0.020
Pentachlorophenol	ND		0.033	0.020
Phenanthrene	ND		0.033	0.020
Anthracene	ND		0.033	0.020
Carbazole	ND		0.033	0.020
Di-n-butyl phthalate	ND		0.033	0.020
Fluoranthene	ND		0.033	0.020
Benzidine	ND		0.033	0.020
Pyrene	ND		0.033	0.020
3,3'-Dimethylbenzidine	ND		0.033	0.020
Butyl benzyl phthalate	ND		0.033	0.020
3,3'-Dichlorobenzidine	ND		0.033	0.023
Benzo[a]anthracene	ND		0.033	0.020
Chrysene	ND		0.033	0.020
Bis(2-ethylhexyl) phthalate	ND		0.033	0.020
Di-n-octyl phthalate	ND		0.033	0.024
Benzo[b]fluoranthene	ND		0.033	0.020
Benzo[k]fluoranthene	ND		0.033	0.020
Benzo[a]pyrene	ND		0.033	0.020
Indeno[1,2,3-cd]pyrene	ND		0.033	0.029
Dibenz[a,h]anthracene	ND		0.033	0.020
Benzo[g,h,i]perylene	ND		0.033	0.020

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

** - represents the total of 3-6-Methylchrysene

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKS150521-03
Client ID: .
Date Received: NA
Date Extracted: 05/21/2015
Date Analyzed: 05/22/2015
Data file: C5656.D

GC/MS Column: DB-5
Sample wt/vol: 15.00g
Matrix-Units: Soil-mg/Kg
Dilution Factor: 1
% Moisture: NA

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-18-15\
Data File : C5571.D
Acq On : 18 May 2015 15:09
Operator : EDM
Sample : .,BLKS150515-02,S,15.00g,0,0.5
Misc : 150515-02,05/15/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 16:02:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed May 06 15:29:27 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.44	152	260137	40.00	UG	0.00
23) Naphthalene-d8	3.00	136	1070501	40.00	UG	0.00
43) Acenaphthene-d10	3.82	164	617880	40.00	UG	-0.01
66) Phenanthrene-d10	4.60	188	976774	40.00	UG	-0.02
82) Chrysene-d12	6.37	240	788905m	40.00	UG	-0.03
92) Perylene-d12	7.70	264	358047	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.93	112	506417	56.72	UG	0.00
Spiked Amount 100.000	Range 24 - 101		Recovery = 56.72%			
6) Phenol-d5	2.27	99	682370	60.13	UG	0.00
Spiked Amount 100.000	Range 23 - 108		Recovery = 60.13%			
24) Nitrobenzene-d5	2.69	82	264448	23.56	UG	0.01
Spiked Amount 50.000	Range 26 - 98		Recovery = 47.12%			
47) 2-Fluorobiphenyl	3.47	172	583772	26.22	UG	0.00
Spiked Amount 50.000	Range 34 - 96		Recovery = 52.44%			
70) 2,4,6-Tribromophenol	4.22	330	188426	59.39	UG	-0.02
Spiked Amount 100.000	Range 32 - 112		Recovery = 59.39%			
84) Terphenyl-d14	5.51	244	799596m	34.42	UG	-0.05
Spiked Amount 50.000	Range 19 - 118		Recovery = 68.84%			

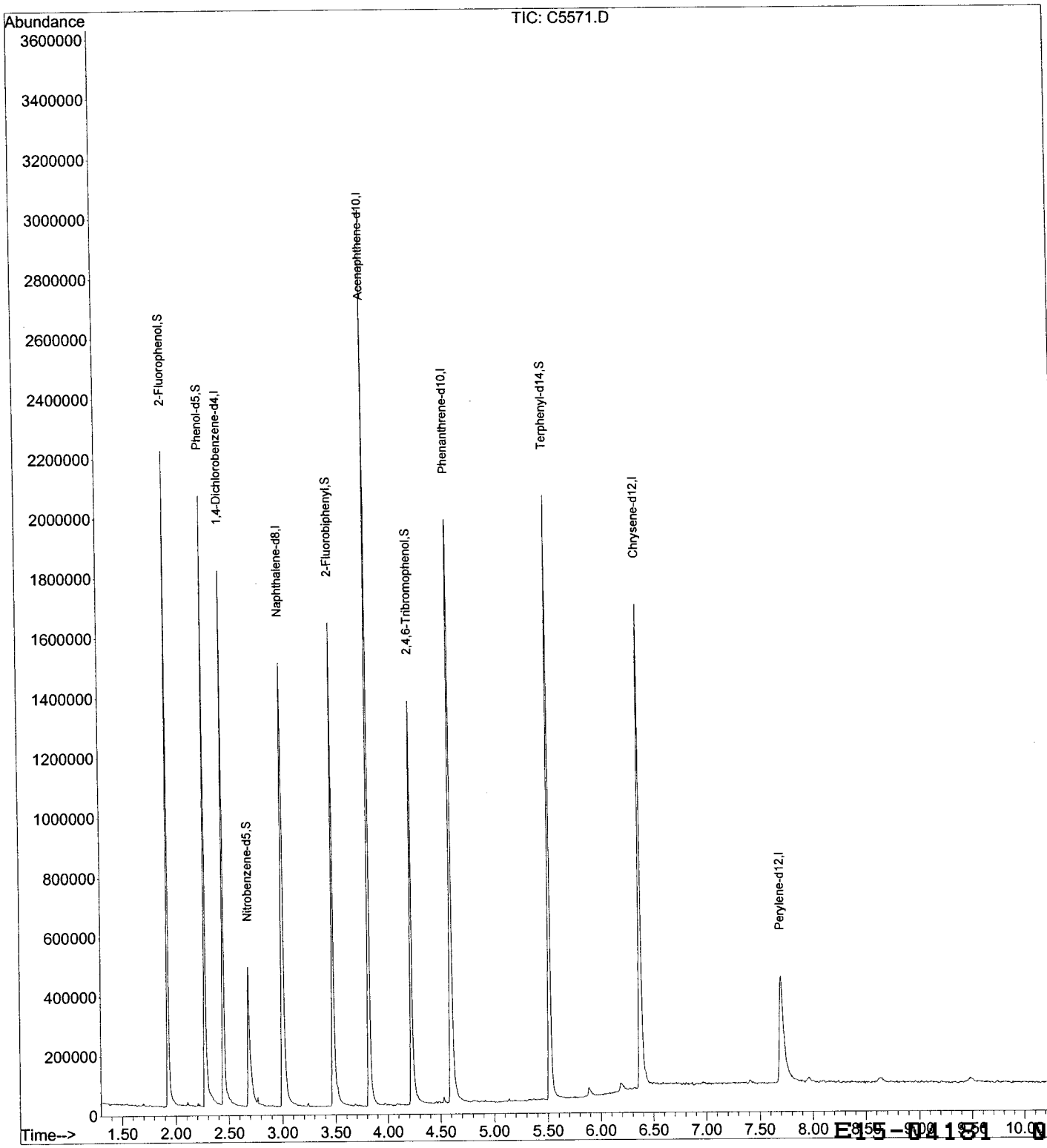
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-18-15\
Data File : C5571.D
Acq On : 18 May 2015 15:09
Operator : EDM
Sample : .,BLKS150515-02,S,15.00g,0,0.5
Misc : 150515-02,05/15/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 16:02:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed May 06 15:29:27 2015
Response via : Initial Calibration



E15-04181 0074

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\05-18-15\
Data File : C5571.D
Acq On : 18 May 2015 15:09
Operator : EDM
Sample : .,BLKS150515-02,S,15.00g,0,0.5
Misc : 150515-02,05/15/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\CS1115.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

CS1115.M Mon May 18 15:26:32 2015 RPT1

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5656.D
Acq On : 22 May 2015 12:28
Operator : EDM
Sample : .,BLKS150521-03,S,15.00g,0,0.5
Misc : 150521-03,05/21/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 12:39:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.46	152	291525	40.00	UG	0.00
23) Naphthalene-d8	3.01	136	1221363	40.00	UG	0.00
43) Acenaphthene-d10	3.83	164	712887	40.00	UG	0.02
66) Phenanthrene-d10	4.61	188	1121787	40.00	UG	0.04
82) Chrysene-d12	6.39	240	819750	40.00	UG	0.06
92) Perylene-d12	7.70	264	390227	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	1.93	112	609954	56.99	UG	0.00
Spiked Amount 100.000	Range 24 - 101		Recovery = 56.99%			
6) Phenol-d5	2.27	99	792932	61.17	UG	0.00
Spiked Amount 100.000	Range 23 - 108		Recovery = 61.17%			
24) Nitrobenzene-d5	2.69	82	317102	27.96	UG	0.00
Spiked Amount 50.000	Range 26 - 98		Recovery = 55.92%			
47) 2-Fluorobiphenyl	3.48	172	687367	31.75	UG	0.01
Spiked Amount 50.000	Range 34 - 96		Recovery = 63.50%			
70) 2,4,6-Tribromophenol	4.24	330	208876	65.66	UG	0.03
Spiked Amount 100.000	Range 32 - 112		Recovery = 65.66%			
84) Terphenyl-d14	5.54	244	856025	41.16	UG	0.07
Spiked Amount 50.000	Range 19 - 118		Recovery = 82.32%			

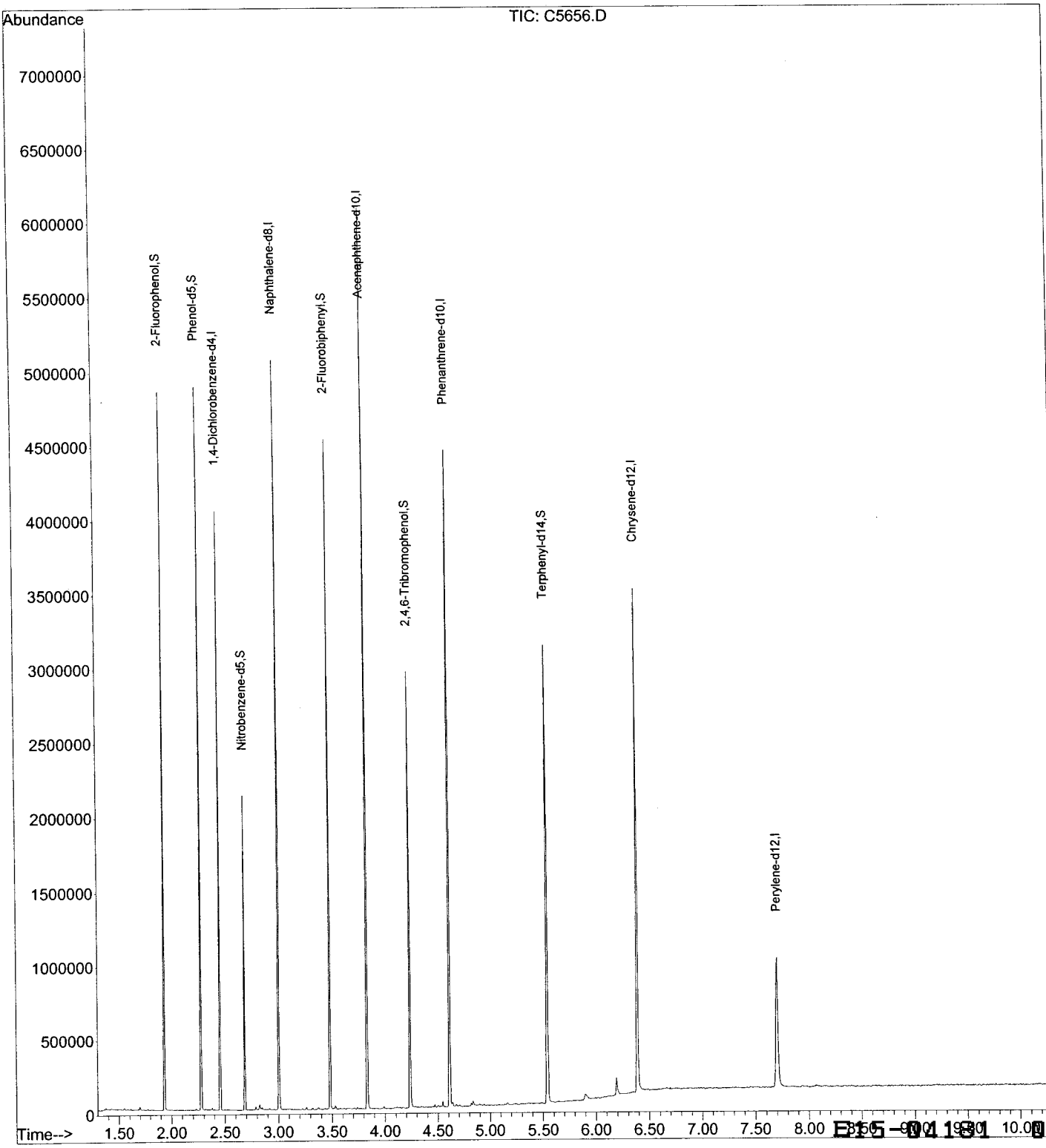
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5656.D
Acq On : 22 May 2015 12:28
Operator : EDM
Sample : .,BLKS150521-03,S,15.00g,0,0.5
Misc : 150521-03,05/21/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 12:39:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu May 21 08:45:42 2015
Response via : Initial Calibration



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\05-22-15\
Data File : C5656.D
Acq On : 22 May 2015 12:28
Operator : EDM
Sample : .,BLKS150521-03,S,15.00g,0,0.5
Misc : 150521-03,05/21/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\CS1215.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

CS1215.M Fri May 22 12:39:50 2015 RPT1

SAMPLE TRACKING

IAL
Integrated Analytical Laboratories LLC
Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

CUSTOMER INFO		REPORTING INFO	
Company:	GEI Consultants	REPORT TO:	
Address:	18000 Horizon Way Suite 200 Mt. Laurel, NJ 08054	Address:	Same
Telephone #:	856-608-0860	Attn:	
Fax #:	856-608-0864	FAX #	
Project Manager:	Chris Dailey	INVOICE TO:	
EMAIL Address:	cdailey@geiconsultants.com	Address:	Same
Sampler:	Luke Cuccurullo		
Project Name:	Sea Isle City	Attn:	
Project Location (State):	New Jersey	PO #	
Bottle Order #:			
Quote # :			

Turnaround Time (starts the following day if samples rec'd at lab > 5PM)

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

PHC - MUST CHOOSE

NJ EPH DRO (5 day TAT) NJ EPH Fractionated (5 day TAT)
NJ EPH - C40 (5 day TAT)
DRO-8015 (3-5 day TAT) QAM025 (5 day TAT)

Rush TAT Charge **
24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day 10%

Report Format
Results Only
Reduced
Regulatory - 15% Surcharge applies
Other (describe)

EDDs
SRP format
lab approved custom EDD
NO EDD/CD REQ'D

Verbal/Fax: Std 2 wk unless otherwise specified
24 hr** 48 hr** 72 hr** 96 hr** 1 wk**
Other** (specify):
Hard Copy: Std 3 week * Other - call for price

Cooler Temp _____ °C

SAMPLE INFORMATION

Sample Matrix
DW - Drinking Water AQ - Aqueous WW - Waste Water
OI - Oil LIQ - Liquid (Specify) OT - Other (Specify)
S - Soil SL - Sludge SOL - Solid W - Wipe

ANALYTICAL PARAMETERS

BOTTLES & PRESERVATIVES

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# container	IAL #	PAH	HCL	HNO3	MeOH	Other	None	Encore
B-495	4.5-5	5/19/15	11:15	S	1	1	X					X	
B-494	3.5-4	5/19/15	11:30	S	1	2	X					X	
B-496	4.5-5	5/19/15	11:45	S	1	3	X					X	
B-493	3.5-4	5/19/15	12:00	S	1	4	X					X	

Known Hazard: Yes or No Describe:

Conc. Expected: Low Med High

MDL Req: GWQS (11/05) - SRS - SRS/IGW - SRS Residential - OTHER (SEE COMMENTS)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Carrier (check one): _____ IAL Courier _____ Client Courier _____ FedEx/UPS

	Signature/Company	Date	Time	Signature/Company	Date	Time
Relinquished by:	Luke Cuccurullo			Received by:	5/20/15	10:00
Relinquished by:		5/20/15	5:30	Received by:	5/20/15	7:30
Relinquished by:				Received by:		
Relinquished by:				Received by:		
Relinquished by:				Received by:		

Comments: Call with Questions

Lab Case # 1181

PAGE: 1 of 1

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

I:\2008\FORMS\EV COC

10/2010 rev

IAL
Integrated Analytical Laboratories, LLC

PROJECT INFORMATION

E15-04181: SEA ISLE CITY

To: Chris Dailey
GEI Consultants, Inc.
Fax: 1(856) 608-6864
EMail: cdailey@geiconsultants.com;datagr

Report To

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054
Attn: Chris Dailey

Bill To

GEI Consultants, Inc.
400 Unicorn Park Drive

Woburn, MA 01801
Attn: Accounts Payable

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Reduced		May 20, 2015 @ 17:30	NA	Jun 05, 2015	Jun 12, 2015 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. SRP TXT, Equis GEI

**** QC Requirement (must meet):** NJ IGW

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
04181-001	B-495	4.5/5	05/19/15@11:15	Soil	mg/Kg (ppm)	
04181-002	B-494	3.5/4	05/19/15@11:30	Soil	mg/Kg (ppm)	
04181-003	B-496	4.5/5	05/19/15@11:45	Soil	mg/Kg (ppm)	
04181-004	B-493	3.5/4	05/19/15@12:00	Soil	mg/Kg (ppm)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	TCL/PAH	Analyze	8270D	STD/2 WKS	6/2/2015
002	TCL/PAH	Analyze	8270D	STD/2 WKS	6/2/2015
003	TCL/PAH	Analyze	8270D	STD/2 WKS	6/2/2015
004	TCL/PAH	Analyze	8270D	STD/2 WKS	6/2/2015

Project Notes:

NOTE 1 taken by Ellen on 05/20/2015 11:25
ANY E QUALIFIED RESULTS NEED A COMBINED FORM 1.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 15** **04181** CLIENT: GEI Sea Isle City

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

Comments

COC: (COMPLETE) / INCOMPLETE

KEY

✓ = YES/NA

✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✓	no-Extra Bottles	
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✓	pH Check (exclude VOs)[1]	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✓	**Chain of Custody is Clear**	

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL JR DATE 5/20/13

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ☐

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL DATE 5/20/13

E15-04181 0082

REV 03/2013

Laboratory Custody Chronicle

IAL Case No.

E15-04181

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 5/20/2015@17:30

Department: Semivolatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL/PAH	04181-001	Soil	5/21/15	Kou-Liang	5/22/15	Eleanor
"	-002	"	5/21/15	Kou-Liang	5/22/15	Eleanor
"	-003	"	5/21/15	Kou-Liang	5/22/15	Eleanor
"	-004	"	5/21/15	Kou-Liang	5/22/15	Eleanor

E15-04181 0083

May 27, 2015 @ 04:03

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

Appendix D

Groundwater Laboratory Analytical Results

2014 and 2015 Sampling Events

IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054

Project Name: **SEA ISLE CITY**
IAL Case Number: **E15-04681**

These data have been reviewed and accepted by:

Michael H. Leffler, Ph.D.
Laboratory Director

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

* Methodology is included in the IAL Project Information Page

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

This report was finalized on June 22, 2015

* Methodology is included in the IAL Project Information Page

Sample Summary

IAL Case No.

E15-04681

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 6/ 4/2015@16:15

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
04681-001	MW-11	11.30	6/ 3/2015@13:40	Aqueous	4
04681-002	MW-20	11.65	6/ 3/2015@12:00	Aqueous	4
04681-003	MW-21	11.33	6/ 3/2015@10:40	Aqueous	4
04681-004	MW-22	11.60	6/ 3/2015@15:15	Aqueous	4
04681-005	FB	n/a	6/ 3/2015	Aqueous	4
04681-006	TB	n/a	6/ 3/2015	Aqueous	2

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

INTEGRATED ANALYTICAL LABORATORIES, LLC.

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-04681

Integrated Analytical Laboratories, LLC. received six (6) samples** from GEI Consultants, Inc. (IAL SDG# **E15-04681**, Project: SEA ISLE CITY) on June 4, 2015 for the analysis of :

(6) TCL VO + 15
(5) TCL/PAH + SIMS

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2°C

Volatiles By 8260C	**Batch: 150610**	**Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria.

E15-04681
- All samples were analyzed within holding time.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-04681-001	1	NA
E15-04681-002	1	NA
E15-04681-003	1	NA
E15-04681-004	1	NA
E15-04681-005	1	NA
E15-04681-006	1	NA

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-04681

Semivolatiles By 8270D SIM	Batch: 150604-05	Matrix: Aqueous

QC

- Calibration curve met QC criteria.
- Internal standard recovery me QC criteria.
- Surrogate recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

E15-04681

- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- Sample(s) used for aqueous BNA analyses contained varying levels of sediment. Precautions were taken to take an aliquot representative of the sample. However, due to the nature of aqueous samples containing sediment, reproduction of results may prove difficult. The rough amount of sediment present in the samples is as follows: 04681-001:1%.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-04681-001	1	NA
E15-04681-002	1	NA
E15-04681-003	1	NA
E15-04681-004	1	NA
E15-04681-005	1	NA

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

6/19/2015
Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
Client: GEI Consultants, Inc.
Project Location: SEA ISLE CITY
IAL Project #: E15-04681
IAL Sample ID(s): E15-04681-001 ~ -006
Sampling Date(s): 6/3/2015

List of DKQP Method Used:
TCL VO by 8260C
TCL/PAH + SIMS by 8270D SIM

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP	X		
1A	Were the method specified handling, preservation, and holding time requirements met?	X		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)			X
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	X		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?	X		
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?	X		
5B	Were these reporting limits met?		X	
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	X		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?		X	

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E15-04681

	Lab ID:	04681-001			04681-002			04681-003			04681-004		
	Client ID:	MW-11			MW-20			MW-21			MW-22		
	Depth:	11.30			11.65			11.33			11.60		
	Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
	Sampled Date	6/3/15			6/3/15			6/3/15			6/3/15		
PARAMETER(Units)		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)		*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
TOTAL VO's:		ND			ND			ND			ND		
TOTAL TIC's:		ND			ND			ND			ND		
TOTAL VO's & TIC's:		ND			ND			ND			ND		
Semivolatiles - PAH (Units)		*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Naphthalene		ND		0.341	ND		0.341	ND		0.341	ND		0.341
2-Methylnaphthalene		ND		0.224	ND		0.224	ND		0.224	ND		0.224
Acenaphthylene		ND		0.246	ND		0.246	ND		0.246	ND		0.246
Acenaphthene		ND		0.251	ND		0.251	ND		0.251	ND		0.251
Fluorene		ND		0.203	ND		0.203	ND		0.203	ND		0.203
Phenanthrene		ND		0.225	ND		0.225	ND		0.225	ND		0.225
Anthracene		ND		0.258	ND		0.258	ND		0.258	ND		0.258
Fluoranthene		ND		0.206	ND		0.206	ND		0.206	ND		0.206
Pyrene		ND		0.256	ND		0.256	ND		0.256	ND		0.256
Benzo[a]anthracene		ND		0.100	ND		0.100	ND		0.100	ND		0.100
Chrysene		ND		0.320	ND		0.320	ND		0.320	ND		0.320
Benzo[b]fluoranthene		ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[k]fluoranthene		ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[a]pyrene		ND		0.100	ND		0.100	ND		0.100	ND		0.100
Indeno[1,2,3-cd]pyrene		ND		0.100	ND		0.100	ND		0.100	ND		0.100
Dibenz[a,h]anthracene		ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[g,h,i]perylene		ND		0.325	ND		0.325	ND		0.325	ND		0.325

ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SEA ISLE CITY
Lab Case No.: E15-04681

	Lab ID:	04681-005			04681-006		
	Client ID:	FB			TB		
	Depth:						
	Matrix:	Aqueous			Aqueous		
	Sampled Date	6/3/15			6/3/15		
PARAMETER(Units)		Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)		*(ug/L)*			*(ug/L)*		
TOTAL VO's:		ND			ND		
TOTAL TIC's:		ND			ND		
TOTAL VO's & TIC's:		ND			ND		
Semivolatiles - PAH (Units)		*(ug/L)*			*(ug/L)*		
Naphthalene		ND		0.341	~		~
2-Methylnaphthalene		ND		0.224	~		~
Acenaphthylene		ND		0.246	~		~
Acenaphthene		ND		0.251	~		~
Fluorene		ND		0.203	~		~
Phenanthrene		ND		0.225	~		~
Anthracene		ND		0.258	~		~
Fluoranthene		ND		0.206	~		~
Pyrene		ND		0.256	~		~
Benzo[a]anthracene		ND		0.100	~		~
Chrysene		ND		0.320	~		~
Benzo[b]fluoranthene		ND		0.100	~		~
Benzo[k]fluoranthene		ND		0.100	~		~
Benzo[a]pyrene		ND		0.100	~		~
Indeno[1,2,3-cd]pyrene		ND		0.100	~		~
Dibenz[a,h]anthracene		ND		0.100	~		~
Benzo[g,h,i]perylene		ND		0.325	~		~

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-001
Client ID: MW-11
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4196.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-001
Client ID: MW-11
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4196.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 04681-001
Client ID: MW-11
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Date File: G4196.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-002
Client ID: MW-20
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4197.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-002
Client ID: MW-20
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4197.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 04681-002
Client ID: MW-20
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Date File: G4197.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-003
Client ID: MW-21
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4198.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-003
Client ID: MW-21
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4198.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 04681-003
Client ID: MW-21
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Date File: G4198.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-004
Client ID: MW-22
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4199.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-004
Client ID: MW-22
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4199.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 04681-004
Client ID: MW-22
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Date File: G4199.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-005
Client ID: FB
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4194.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-005
Client ID: FB
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4194.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 04681-005
Client ID: FB
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Date File: G4194.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-006
Client ID: TB
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4195.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 04681-006
Client ID: TB
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Data file: G4195.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: 04681-006
Client ID: TB
Date Received: 06/04/2015
Date Analyzed: 06/09/2015
Date File: G4195.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04681-001
Client ID: MW-11/11.30
Date Received: 06/04/2015
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0149.D
SIM Data file: B0156.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-04681 0029

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04681-002
Client ID: MW-20/11.65
Date Received: 06/04/2015
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0150.D
SIM Data file: B0157.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-04681 0030

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04681-003
Client ID: MW-21/11.33
Date Received: 06/04/2015
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0151.D
SIM Data file: B0158.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-04681 0031

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04681-004
Client ID: MW-22/11.60
Date Received: 06/04/2015
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0152.D
SIM Data file: B0159.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-04681 0032

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-04681-005
Client ID: FB
Date Received: 06/04/2015
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0153.D
SIM Data file: B0160.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-04681 0033

VOLATILE ORGANICS

VOLATILE ORGANICS QC SUMMARY

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 06/09/2015

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA150609a	AQUEOUS	G4185.D	90	101	100
04715-001	AQUEOUS	G4186.D	88	102	98
04676-004	AQUEOUS	G4187.D	86	99	98
04676-007	AQUEOUS	G4188.D	88	100	96
04676-001	AQUEOUS	G4189.D	86	96	98
04676-002	AQUEOUS	G4190.D	88	95	98
04676-003	AQUEOUS	G4191.D	87	97	98
04676-005	AQUEOUS	G4192.D	89	90	99
04703-001	AQUEOUS	G4193.D	88	95	100
04681-005	AQUEOUS	G4194.D	88	97	99
04681-006	AQUEOUS	G4195.D	87	99	97
04681-001	AQUEOUS	G4196.D	89	100	97
04681-002	AQUEOUS	G4197.D	89	99	98
04681-003	AQUEOUS	G4198.D	89	99	98
04681-004	AQUEOUS	G4199.D	91	100	97
04652-005	AQUEOUS	G4200.D	91	100	97
04652-003	AQUEOUS	G4201.D	92	101	99
04652-006	AQUEOUS	G4202.D	92	99	99
04676-006	AQUEOUS	G4203.D	91	99	98
04683-001	AQUEOUS	G4204.D	89	99	98
LCSA150609a	AQUEOUS	G4205.D	88	100	99
4676-003MS	AQUEOUS	G4206.D	86	100	99
4676-003MSD	AQUEOUS	G4207.D	87	100	100

	Concentration	DKQPs	Leachate Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	59-138	43-133
SMC2 = Toluene-d8	50 ppb	70-130	40-133	39-137
SMC3 = Bromofluorobenzene	50 ppb	70-130	42-152	45-145

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

INTEGRATED ANALYTICAL LABORATORIES

8260

LCS ACCURACY REPORT

Lab ID: LCSA150609a
Date Received: NA
Date Analyzed: 06/09/2015
LCS Data file: G4205.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	LCS Conc.	%Rec.	#
Dichlorodifluoromethane	50.0	0.0	46.7	93	
Chloromethane	50.0	0.0	43.8	88	
Vinyl chloride	50.0	0.0	46.8	94	
Bromomethane	50.0	0.0	59.6	119	
Chloroethane	50.0	0.0	50.4	101	
Trichlorofluoromethane	50.0	0.0	52.6	105	
Acrolein	150	0.0	125.4	84	
1,1-Dichloroethene	50.0	0.0	48.7	97	
Acetone	50.0	0.0	36.6	73	
Carbon disulfide	50.0	0.0	49.7	99	
Vinyl acetate	50.0	0.0	42.7	85	
Methylene chloride	50.0	0.0	50.3	101	
Acrylonitrile	150.0	0.0	177.2	118	
tert-Butyl alcohol (TBA)	100.0	0.0	93.7	94	
trans-1,2-Dichloroethene	50.0	0.0	50.1	100	
Methyl tert-butyl ether (MTBE)	50.0	0.0	49.6	99	
1,1-Dichloroethane	50.0	0.0	50.4	101	
Diisopropyl ether (DIPE)	50.0	0.0	53.3	107	
cis-1,2-Dichloroethene	50.0	0.0	50.1	100	
2,2-Dichloropropane	50.0	0.0	50.5	101	
2-Butanone (MEK)	50.0	0.0	40.1	80	
Bromochloromethane	50.0	0.0	50.2	100	
Chloroform	50.0	0.0	49.2	98	
1,1,1-Trichloroethane	50.0	0.0	49.0	98	
Carbon tetrachloride	50.0	0.0	46.6	93	
1,1-Dichloropropene	50.0	0.0	46.6	93	
1,2-Dichloroethane (EDC)	50.0	0.0	45.2	90	
Benzene	50.0	0.0	50.5	101	
Trichloroethene	50.0	0.0	51.8	104	
1,2-Dichloropropane	50.0	0.0	50.9	102	
Dibromomethane	50.0	0.0	47.2	94	
1,4-Dioxane	1500	0.0	1170	78	
Bromodichloromethane	50.0	0.0	49.6	99	
2-Chloroethyl vinyl ether	50.0	0.0	42.3	85	
cis-1,3-Dichloropropene	50.0	0.0	48.8	98	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	44.8	90	
Toluene	50.0	0.0	50.1	100	
trans-1,3-Dichloropropene	50.0	0.0	46.3	93	
1,1,2-Trichloroethane	50.0	0.0	46.3	93	
Tetrachloroethene	50.0	0.0	48.0	96	
1,3-Dichloropropane	50.0	0.0	46.4	93	

E15-04681 0037

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150609a
Date Received: NA
Date Analyzed: 06/09/2015
LCS Data file: G4205.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#
2-Hexanone	50.0	0.0	43.9	88	
Dibromochloromethane	50.0	0.0	49.1	98	
1,2-Dibromoethane (EDB)	50.0	0.0	47.3	95	
Chlorobenzene	50.0	0.0	48.3	97	
1,1,1,2-Tetrachloroethane	50.0	0.0	51.7	103	
Ethylbenzene	50.0	0.0	48.3	97	
m,p-Xylene	100.0	0.0	98.8	99	
o-Xylene	50.0	0.0	51.5	103	
Styrene	50.0	0.0	51.1	102	
Bromoform	50.0	0.0	46.4	93	
Isopropylbenzene	50.0	0.0	49.8	100	
1,1,2,2-Tetrachloroethane	50.0	0.0	40.8	82	
Bromobenzene	50.0	0.0	49.3	99	
1,2,3-Trichloropropane	50.0	0.0	43.1	86	
n-Propylbenzene	50.0	0.0	48.0	96	
2-Chlorotoluene	50.0	0.0	48.5	97	
1,3,5-Trimethylbenzene	50.0	0.0	50.2	100	
4-Chlorotoluene	50.0	0.0	48.5	97	
tert-Butylbenzene	50.0	0.0	49.8	100	
1,2,4-Trimethylbenzene	50.0	0.0	49.8	100	
sec-Butylbenzene	50.0	0.0	48.0	96	
1,3-Dichlorobenzene	50.0	0.0	48.2	96	
4-Isopropyltoluene	50.0	0.0	49.0	98	
1,4-Dichlorobenzene	50.0	0.0	47.6	95	
n-Butylbenzene	50.0	0.0	46.1	92	
1,2-Dichlorobenzene	50.0	0.0	48.3	97	
1,2-Dibromo-3-chloropropane	50.0	0.0	40.2	80	
1,2,4-Trichlorobenzene	50.0	0.0	45.0	90	
Hexachlorobutadiene	50.0	0.0	45.7	91	
Naphthalene	50.0	0.0	44.4	89	
1,2,3-Trichlorobenzene	50.0	0.0	43.5	87	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	48.5	97	
Methyl acetate	50.0	0.0	43.6	87	
Cyclohexane	50.0	0.0	51.4	103	
Methylcyclohexane	50.0	0.0	46.9	94	

	Leachate Aqueous/Meoh	Soil/Sediment
LCS Recovery Limits	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits

E15-04681 0038

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150609a
Date Received: NA
Date Analyzed: 06/09/2015
LCS Data file: G4205.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

MS/MSD SPIKE REPORT

Lab ID: 04676-003
Client ID: MW-4/6.60
Date Received: NA
Date Analyzed: 06/09/2015
MS Data file: G4206.D
MSD Data file: G4207.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
Dichlorodifluoromethane	50.0	0.0	48.8	98		45.6	91		7	
Chloromethane	50.0	0.0	47.0	94		45.5	91		3	
Vinyl chloride	50.0	0.0	50.4	101		47.8	96		5	
Bromomethane	50.0	0.0	63.3	127		58.8	118		7	
Chloroethane	50.0	0.0	53.8	108		50.3	101		7	
Trichlorofluoromethane	50.0	0.0	55.8	112		53.4	107		4	
Acrolein	150	0.0	130	87		130	87		0	
1,1-Dichloroethene	50.0	0.0	52.0	104		49.6	99		5	
Acetone	50.0	0.0	40.4	81		40.0	80		1	
Carbon disulfide	50.0	0.0	53.7	107		51.3	103		5	
Vinyl acetate	50.0	0.0	41.8	84		40.4	81		3	
Methylene chloride	50.0	0.0	51.1	102		49.8	100		3	
Acrylonitrile	150	0.0	174	116		174	116		0	
tert-Butyl alcohol (TBA)	100	0.0	78.1	78		76.3	76		2	
trans-1,2-Dichloroethene	50.0	0.0	52.0	104		49.8	100		4	
Methyl tert-butyl ether (MTBE)	50.0	0.0	48.9	98		49.0	98		0	
1,1-Dichloroethane	50.0	0.0	52.0	104		49.9	100		4	
Diisopropyl ether (DIPE)	50.0	0.0	53.3	107		52.4	105		2	
cis-1,2-Dichloroethene	50.0	0.0	51.2	102		50.0	100		2	
2,2-Dichloropropane	50.0	0.0	49.4	99		49.6	99		0	
2-Butanone (MEK)	50.0	0.3	41.4	82		41.7	83		1	
Bromochloromethane	50.0	0.0	50.3	101		49.7	99		1	
Chloroform	50.0	0.0	50.0	100		48.8	98		2	
1,1,1-Trichloroethane	50.0	0.0	50.8	102		49.1	98		3	
Carbon tetrachloride	50.0	0.0	48.8	98		46.9	94		4	
1,1-Dichloropropene	50.0	0.0	48.9	98		46.6	93		5	
1,2-Dichloroethane (EDC)	50.0	0.0	44.5	89		44.0	88		1	
Benzene	50.0	0.0	52.5	105		50.3	101		4	
Trichloroethene	50.0	0.0	54.4	109		52.3	105		4	
1,2-Dichloropropane	50.0	0.0	52.3	105		50.4	101		4	
Dibromomethane	50.0	0.0	47.1	94		46.5	93		1	
1,4-Dioxane	1,500	0.0	1252	83		1245	83		1	
Bromodichloromethane	50.0	0.0	50.2	100		49.0	98		2	
2-Chloroethyl vinyl ether	50.0	0.0	0.0	0	*$	0.0	0	*$	NC	*$
cis-1,3-Dichloropropene	50.0	0.0	50.7	101		48.8	98		4	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	44.6	89		45.4	91		2	
Toluene	50.0	0.0	52.7	105		50.2	100		5	
trans-1,3-Dichloropropene	50.0	0.0	47.6	95		46.1	92		3	
1,1,2-Trichloroethane	50.0	0.0	45.1	90		45.3	91		0	
Tetrachloroethene	50.0	0.0	51.4	103		48.2	96		6	
1,3-Dichloropropane	50.0	0.0	46.6	93		45.9	92		2	

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 04676-003
Client ID: MW-4/6.60
Date Received: NA
Date Analyzed: 06/09/2015
MS Data file: G4206.D
MSD Data file: G4207.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
2-Hexanone	50.0	0.0	44.8	90		45.9	92		2	
Dibromochloromethane	50.0	0.0	49.2	98		48.6	97		1	
1,2-Dibromoethane (EDB)	50.0	0.0	47.3	95		47.0	94		1	
Chlorobenzene	50.0	0.0	50.6	101		49.1	98		3	
1,1,1,2-Tetrachloroethane	50.0	0.0	53.4	107		52.0	104		3	
Ethylbenzene	50.0	0.0	50.6	101		49.0	98		3	
m,p-Xylene	100	0.0	103.9	104		100.4	100		3	
o-Xylene	50.0	0.0	53.4	107		51.7	103		3	
Styrene	50.0	0.0	52.3	105		50.9	102		3	
Bromoform	50.0	0.0	45.9	92		45.5	91		1	
Isopropylbenzene	50.0	0.0	52.5	105		50.4	101		4	
1,1,2,2-Tetrachloroethane	50.0	0.0	40.0	80		40.0	80		0	
Bromobenzene	50.0	0.0	50.8	102		49.7	99		2	
1,2,3-Trichloropropane	50.0	0.0	42.7	85		43.2	86		1	
n-Propylbenzene	50.0	0.0	50.4	101		48.8	98		3	
2-Chlorotoluene	50.0	0.0	50.4	101		49.0	98		3	
1,3,5-Trimethylbenzene	50.0	0.0	52.2	104		50.7	101		3	
4-Chlorotoluene	50.0	0.0	50.4	101		49.0	98		3	
tert-Butylbenzene	50.0	0.0	52.3	105		49.9	100		5	
1,2,4-Trimethylbenzene	50.0	0.0	51.8	104		50.2	100		3	
sec-Butylbenzene	50.0	0.0	50.6	101		48.5	97		4	
1,3-Dichlorobenzene	50.0	0.0	49.7	99		49.0	98		1	
4-Isopropyltoluene	50.0	0.0	51.1	102		49.5	99		3	
1,4-Dichlorobenzene	50.0	0.0	48.8	98		48.0	96		2	
n-Butylbenzene	50.0	0.0	48.3	97		46.7	93		3	
1,2-Dichlorobenzene	50.0	0.0	49.1	98		48.5	97		1	
1,2-Dibromo-3-chloropropane	50.0	0.0	40.4	81		40.8	82		1	
1,2,4-Trichlorobenzene	50.0	0.0	46.6	93		45.9	92		2	
Hexachlorobutadiene	50.0	0.0	49.1	98		47.1	94		4	
Naphthalene	50.0	0.0	45.6	91		45.4	91		0	
1,2,3-Trichlorobenzene	50.0	0.0	45.7	91		45.7	91		0	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	51.6	103		47.7	95		8	
Methyl acetate	50.0	0.0	43.3	87		43.6	87		1	
Cyclohexane	50.0	0.0	53.8	108		50.1	100		7	
Methylcyclohexane	50.0	0.0	49.3	99		46.3	93		6	

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 04676-003
Client ID: MW-4/6.60
Date Received: NA
Date Analyzed: 06/09/2015
MS Data file: G4206.D
MSD Data file: G4207.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#

2-Chloroethyl vinyl ether has zero spike recovery in the MS/MSD. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

VOLATILE METHOD BLANK SUMMARY

Lab File ID: G4185.D Instrument ID: MSD_G

Date Analyzed: 06/09/2015 Time Analyzed: 10:40

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
01	04715-001	06/09/2015	11:07
FIELD_BLANK	04676-004	06/09/2015	11:36
TRIP_BLANK	04676-007	06/09/2015	12:03
MW-3/7.45	04676-001	06/09/2015	12:31
MW-5/5.45	04676-002	06/09/2015	12:59
MW-4/6.60	04676-003	06/09/2015	13:27
MW-2/8.27	04676-005	06/09/2015	13:56
RR-MW1R	04703-001	06/09/2015	14:24
FB	04681-005	06/09/2015	14:52
TB	04681-006	06/09/2015	15:20
MW-11	04681-001	06/09/2015	15:48
MW-20	04681-002	06/09/2015	16:17
MW-21	04681-003	06/09/2015	16:45
MW-22	04681-004	06/09/2015	17:13
MW-28	04652-005	06/09/2015	17:41
MW-22R	04652-003	06/09/2015	18:09
MW-18	04652-006	06/09/2015	18:37
MW-1/7.39	04676-006	06/09/2015	19:06
TWP-1/6.8	04683-001	06/09/2015	19:33
LCSA150609a	LCSA150609a	06/09/2015	20:01
4676-003MS	4676-003MS	06/09/2015	20:29
4676-003MSD	4676-003MSD	06/09/2015	20:57

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G3960.D

BFB Injection Date: 05/27/2015

Inst ID: MSD_G

BFB Injection Time: 10:24

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	16.1			
75	30.0 - 60.0% of mass 95	48.0			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.6			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	76.6			
175	5.0 - 9.0% of mass 174	6.1	(	7.9	)1
176	95.0 - 101.0% of mass 174	73.8	(	96.3	)1
177	5.0 - 9.0% of mass 176	5.0	(	6.8	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC100	G3965.D	05/27/2015	12:44
ICC001	ICCV001	G3961.D	05/27/2015	10:52
ICC002	ICC002	G3962.D	05/27/2015	11:20
ICC005	ICC005	G3963.D	05/27/2015	11:48
ICC020	ICC020	G3964.D	05/27/2015	12:16
ICC150	ICC150	G3966.D	05/27/2015	13:12
ICC200	ICC200	G3967.D	05/27/2015	13:40
ICV100	ICV100	G3969.D	05/27/2015	14:37
BLKA150527a	BLKA150527a	G3971.D	05/27/2015	15:33
FB052115	04256-008	G3972.D	05/27/2015	16:01
TB052115	04256-009	G3973.D	05/27/2015	16:29
TWP-27-1B	04256-003	G3974.D	05/27/2015	16:58
TWP-27-1C	04256-004	G3975.D	05/27/2015	17:26
TB	04296-002	G3976.D	05/27/2015	17:54
MW-1	04296-001	G3977.D	05/27/2015	18:22
WP	04295-001	G3978.D	05/27/2015	18:50
TWP-27-1A	04256-001	G3979.D	05/27/2015	19:18
TWP-27-1D	04256-005	G3980.D	05/27/2015	19:46
REP052115	04256-007	G3981.D	05/27/2015	20:14
LCSA150527a	LCSA150527a	G3982.D	05/27/2015	20:42

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G3960.D

BFB Injection Date : 05/27/201

Inst ID: MSD_G

BFB Injection Time: 10:24

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	16.1			
75	30.0 - 60.0% of mass 95	48.0			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.6			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	76.6			
175	5.0 - 9.0% of mass 174	6.1	(	7.9	)1
176	95.0 - 101.0% of mass 174	73.8	(	96.3	)1
177	5.0 - 9.0% of mass 176	5.0	(	6.8	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
4256-003MS	4256-003MS	G3983.D	05/27/2015	21:10
4256-003MSD	4256-003MSD	G3984.D	05/27/2015	21:38

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G4182.D

BFB Injection Date: 06/09/2015

Inst ID: MSD_G

BFB Injection Time: 9:15

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	15.8			
75	30.0 - 60.0% of mass 95	46.3			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.6			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	74.4			
175	5.0 - 9.0% of mass 174	5.7	(	7.6	)1
176	95.0 - 101.0% of mass 174	72.5	(	97.4	)1
177	5.0 - 9.0% of mass 176	4.9	(	6.7	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV100	G4183.D	06/09/2015	9:43
BLKA150609a	BLKA150609a	G4185.D	06/09/2015	10:40
01	04715-001	G4186.D	06/09/2015	11:07
FIELD_BLANK	04676-004	G4187.D	06/09/2015	11:36
TRIP_BLANK	04676-007	G4188.D	06/09/2015	12:03
MW-3/7.45	04676-001	G4189.D	06/09/2015	12:31
MW-5/5.45	04676-002	G4190.D	06/09/2015	12:59
MW-4/6.60	04676-003	G4191.D	06/09/2015	13:27
MW-2/8.27	04676-005	G4192.D	06/09/2015	13:56
RR-MW1R	04703-001	G4193.D	06/09/2015	14:24
FB	04681-005	G4194.D	06/09/2015	14:52
TB	04681-006	G4195.D	06/09/2015	15:20
MW-11	04681-001	G4196.D	06/09/2015	15:48
MW-20	04681-002	G4197.D	06/09/2015	16:17
MW-21	04681-003	G4198.D	06/09/2015	16:45
MW-22	04681-004	G4199.D	06/09/2015	17:13
MW-28	04652-005	G4200.D	06/09/2015	17:41
MW-22R	04652-003	G4201.D	06/09/2015	18:09
MW-18	04652-006	G4202.D	06/09/2015	18:37
MW-1/7.39	04676-006	G4203.D	06/09/2015	19:06

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G4182.D

BFB Injection Date : 06/09/201

Inst ID: MSD_G

BFB Injection Time: 9:15

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	15.8			
75	30.0 - 60.0% of mass 95	46.3			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.6			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	74.4			
175	5.0 - 9.0% of mass 174	5.7	(	7.6	)1
176	95.0 - 101.0% of mass 174	72.5	(	97.4	)1
177	5.0 - 9.0% of mass 176	4.9	(	6.7	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
TWP-1/6.8	04683-001	G4204.D	06/09/2015	19:33
LCSA150609a	LCSA150609a	G4205.D	06/09/2015	20:01
4676-003MS	4676-003MS	G4206.D	06/09/2015	20:29
4676-003MSD	4676-003MSD	G4207.D	06/09/2015	20:57

Response Factor Report MSD_G

05/27/15

5/27/15

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Wed May 27 14:21:11 2015
Response Via : Initial Calibration

Calibration Files
1 =G3961.D 2 =G3962.D 5 =G3963.D
20 =G3964.D 100 =G3965.D 150 =G3966.D 200 =G3967.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD								
2)	T	Dichlorodifluorom	0.624	0.623	0.548	0.449	0.521	0.503	0.419	0.527	15.02
3)	P	Chloromethane	0.671	0.684	0.586	0.523	0.569	0.538	0.520	0.585	11.61
4)	C	Vinyl chloride	0.563	0.611	0.543	0.470	0.528	0.500	0.458	0.525	10.24
5)	T	Bromomethane	0.269	0.268	0.254	0.226	0.222	0.203	0.170	0.230	15.79
6)	T	Chloroethane	0.298	0.329	0.284	0.259	0.270	0.265	0.240	0.278	10.52
7)	T	Trichlorofluorome	0.476	0.510	0.418	0.409	0.530	0.543	0.469	0.479	10.90
8)	T	Acrolein	0.052	0.050	0.049	0.047	0.043	0.048	0.042	0.047	7.36
9)	MC	1,1-Dichloroethen	0.435	0.438	0.396	0.351	0.387	0.384	0.352	0.392	8.91
10)	T	Acetone			0.292	0.247	0.233	0.224	0.215	0.242	12.38
11)	T	Carbon disulfide	1.152	1.137	1.014	0.955	1.105	1.080	1.009	1.065	6.91
12)	T	Vinyl acetate	1.495	1.616	1.527	1.485	1.574	1.537	0.945	1.454	15.74
13)	T	Methylene chlorid		0.686	0.605	0.537	0.556	0.530	0.524	0.573	10.92
14)	T	Acrylonitrile	0.172	0.177	0.174	0.166	0.164	0.178	0.163	0.171	3.64
15)	T	tert-Butyl alcoho		0.051	0.050	0.046	0.048	0.049	0.050	0.049	3.42
16)	T	trans-1,2-Dichlor	0.581	0.592	0.522	0.472	0.509	0.486	0.464	0.518	9.85
17)	T	Methyl tert-butyl	1.597	1.685	1.538	1.420	1.496	1.438	1.432	1.515	6.50
18)	P	1,1-Dichloroethan	0.928	1.003	0.902	0.824	0.880	0.842	0.822	0.886	7.36
19)	T	Diisopropyl ether	1.424	1.589	1.455	1.348	1.415	1.357	1.338	1.418	6.15
20)	T	cis-1,2-Dichloroe	0.621	0.653	0.591	0.544	0.572	0.545	0.532	0.580	7.73
21)	T	2,2-Dichloropropa	0.488	0.512	0.419	0.399	0.423	0.399	0.376	0.431	11.66
22)	T	2-Butanone (MEK)	0.301	0.352	0.281	0.264	0.275	0.270	0.265	0.287	10.90
23)	T	Bromochloromethan	0.289	0.306	0.275	0.256	0.271	0.260	0.259	0.274	6.67
24)	T	Tetrahydrofuran								0.000	-1.00
25)	C	Chloroform	0.978	1.022	0.937	0.857	0.904	0.869	0.848	0.916	7.17
26)	T	1,1,1-Trichloroet	0.767	0.808	0.725	0.670	0.749	0.718	0.676	0.730	6.73
27)	T	Carbon tetrachlor	0.674	0.695	0.617	0.553	0.643	0.643	0.593	0.631	7.65
28)	T	1,1-Dichloroprope	0.802	0.803	0.679	0.616	0.683	0.666	0.620	0.696	11.15
29)	T	1,2-Dichloroethan	0.773	0.783	0.741	0.662	0.678	0.650	0.637	0.703	8.65
30)	S	1,2-Dichloroethan	0.579	0.575	0.570	0.554	0.551	0.536	0.532	0.557	3.37
31)	I	1,4-Difluorobenzene	ISTD								
32)	M	Benzene	1.433	1.492	1.376	1.273	1.323	1.280	1.244	1.346	6.80
33)	M	Trichloroethene	0.378	0.397	0.355	0.323	0.350	0.344	0.334	0.355	7.23
34)	C	1,2-Dichloropropa	0.328	0.351	0.331	0.306	0.323	0.316	0.313	0.324	4.53
35)	T	Dibromomethane	0.207	0.241	0.211	0.201	0.210	0.204	0.205	0.211	6.46
36)	T	1,4-Dioxane	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	11.19
37)	T	Bromodichlorometh	0.421	0.463	0.415	0.419	0.457	0.449	0.450	0.439	4.59
38)	T	2-Chloroethyl vin	0.130	0.137	0.140	0.144	0.172	0.176	0.181	0.154	13.84
39)	T	cis-1,3-Dichlorop	0.380	0.427	0.429	0.474	0.546	0.553	0.550	0.480	14.75
40)	T	4-Methyl-2-pentan	0.259	0.298	0.252	0.259	0.271	0.278	0.273	0.270	5.68
41)	S	Toluene-d8	1.197	1.203	1.208	1.213	1.206	1.199	1.199	1.204	0.48
42)	MC	Toluene	0.885	0.915	0.849	0.802	0.831	0.815	0.789	0.841	5.42
43)	T	trans-1,3-Dichlor	0.314	0.370	0.373	0.425	0.499	0.510	0.507	0.428	18.42
44)	T	1,1,2-Trichloroet	0.260	0.292	0.259	0.243	0.251	0.248	0.247	0.257	6.42
45)	T	Tetrachloroethene	0.418	0.394	0.345	0.315	0.338	0.335	0.318	0.352	11.07
46)	T	1,3-Dichloropropa	0.539	0.569	0.519	0.494	0.512	0.501	0.495	0.518	5.23
47)	T	2-Hexanone	0.221	0.254	0.222	0.234	0.245	0.260	0.248	0.241	6.37
48)	T	Dibromochlorometh	0.264	0.297	0.277	0.297	0.333	0.338	0.338	0.306	9.89
49)	T	1,2-Dibromoethane	0.275	0.327	0.295	0.288	0.306	0.305	0.304	0.300	5.43
50)	I	Chlorobenzene-d5	ISTD								
51)	MP	Chlorobenzene	1.116	1.166	1.046	0.975	1.015	1.000	0.986	1.044	6.88
52)	T	1,1,1,2-Tetrachlo	0.317	0.375	0.336	0.336	0.368	0.362	0.362	0.[illegible]	[illegible]
53)	C	Ethylbenzene	1.851	1.900	1.706	1.599	1.702	1.672	1.625	1.722	6.54

B15-04681 0048

Response Factor Report MSD_G

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Wed May 27 14:21:11 2015
Response Via : Initial Calibration

Calibration Files
1 =G3961.D 2 =G3962.D 5 =G3963.D
20 =G3964.D 100 =G3965.D 150 =G3966.D 200 =G3967.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
54)	T	m,p-Xylene	0.724	0.737	0.657	0.626	0.646	0.624	0.602	0.659	7.86
55)	T	o-Xylene		0.736	0.673	0.643	0.655	0.626	0.611	0.657	6.71
56)	T	Styrene	1.087	1.221	1.140	1.092	1.122	1.088	1.054	1.115	4.88
57)	P	Bromoform	0.167	0.197	0.172	0.198	0.240	0.253	0.252	0.211	17.40
58)	T	Isopropylbenzene	1.792	1.861	1.640	1.560	1.669	1.637	1.574	1.676	6.64
59)	S	Bromofluorobenzen	0.553	0.553	0.557	0.554	0.551	0.557	0.560	0.555	0.54
60)	P	1,1,2,2-Tetrachlo	0.456	0.531	0.408	0.409	0.417	0.419	0.411	0.436	10.37
61)	T	Bromobenzene	0.464	0.518	0.445	0.426	0.447	0.442	0.437	0.454	6.74
62)	T	1,2,3-Trichloropr	0.449	0.467	0.392	0.380	0.390	0.388	0.385	0.407	8.72
63)	T	n-Propylbenzene	2.285	2.282	1.974	1.868	1.990	1.959	1.877	2.034	8.70
64)	T	2-Chlorotoluene	1.469	1.488	1.291	1.204	1.261	1.243	1.214	1.310	9.07
65)	T	1,3,5-Trimethylbe	1.612	1.628	1.447	1.378	1.439	1.396	1.343	1.463	7.72
66)	T	4-Chlorotoluene	1.469	1.488	1.291	1.204	1.261	1.243	1.214	1.310	9.07
67)	T	tert-Butylbenzene	1.288	1.273	1.142	1.093	1.196	1.169	1.123	1.183	6.25
68)	T	1,2,4-Trimethylbe	1.602	1.623	1.433	1.359	1.418	1.388	1.359	1.455	7.68
69)	T	sec-Butylbenzene	2.013	1.925	1.653	1.568	1.699	1.664	1.575	1.728	10.01
70)	T	1,3-Dichlorobenze	0.982	0.963	0.819	0.785	0.819	0.815	0.804	0.855	9.51
71)	T	4-Isopropyltoluen	1.593	1.571	1.324	1.278	1.373	1.349	1.295	1.397	9.29
72)	T	1,4-Dichlorobenze	0.982	0.977	0.810	0.763	0.800	0.802	0.791	0.846	10.90
73)	T	n-Butylbenzene	1.532	1.463	1.210	1.165	1.246	1.210	1.135	1.280	12.04
74)	T	1,2-Dichlorobenze	0.936	0.932	0.807	0.761	0.772	0.755	0.740	0.815	10.30
75)	T	1,2-Dibromo-3-chl	0.067	0.072	0.058	0.060	0.071	0.075	0.073	0.068	9.98
76)	T	1,2,4-Trichlorobe	0.719	0.662	0.537	0.531	0.554	0.553	0.550	0.587	12.53
77)	T	Hexachlorobutadie	0.278	0.254	0.199	0.193	0.217	0.212	0.207	0.223	14.05
78)	T	Naphthalene	1.130	1.173	0.966	1.015	1.077	1.103	1.085	1.078	6.43
79)	T	1,2,3-Trichlorobe	0.561	0.522	0.425	0.416	0.427	0.425	0.430	0.458	12.76
80)	T	1,1,2-Trichloro-1	0.288	0.292	0.241	0.215	0.243	0.243	0.210	0.247	12.98
81)	T	Methyl acetate	0.285	0.301	0.258	0.242	0.249	0.241	0.247	0.261	9.03
82)	T	Cyclohexane		0.593	0.510	0.456	0.538	0.536	0.473	0.518	9.55
83)	T	Methylcyclohexane	0.652	0.631	0.522	0.477	0.554	0.557	0.480	0.553	12.34
84)		Pentane								0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

E15-04681 0049

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-27-15\
Data File : G3969.D
Acq On : 27 May 2015 14:37
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 27 14:50:15 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	102	0.00
2	T	Dichlorodifluoromethane	0.527	0.499	5.3	98	0.00
3	P	Chloromethane	0.585	0.477	18.5	85	0.00
4	C	Vinyl chloride	0.525	0.421	19.8	81	0.01
5	T	Bromomethane	0.230	0.207	10.0	95	0.00
6	T	Chloroethane	0.278	0.233	16.2	88	0.00
7	T	Trichlorofluoromethane	0.479	0.413	13.8	79	0.07
8	T	Acrolein	0.047	0.042	10.6	98	0.00
9	MC	1,1-Dichloroethene	0.392	0.318	18.9	84	-0.01
10	T	Acetone	0.242	0.224	7.4	98	0.00
11	T	Carbon disulfide	1.065	0.907	14.8	84	0.00
12	T	Vinyl acetate	1.454	1.442	0.8	93	0.00
13	T	Methylene chloride	0.573	0.509	11.2	93	0.00
14	T	Acrylonitrile	0.171	0.161	5.8	100	0.00
15	T	tert-Butyl alcohol (TBA)	0.049	0.052	-6.1	110	0.00
16	T	trans-1,2-Dichloroethene	0.518	0.427	17.6	86	0.00
17	T	Methyl tert-butyl ether (MT	1.515	1.441	4.9	98	0.00
18	P	1,1-Dichloroethane	0.886	0.761	14.1	88	0.00
19	T	Diisopropyl ether (DIPE)	1.418	1.295	8.7	93	0.00
20	T	cis-1,2-Dichloroethene	0.580	0.505	12.9	90	0.00
21	T	2,2-Dichloropropane	0.431	0.411	4.6	99	0.00
22	T	2-Butanone (MEK)	0.287	0.266	7.3	99	-0.01
23	T	Bromochloromethane	0.274	0.252	8.0	95	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	78	0.00
25	C	Chloroform	0.916	0.801	12.6	90	0.00
26	T	1,1,1-Trichloroethane	0.730	0.612	16.2	83	0.00
27	T	Carbon tetrachloride	0.631	0.515	18.4	82	0.00
28	T	1,1-Dichloropropene	0.696	0.578	17.0	86	0.00
29	T	1,2-Dichloroethane (EDC)	0.703	0.637	9.4	96	0.00
30	S	1,2-Dichloroethane-d4	0.557	0.535	3.9	99	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
32	M	Benzene	1.346	1.174	12.8	89	0.00
33	M	Trichloroethene	0.355	0.305	14.1	87	0.00
34	C	1,2-Dichloropropane	0.324	0.297	8.3	92	0.00
35	T	Dibromomethane	0.211	0.202	4.3	96	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	110	0.00
37	T	Bromodichloromethane	0.439	0.425	3.2	93	0.00
38	T	2-Chloroethyl vinyl ether	0.154	0.173	-12.3	100	0.00
39	T	cis-1,3-Dichloropropene	0.480	0.518	-7.9	95	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.270	0.276	-2.2	102	0.00
41	S	Toluene-d8	1.204	1.202	0.2	100	0.00
42	MC	Toluene	0.841	0.741	11.9	89	0.00
43	T	trans-1,3-Dichloropropene	0.428	0.481	-12.4	97	0.00
44	T	1,1,2-Trichloroethane	0.257	0.244	5.1	97	0.00
45	T	Tetrachloroethene	0.352	0.287	18.5	85	0.00
46	T	1,3-Dichloropropane	0.518	0.495	4.4	97	0.00
47	T	2-Hexanone	0.241	0.244	-1.2	100	0.00

E15-04681 0050

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-27-15\
Data File : G3969.D
Acq On : 27 May 2015 14:37
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 27 14:50:15 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	T	Dibromochloromethane	0.306	0.327	-6.9	98	0.00
49	T	1,2-Dibromoethane (EDB)	0.300	0.302	-0.7	99	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00
51	MP	Chlorobenzene	1.044	0.927	11.2	92	0.00
52	T	1,1,1,2-Tetrachloroethane	0.351	0.339	3.4	93	0.00
53	C	Ethylbenzene	1.722	1.498	13.0	89	0.00
54	T	m,p-Xylene	0.659	0.570	13.5	89	0.00
55	T	o-Xylene	0.657	0.592	9.9	91	0.00
56	T	Styrene	1.115	1.040	6.7	93	0.00
57	P	Bromoform	0.211	0.241	-14.2	101	0.00
58	T	Isopropylbenzene	1.676	1.438	14.2	87	0.00
59	S	Bromofluorobenzene	0.555	0.552	0.5	101	0.00
60	P	1,1,2,2-Tetrachloroethane	0.436	0.414	5.0	100	0.00
61	T	Bromobenzene	0.454	0.421	7.3	95	0.00
62	T	1,2,3-Trichloropropane	0.407	0.383	5.9	99	0.00
63	T	n-Propylbenzene	2.034	1.721	15.4	87	0.00
64	T	2-Chlorotoluene	1.310	1.130	13.7	90	0.00
65	T	1,3,5-Trimethylbenzene	1.463	1.270	13.2	89	0.00
66	T	4-Chlorotoluene	1.310	1.130	13.7	90	0.00
67	T	tert-Butylbenzene	1.183	1.027	13.2	87	0.00
68	T	1,2,4-Trimethylbenzene	1.455	1.274	12.4	91	0.00
69	T	sec-Butylbenzene	1.728	1.433	17.1	85	0.00
70	T	1,3-Dichlorobenzene	0.855	0.761	11.0	94	0.00
71	T	4-Isopropyltoluene	1.397	1.179	15.6	87	0.00
72	T	1,4-Dichlorobenzene	0.846	0.751	11.2	95	0.00
73	T	n-Butylbenzene	1.280	1.056	17.5	86	0.00
74	T	1,2-Dichlorobenzene	0.815	0.731	10.3	95	0.00
75	T	1,2-Dibromo-3-chloropropane	0.068	0.073	-7.4	103	0.00
76	T	1,2,4-Trichlorobenzene	0.587	0.532	9.4	97	0.00
77	T	Hexachlorobutadiene	0.223	0.179	19.7	83	0.00
78	T	Naphthalene	1.078	1.097	-1.8	103	0.00
79	T	1,2,3-Trichlorobenzene	0.458	0.422	7.9	100	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.247	0.209	15.4	87	0.00
81	T	Methyl acetate	0.261	0.251	3.8	101	-0.01
82	T	Cyclohexane	0.518	0.430	17.0	81	0.00
83	T	Methylcyclohexane	0.553	0.484	12.5	88	0.00
84		Pentane	0.000	0.000	0.0	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4183.D
Acq On : 9 Jun 2015 9:43
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 09 12:55:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	88	0.00
2	T	Dichlorodifluoromethane	0.527	0.491	6.8	83	0.00
3	P	Chloromethane	0.585	0.494	15.6	76	0.01
4	C	Vinyl chloride	0.525	0.445	15.2	74	0.02
5	T	Bromomethane	0.230	0.248	-7.8	98	0.00
6	T	Chloroethane	0.278	0.255	8.3	83	0.01
7	T	Trichlorofluoromethane	0.479	0.467	2.5	77	0.07
8	T	Acrolein	0.047	0.045	4.3	92	0.00
9	MC	1,1-Dichloroethene	0.392	0.350	10.7	79	-0.01
10	T	Acetone	0.242	0.198	18.2	75	0.00
11	T	Carbon disulfide	1.065	0.995	6.6	79	0.00
12	T	Vinyl acetate	1.454	1.466	-0.8	82	0.00
13	T	Methylene chloride	0.573	0.536	6.5	85	0.00
14	T	Acrylonitrile	0.171	0.189	-10.5	101	0.00
15	T	tert-Butyl alcohol (TBA)	0.049	0.047	4.1	86	0.00
16	T	trans-1,2-Dichloroethene	0.518	0.469	9.5	81	0.00
17	T	Methyl tert-butyl ether (MT	1.515	1.422	6.1	84	0.00
18	P	1,1-Dichloroethane	0.886	0.829	6.4	83	0.00
19	T	Diisopropyl ether (DIPE)	1.418	1.408	0.7	87	0.00
20	T	cis-1,2-Dichloroethene	0.580	0.540	6.9	83	0.00
21	T	2,2-Dichloropropane	0.431	0.408	5.3	85	0.00
22	T	2-Butanone (MEK)	0.287	0.242	15.7	77	0.00
23	T	Bromochloromethane	0.274	0.258	5.8	83	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	75	0.00
25	C	Chloroform	0.916	0.840	8.3	82	0.00
26	T	1,1,1-Trichloroethane	0.730	0.645	11.6	76	0.00
27	T	Carbon tetrachloride	0.631	0.548	13.2	75	0.00
28	T	1,1-Dichloropropene	0.696	0.598	14.1	77	0.00
29	T	1,2-Dichloroethane (EDC)	0.703	0.601	14.5	78	0.00
30	S	1,2-Dichloroethane-d4	0.557	0.495	11.1	79	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	87	0.00
32	M	Benzene	1.346	1.271	5.6	84	0.00
33	M	Trichloroethene	0.355	0.328	7.6	82	0.00
34	C	1,2-Dichloropropane	0.324	0.315	2.8	85	0.00
35	T	Dibromomethane	0.211	0.193	8.5	80	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	93	0.00
37	T	Bromodichloromethane	0.439	0.430	2.1	82	0.00
38	T	2-Chloroethyl vinyl ether	0.154	0.136	11.7	69	0.00
39	T	cis-1,3-Dichloropropene	0.480	0.523	-9.0	84	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.270	0.254	5.9	82	0.00
41	S	Toluene-d8	1.204	1.208	-0.3	88	0.00
42	MC	Toluene	0.841	0.801	4.8	84	0.00
43	T	trans-1,3-Dichloropropene	0.428	0.467	-9.1	82	0.00
44	T	1,1,2-Trichloroethane	0.257	0.234	8.9	82	0.00
45	T	Tetrachloroethene	0.352	0.317	9.9	82	0.00
46	T	1,3-Dichloropropane	0.518	0.473	8.7	81	0.00
47	T	2-Hexanone	0.241	0.235	2.5	84	0.00
48	T	Dibromochloromethane	0.306	0.318	-3.9	84	0.00
49	T	1,2-Dibromoethane (EDB)	0.300	0.283	5.7	81	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4183.D
Acq On : 9 Jun 2015 9:43
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 09 12:55:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50	I	Chlorobenzene-d5	1.000	1.000	0.0	89	0.00
51	MP	Chlorobenzene	1.044	0.962	7.9	85	0.00
52	T	1,1,1,2-Tetrachloroethane	0.351	0.347	1.1	84	0.00
53	C	Ethylbenzene	1.722	1.563	9.2	82	0.00
54	T	m,p-Xylene	0.659	0.603	8.5	84	0.00
55	T	o-Xylene	0.657	0.620	5.6	85	0.00
56	T	Styrene	1.115	1.093	2.0	87	0.00
57	P	Bromoform	0.211	0.224	-6.2	84	0.00
58	T	Isopropylbenzene	1.676	1.529	8.8	82	0.00
59	S	Bromofluorobenzene	0.555	0.555	0.0	90	0.00
60	P	1,1,2,2-Tetrachloroethane	0.436	0.369	15.4	79	0.00
61	T	Bromobenzene	0.454	0.434	4.4	87	0.00
62	T	1,2,3-Trichloropropane	0.407	0.344	15.5	79	0.00
63	T	n-Propylbenzene	2.034	1.815	10.8	82	0.00
64	T	2-Chlorotoluene	1.310	1.186	9.5	84	0.00
65	T	1,3,5-Trimethylbenzene	1.463	1.346	8.0	84	0.00
66	T	4-Chlorotoluene	1.310	1.186	9.5	84	0.00
67	T	tert-Butylbenzene	1.183	1.097	7.3	82	0.00
68	T	1,2,4-Trimethylbenzene	1.455	1.358	6.7	86	0.00
69	T	sec-Butylbenzene	1.728	1.536	11.1	81	0.00
70	T	1,3-Dichlorobenzene	0.855	0.803	6.1	88	0.00
71	T	4-Isopropyltoluene	1.397	1.271	9.0	83	0.00
72	T	1,4-Dichlorobenzene	0.846	0.789	6.7	88	0.00
73	T	n-Butylbenzene	1.280	1.122	12.3	81	0.00
74	T	1,2-Dichlorobenzene	0.815	0.750	8.0	87	0.00
75	T	1,2-Dibromo-3-chloropropane	0.068	0.060	11.8	75	0.00
76	T	1,2,4-Trichlorobenzene	0.587	0.528	10.1	85	0.00
77	T	Hexachlorobutadiene	0.223	0.196	12.1	81	0.00
78	T	Naphthalene	1.078	0.964	10.6	80	0.00
79	T	1,2,3-Trichlorobenzene	0.458	0.396	13.5	83	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.247	0.212	14.2	78	0.00
81	T	Methyl acetate	0.261	0.226	13.4	81	0.00
82	T	Cyclohexane	0.518	0.461	11.0	77	0.00
83	T	Methylcyclohexane	0.553	0.466	15.7	75	0.00
84		Pentane	0.000	0.000	0.0	31#	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G3965.D

Date Analyzed: 05/27/2015

Instrument ID: MSD_G

Time Analyzed: 12:44

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	509138	6.21	778667	7.03	713270	10.38
	UPPER LIMIT	1018276	6.71	1557334	7.53	1426540	10.88
	LOWER LIMIT	254569	5.71	389333.5	6.53	356635	9.88
	LAB SAMPLE ID						
01	ICCV001	502764	6.21	779846	7.03	713010	10.38
02	ICC002	497264	6.21	766821	7.03	699684	10.38
03	ICC005	507054	6.21	785878	7.03	725413	10.38
04	ICC020	517915	6.21	786513	7.03	722760	10.38
05	ICC150	521725	6.21	791917	7.03	728015	10.38
06	ICC200	521966	6.21	784221	7.03	716316	10.38
07	ICV100	518963	6.21	779599	7.03	719644	10.38
08	BLKA150527a	517003	6.21	788318	7.03	726088	10.38
09	04256-008	521261	6.21	793817	7.03	740872	10.38
10	04256-009	515391	6.21	789409	7.03	723422	10.38
11	04256-003	519986	6.21	795335	7.03	740620	10.38
12	04256-004	515899	6.21	790260	7.03	725381	10.38
13	04296-002	510878	6.21	782789	7.03	716826	10.38
14	04296-001	518882	6.21	793584	7.03	728843	10.38
15	04295-001	458303	6.21	719639	7.03	646022	10.38
16	04256-001	500320	6.21	760207	7.03	680372	10.38
17	04256-005	502984	6.21	756221	7.03	684483	10.38
18	04256-007	514670	6.21	771384	7.03	695346	10.38
19	LCSA150527a	507446	6.21	752699	7.03	675259	10.38
20	4256-003MS	505867	6.21	757469	7.03	687542	10.38
21	4256-003MSD	511004	6.21	766244	7.03	694200	10.38
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G4183.D

Date Analyzed: 06/09/2015

Instrument ID: MSD_G

Time Analyzed: 9:43

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	447509	6.21	680831	7.03	638304	10.38
	UPPER LIMIT	895018	6.71	1361662	7.53	1276608	10.88
	LOWER LIMIT	223754.5	5.71	340415.5	6.53	319152	9.88
	LAB SAMPLE ID						
01	BLKA150609a	445564	6.21	680515	7.03	644540	10.37
02	04715-001	444439	6.21	672316	7.03	650888	10.37
03	04676-004	443850	6.21	683878	7.03	634849	10.37
04	04676-007	430860	6.21	647195	7.03	608549	10.37
05	04676-001	431038	6.21	637726	7.03	560338	10.37
06	04676-002	436972	6.21	666544	7.03	580576	10.37
07	04676-003	437701	6.21	655556	7.03	601425	10.37
08	04676-005	439607	6.21	657559	7.03	565046	10.37
09	04703-001	422163	6.21	624921	7.03	548600	10.37
10	04681-005	426048	6.21	635023	7.03	569431	10.37
11	04681-006	437903	6.21	660220	7.03	611387	10.37
12	04681-001	431610	6.21	653909	7.03	614726	10.37
13	04681-002	435046	6.21	664656	7.03	611956	10.37
14	04681-003	439326	6.21	665026	7.03	611217	10.37
15	04681-004	424668	6.21	655505	7.03	620862	10.37
16	04652-005	434824	6.21	671246	7.03	618482	10.37
17	04652-003	435537	6.21	666491	7.03	621339	10.37
18	04652-006	430007	6.21	654433	7.03	604073	10.37
19	04676-006	434199	6.21	670453	7.03	612529	10.37
20	04683-001	439363	6.21	661996	7.03	614522	10.37
21	LCSA150609a	443480	6.21	667385	7.03	620245	10.37
22	4676-003MS	445346	6.21	665763	7.03	615503	10.37

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G4183.D

Date Analyzed: 06/09/2015

Instrument ID: MSD_G

Time Analyzed: 9:43

	50UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	447509		6.21		680831		7.03		638304		10.38	
	UPPER LIMIT	895018		6.71		1361662		7.53		1276608		10.88	
	LOWER LIMIT	223754.5		5.71		340415.5		6.53		319152		9.88	
	LAB SAMPLE ID												
23	4676-003MSD	441007		6.21		666771		7.03		616102		10.37	
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4196.D
Acq On : 9 Jun 2015 15:48
Operator : Sylvia
Sample : MW-11,04681-001,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 10 10:15:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	431610	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	653909	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	614726	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	213025	44.31	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 88.62%			
41) Toluene-d8	8.70	98	787171	50.01	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.02%			
59) Bromofluorobenzene	11.77	95	331952	48.66	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 97.32%			

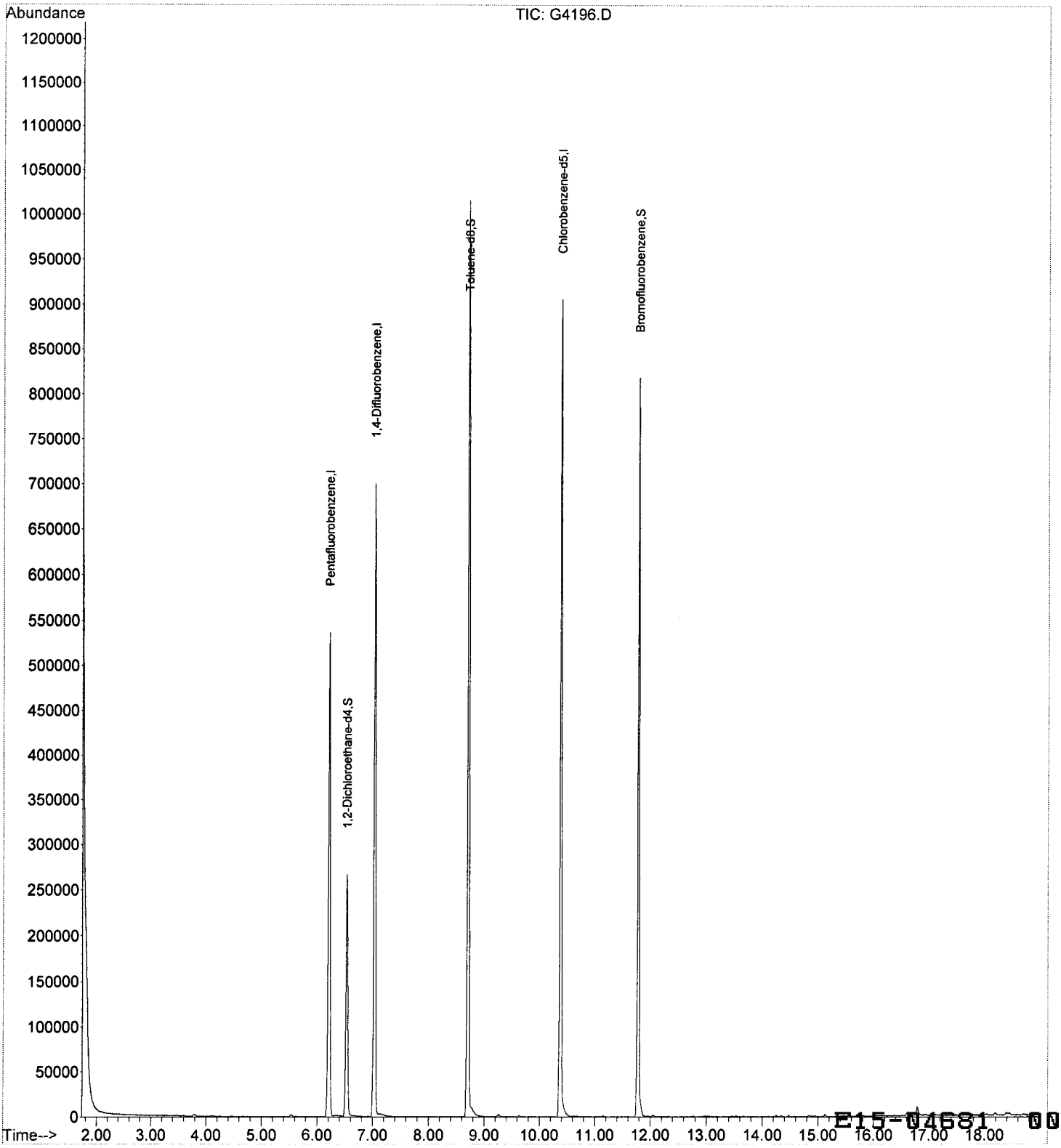
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4196.D
Acq On : 9 Jun 2015 15:48
Operator : Sylvia
Sample : MW-11,04681-001,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 10 10:15:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration



E15-04681 0059

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4196.D
Acq On : 9 Jun 2015 15:48
Operator : Sylvia
Sample : MW-11,04681-001,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	843	856	871	rBV	536529	1185731	58.53%	13.842%
2	6.521	905	916	954	rVB	266128	594641	29.35%	6.942%
3	7.028	1001	1013	1032	rBV	699982	1450122	71.58%	16.929%
4	8.702	1318	1333	1379	rBV	1016092	2026015	100.00%	23.652%
5	10.370	1640	1652	1691	rBV	905770	1787720	88.24%	20.870%
6	11.772	1910	1920	1948	rBV	817977	1494369	73.76%	17.445%
7	16.782	2867	2878	2899	rBV10	9527	27456	1.36%	0.321%

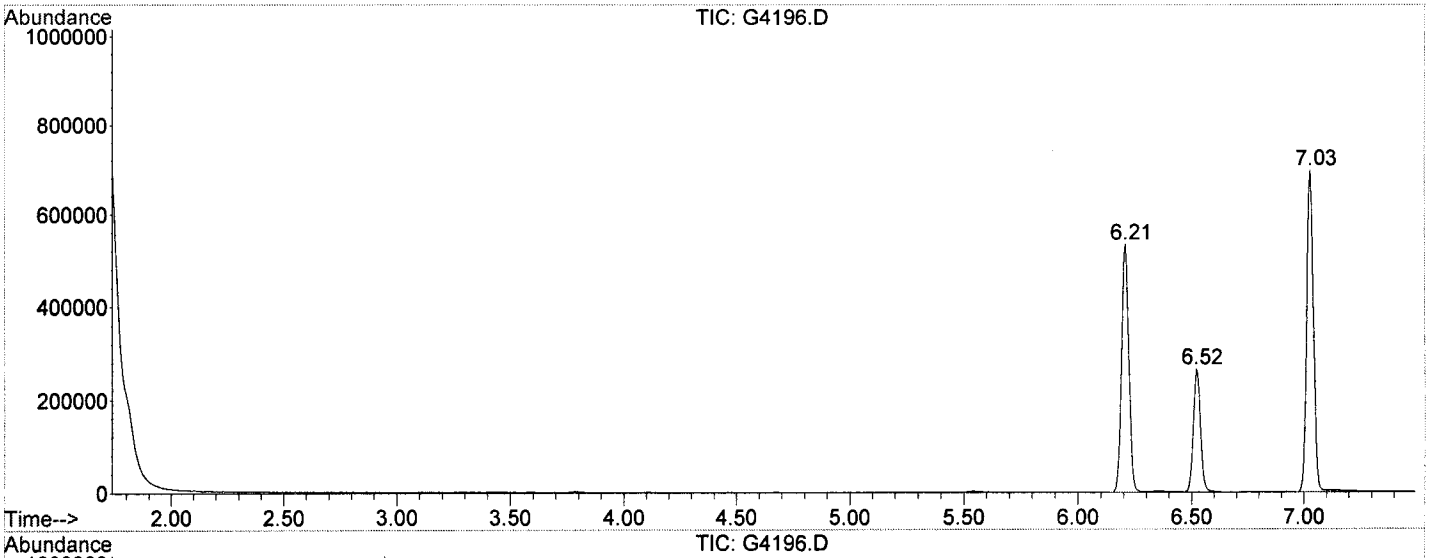
Sum of corrected areas: 8566054

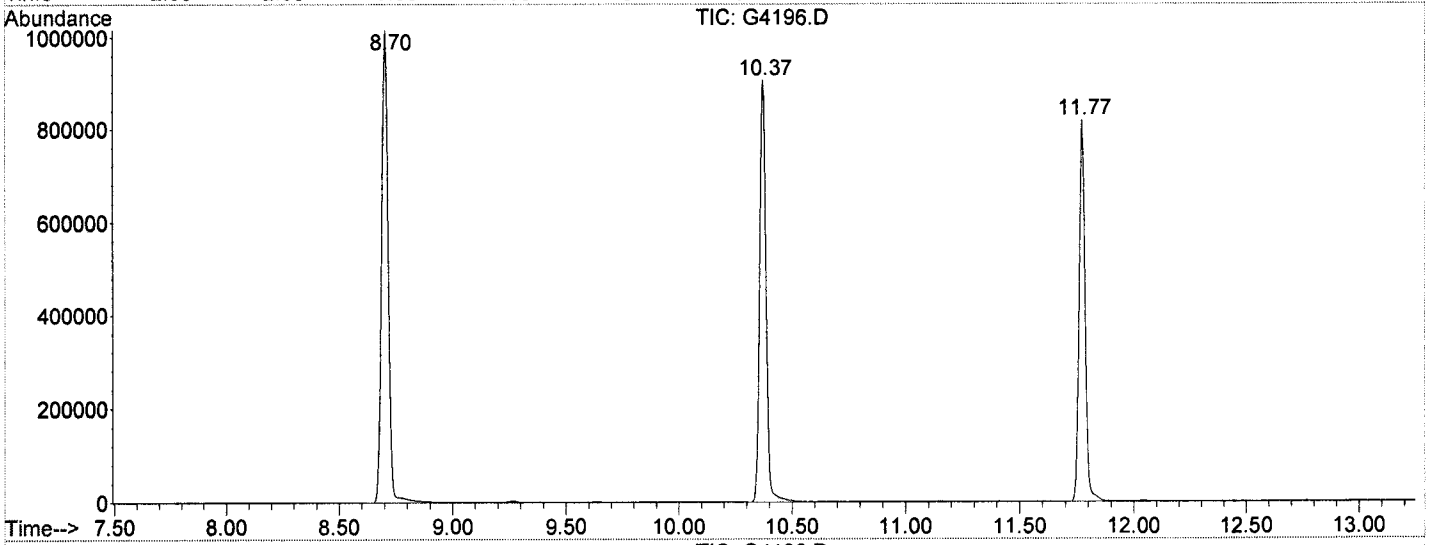
LSC Report - Integrated Chromatogram

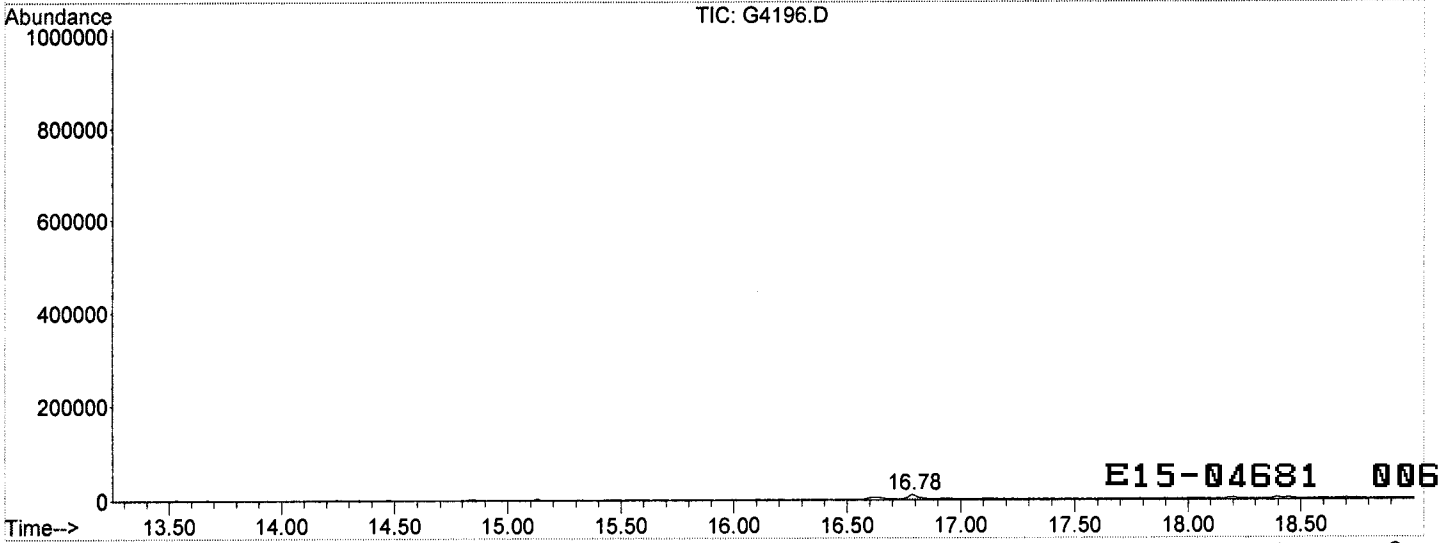
Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4196.D
Acq On : 9 Jun 2015 15:48
Operator : Sylvia
Sample : MW-11,04681-001,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-04681 0061

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4197.D
Acq On : 9 Jun 2015 16:17
Operator : Sylvia
Sample : MW-20,04681-002,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 10 10:17:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	435046	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	664656	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	611956	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	214472	44.26	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 88.52%			
41) Toluene-d8	8.70	98	789781	49.36	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.72%			
59) Bromofluorobenzene	11.77	95	334348	49.23	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 98.46%			

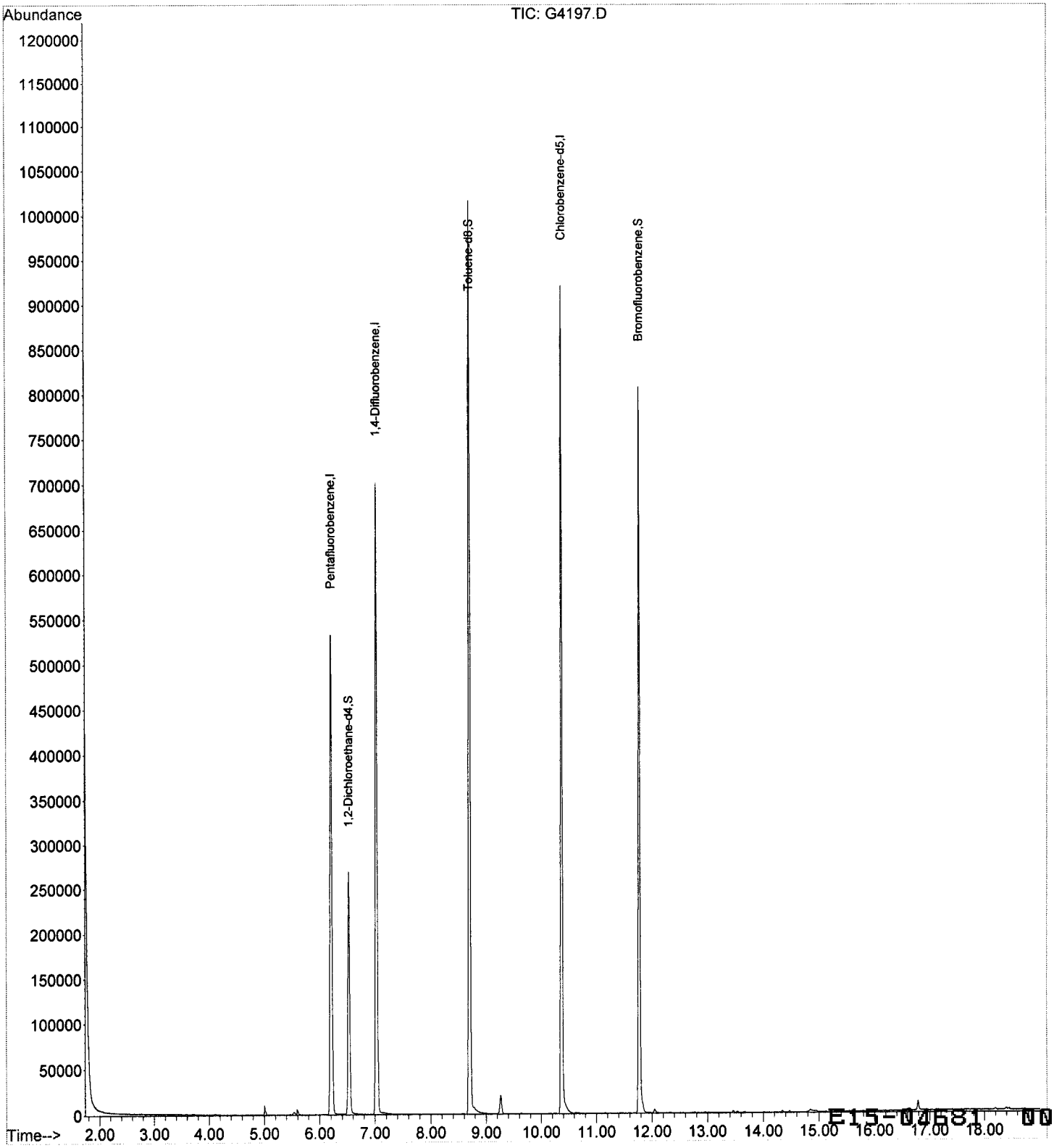
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4197.D
Acq On : 9 Jun 2015 16:17
Operator : Sylvia
Sample : MW-20,04681-002,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jun 10 10:17:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration



E15-04681 0063

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4197.D
Acq On : 9 Jun 2015 16:17
Operator : Sylvia
Sample : MW-20,04681-002,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	844	856	884	rBV	533018	1204217	59.19%	13.944%
2	6.521	903	916	942	rBV	267992	594827	29.24%	6.888%
3	7.028	1001	1013	1033	rBV	700964	1469282	72.22%	17.013%
4	8.702	1319	1333	1388	rBV	1016598	2034503	100.00%	23.558%
5	9.261	1428	1440	1453	rBV2	20451	46877	2.30%	0.543%
6	10.370	1640	1652	1695	rBV	920834	1781538	87.57%	20.629%
7	11.772	1909	1920	1946	rBV	807017	1479072	72.70%	17.127%
8	16.788	2868	2879	2898	rBV6	10487	25825	1.27%	0.299%

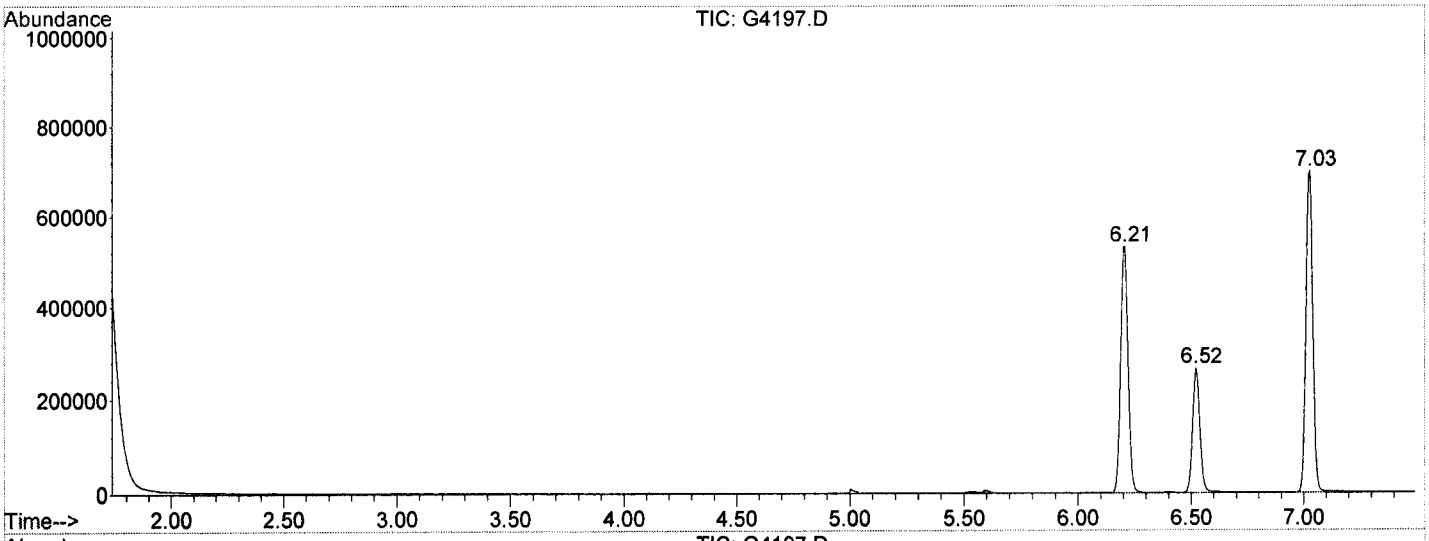
Sum of corrected areas: 8636141

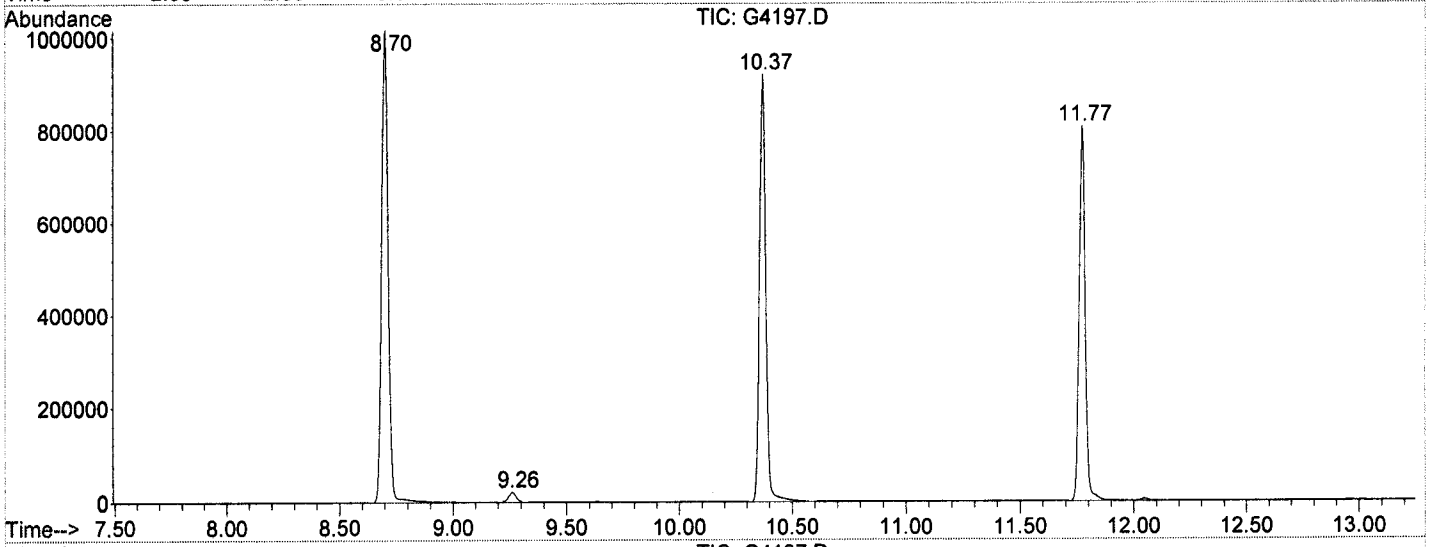
LSC Report - Integrated Chromatogram

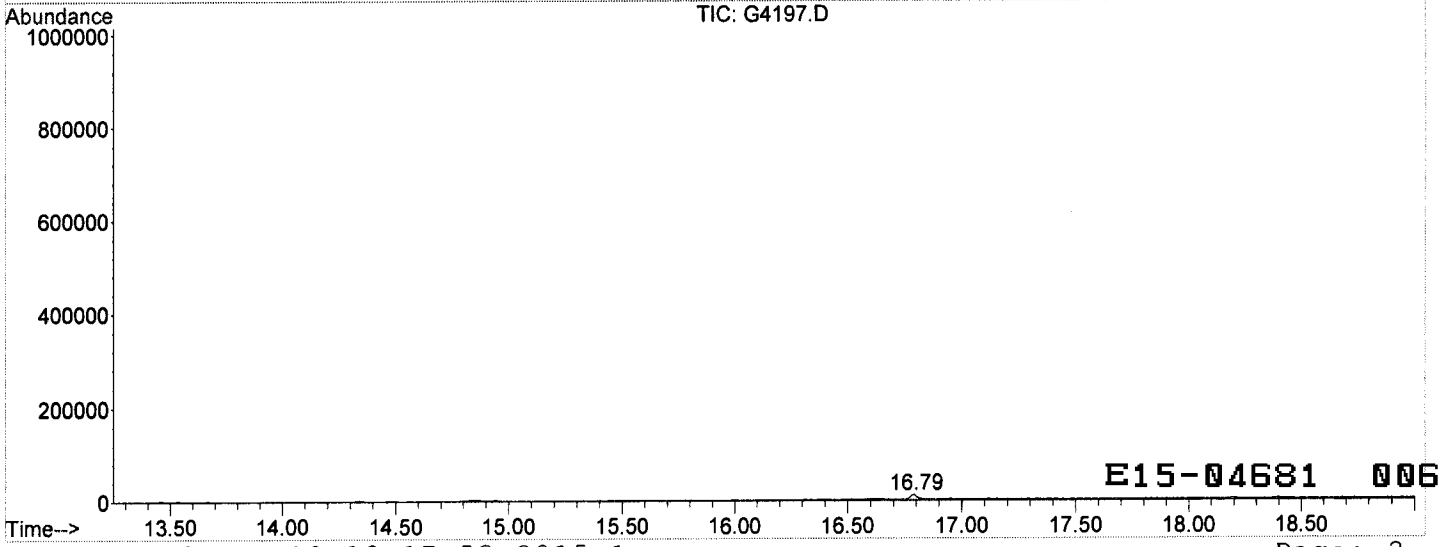
Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4197.D
Acq On : 9 Jun 2015 16:17
Operator : Sylvia
Sample : MW-20,04681-002,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-04681 0065

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4198.D
Acq On : 9 Jun 2015 16:45
Operator : Sylvia
Sample : MW-21,04681-003,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 10 10:18:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	439326	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	665026	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	611217	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	216638	44.27	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 88.54%			
41) Toluene-d8	8.70	98	793302	49.55	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.10%			
59) Bromofluorobenzene	11.77	95	333132	49.11	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 98.22%			

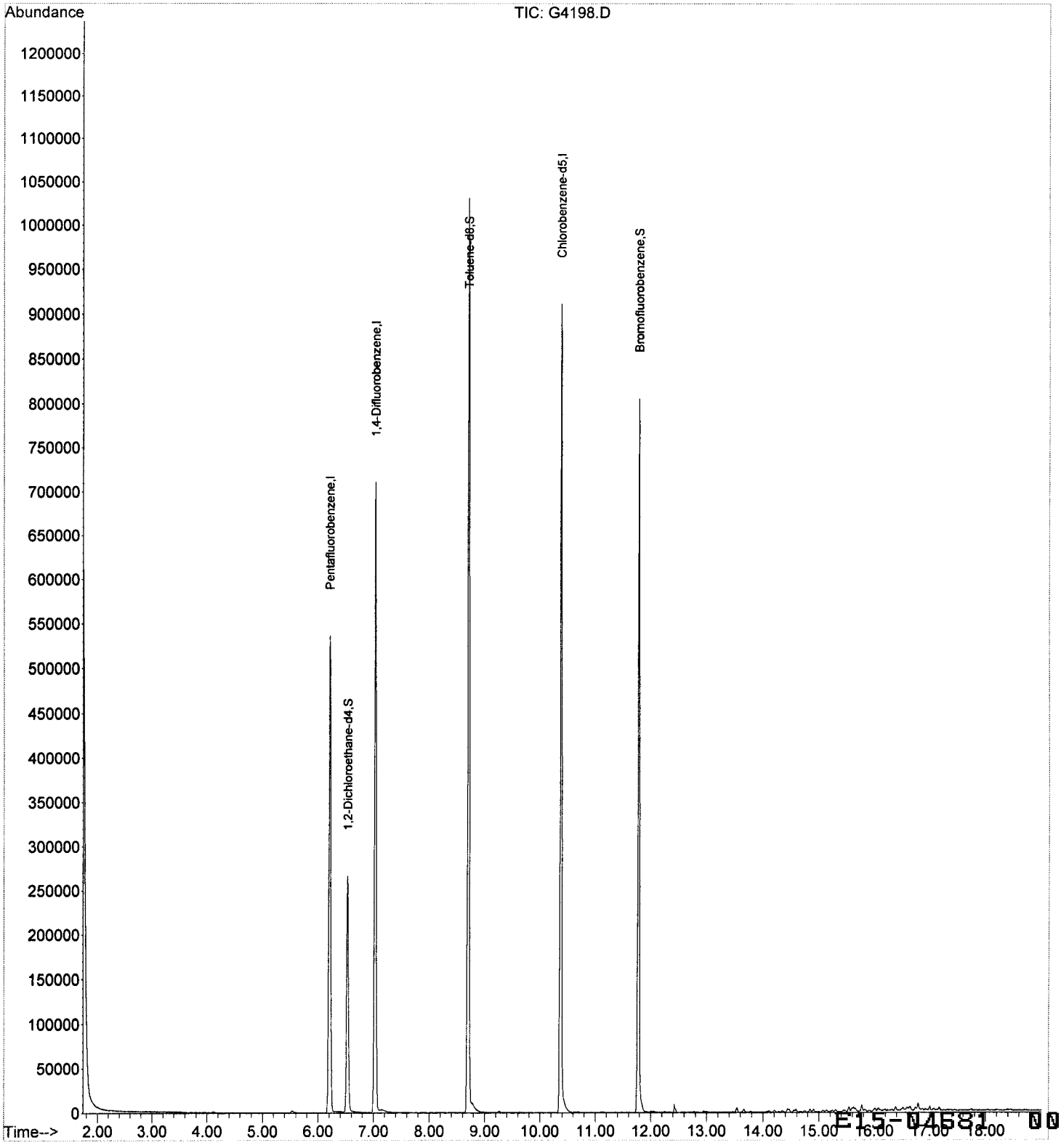
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4198.D
Acq On : 9 Jun 2015 16:45
Operator : Sylvia
Sample : MW-21,04681-003,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jun 10 10:18:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4198.D
Acq On : 9 Jun 2015 16:45
Operator : Sylvia
Sample : MW-21,04681-003,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	844	856	876	rBV	536249	1218550	59.61%	14.076%
2	6.526	904	917	961	rVB	265694	601170	29.41%	6.944%
3	7.028	1002	1013	1073	rBV	710407	1498637	73.31%	17.311%
4	8.702	1321	1333	1394	rBV	1031678	2044205	100.00%	23.613%
5	10.370	1640	1652	1696	rBV	911255	1784146	87.28%	20.609%
6	11.772	1910	1920	1945	rBV	805155	1488943	72.84%	17.199%
7	15.621	2645	2656	2670	rVB	4956	21412	1.05%	0.247%

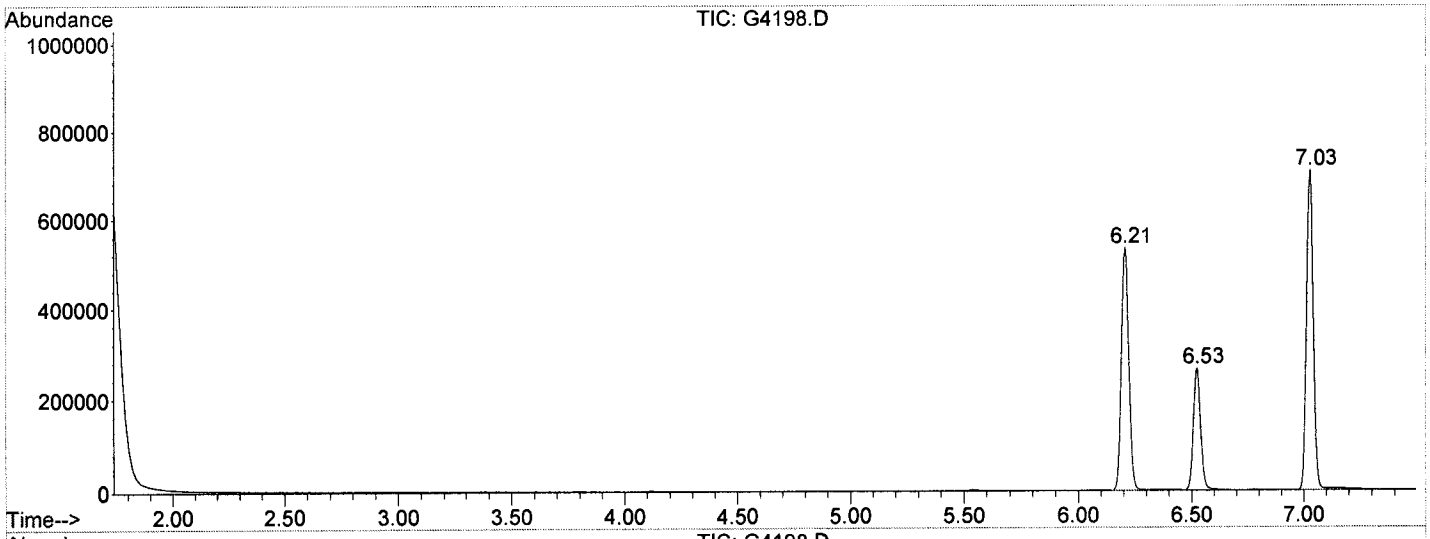
Sum of corrected areas: 8657063

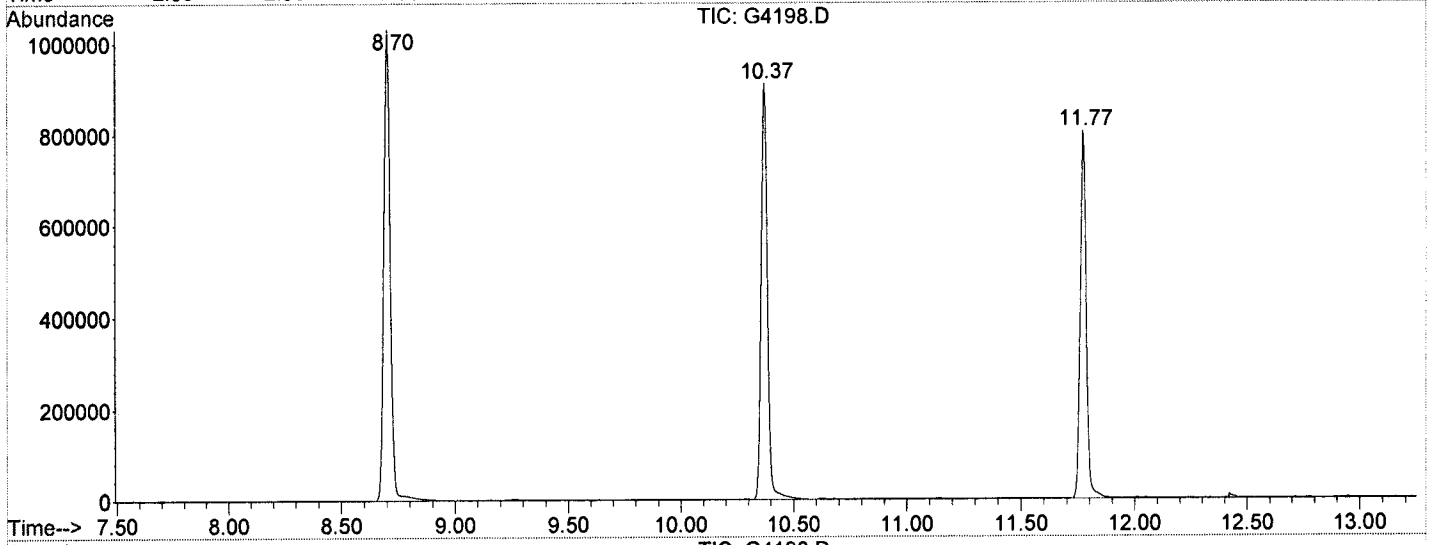
LSC Report - Integrated Chromatogram

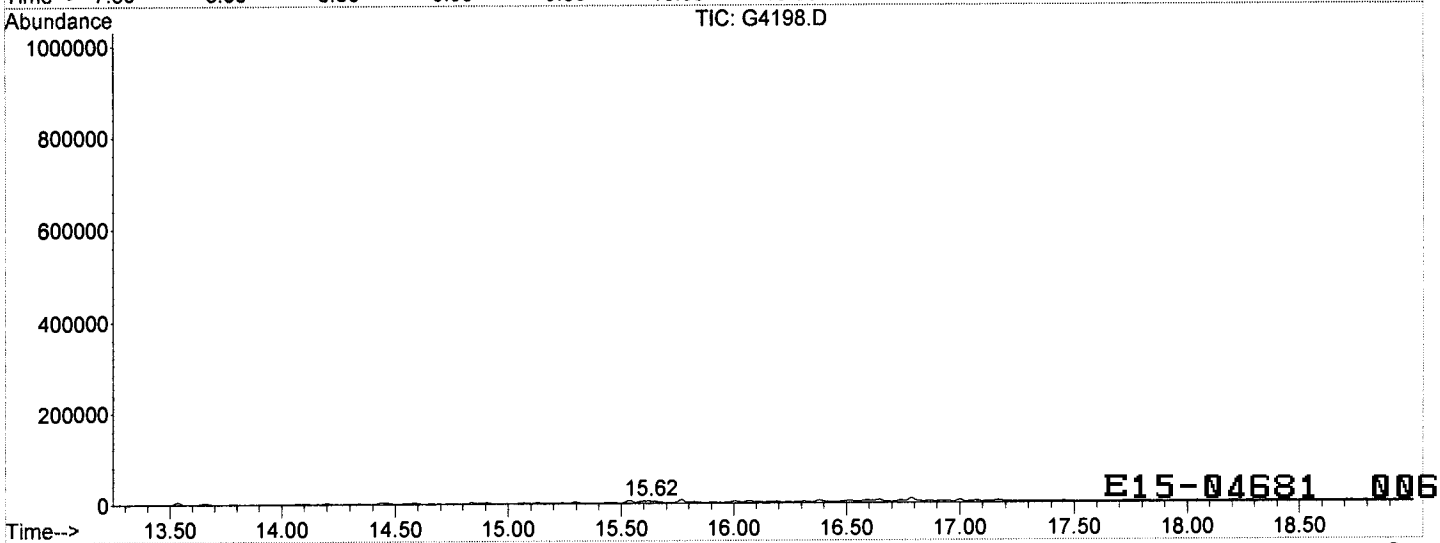
Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4198.D
Acq On : 9 Jun 2015 16:45
Operator : Sylvia
Sample : MW-21,04681-003,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-04681 0069

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4199.D
Acq On : 9 Jun 2015 17:13
Operator : Sylvia
Sample : MW-22,04681-004,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 10 10:21:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	424668	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	655505	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	620862	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	216381	45.75	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 91.50%			
41) Toluene-d8	8.70	98	791722	50.17	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.34%			
59) Bromofluorobenzene	11.77	95	335291	48.66	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 97.32%			

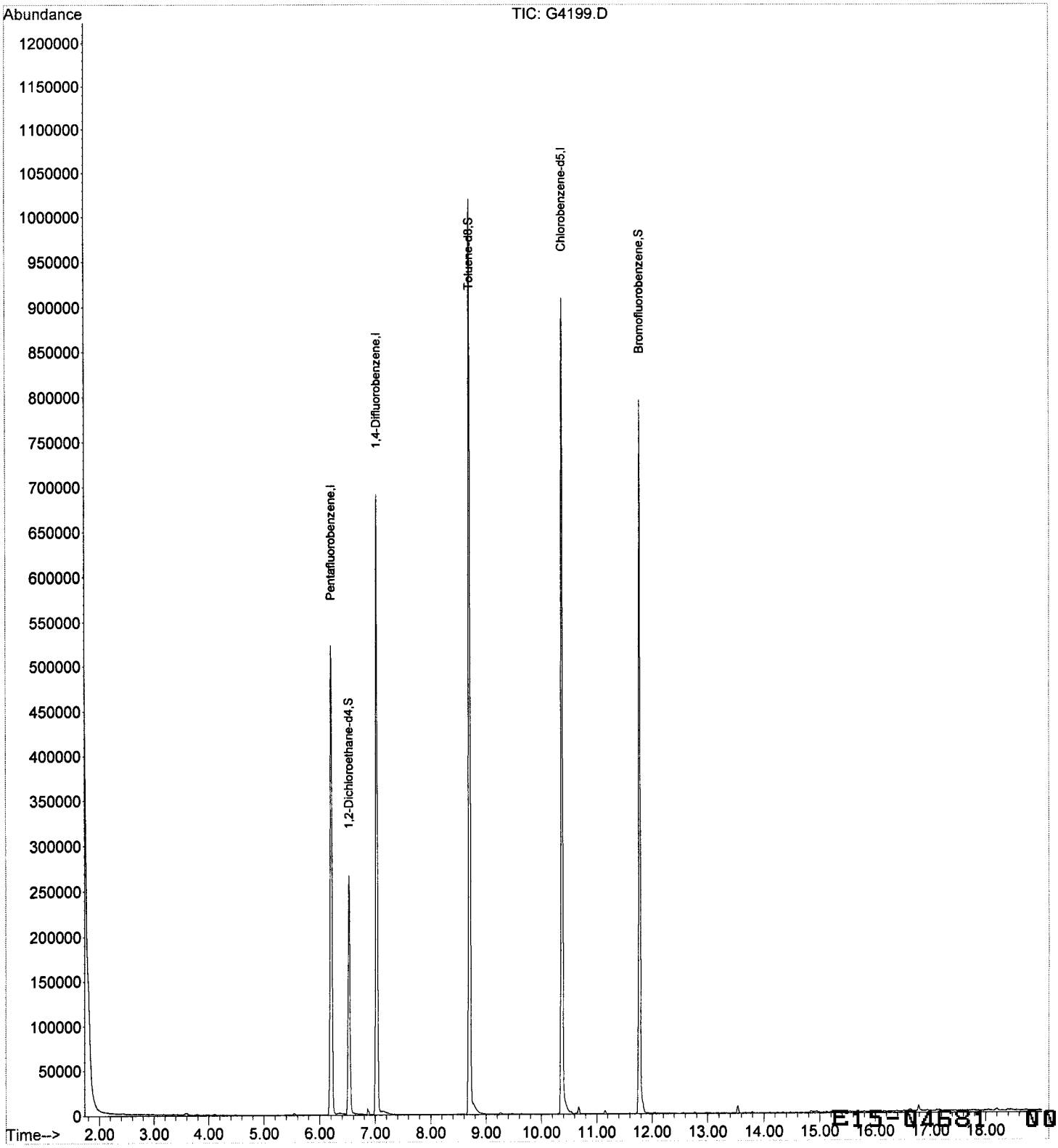
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4199.D
Acq On : 9 Jun 2015 17:13
Operator : Sylvia
Sample : MW-22,04681-004,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 10 10:21:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration



E15-04681 V071

LSC Area Percent Report

Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4199.D
Acq On : 9 Jun 2015 17:13
Operator : Sylvia
Sample : MW-22,04681-004,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	844	856	872	rBV	522490	1182680	57.88%	13.715%
2	6.521	904	916	979	rVB	266385	613079	30.01%	7.110%
3	7.028	1002	1013	1070	rBV	690684	1481957	72.53%	17.185%
4	8.702	1321	1333	1383	rBV	1019741	2043183	100.00%	23.694%
5	10.370	1642	1652	1682	rBV	909111	1803152	88.25%	20.910%
6	11.772	1906	1920	1948	rBV	795318	1499272	73.38%	17.386%

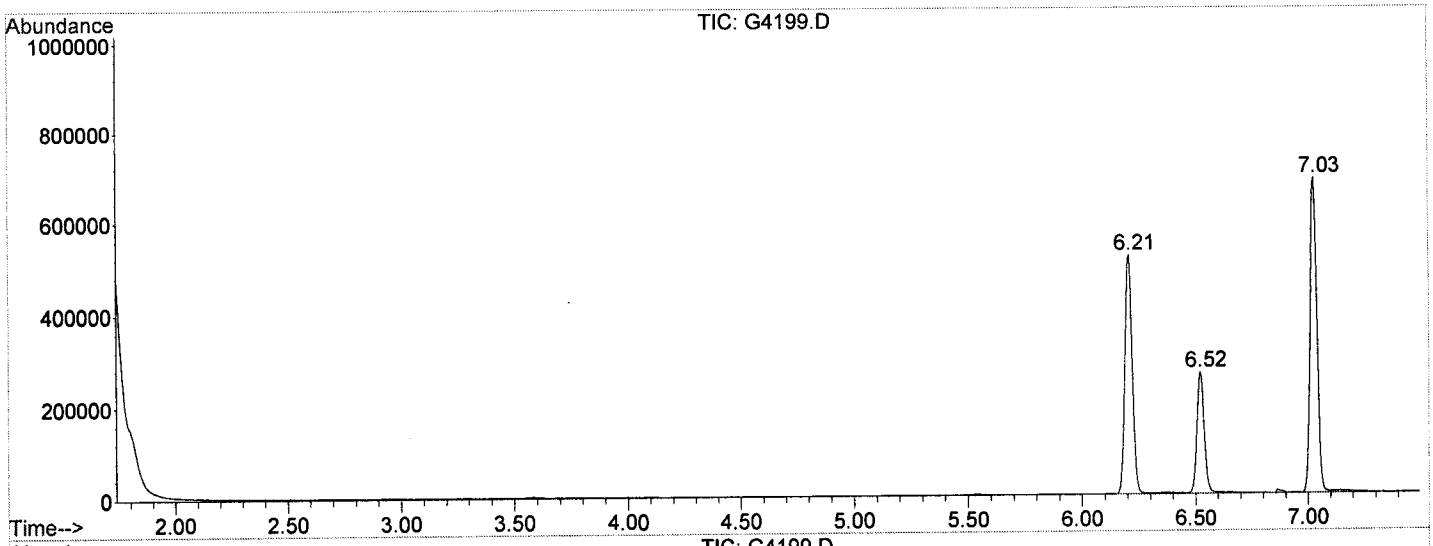
Sum of corrected areas: 8623323

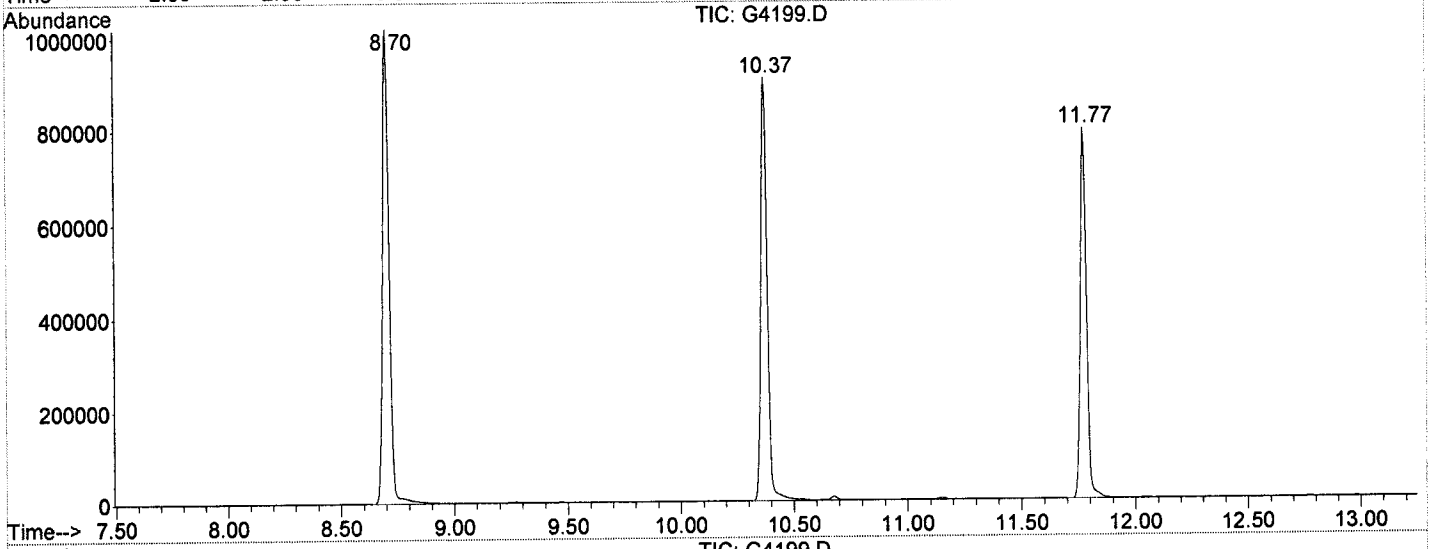
LSC Report - Integrated Chromatogram

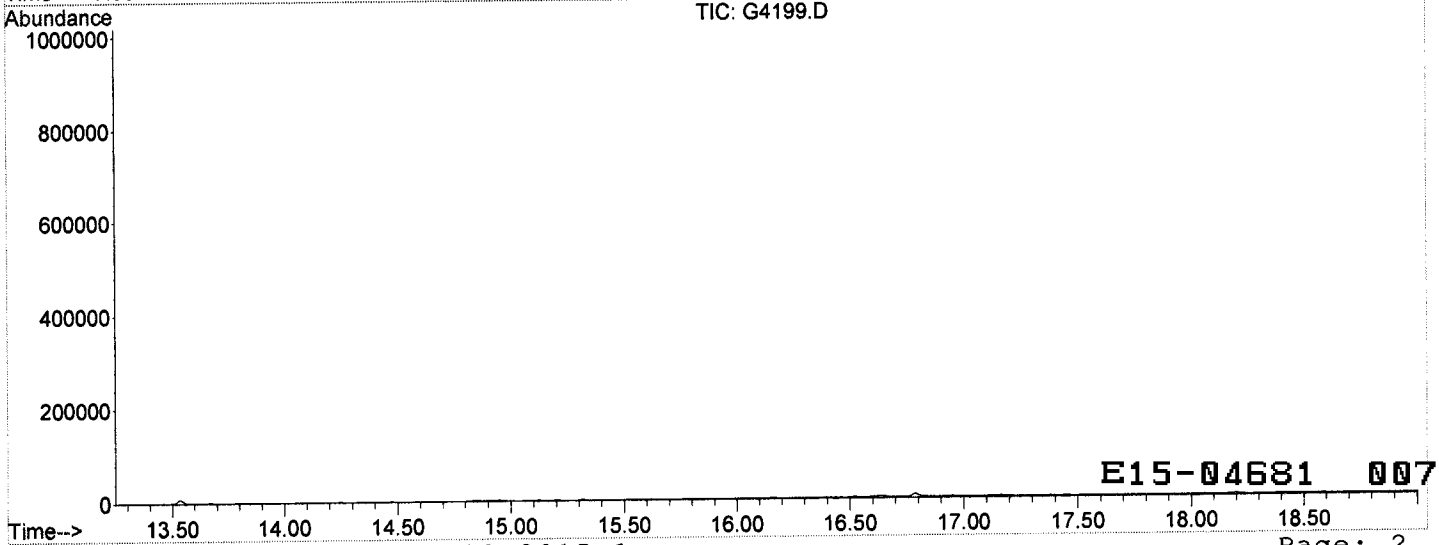
Data Path : C:\MSDCHEM\1\DATA\06-09-15\
Data File : G4199.D
Acq On : 9 Jun 2015 17:13
Operator : Sylvia
Sample : MW-22,04681-004,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-04681 0073

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4194.D
Acq On : 9 Jun 2015 14:52
Operator : Sylvia
Sample : FB,04681-005,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 09 15:50:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	426048	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	635023	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	569431	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	209926	44.24	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 88.48%			
41) Toluene-d8	8.70	98	739353	48.37	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.74%			
59) Bromofluorobenzene	11.77	95	313504	49.61	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 99.22%			

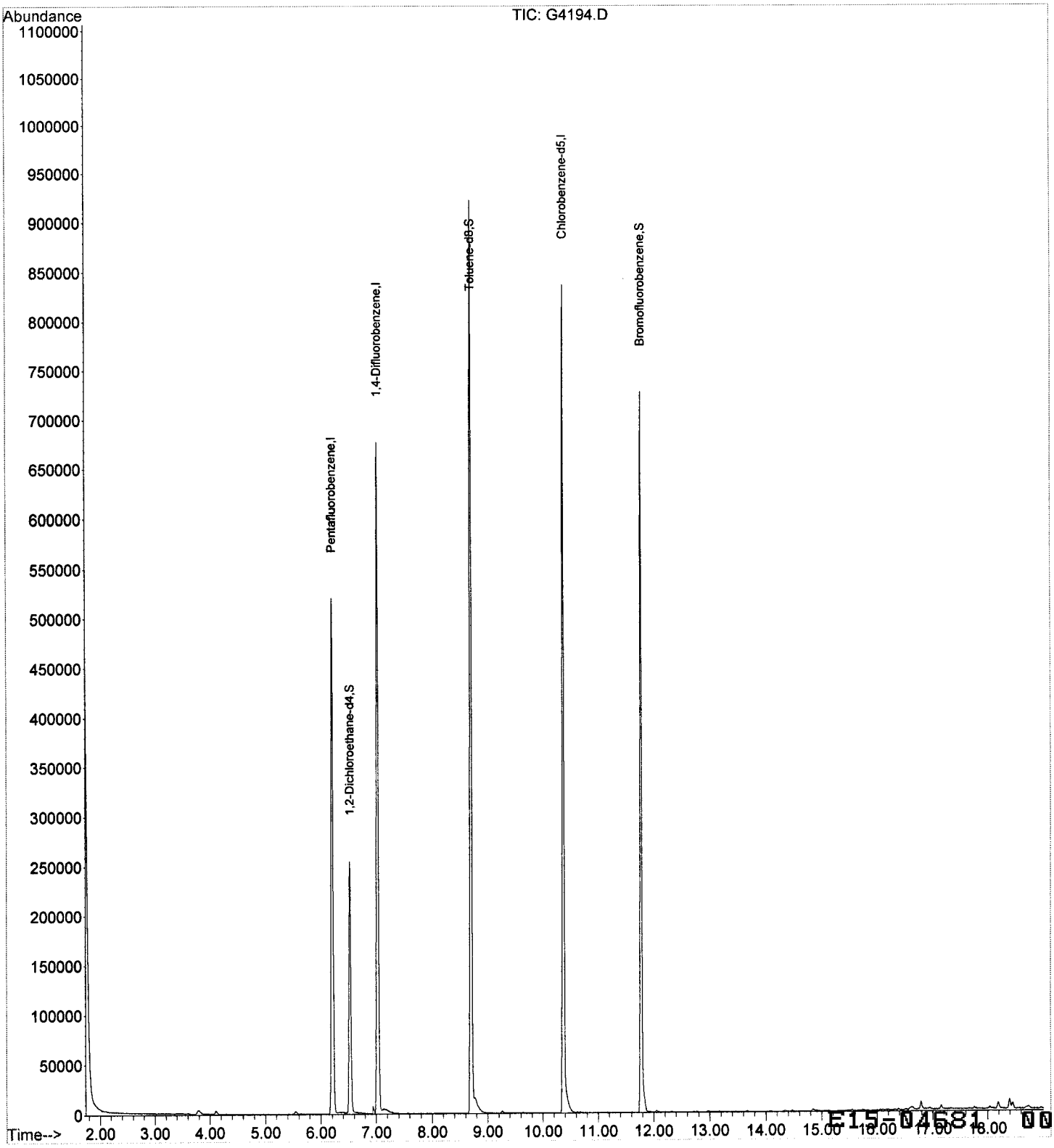
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4194.D
Acq On : 9 Jun 2015 14:52
Operator : Sylvia
Sample : FB,04681-005,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 09 15:50:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4194.D
Acq On : 9 Jun 2015 14:52
Operator : Sylvia
Sample : FB,04681-005,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON
Sampling : 1
Start Thrs: 0.1
Stop Thrs : 0.1

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	839	856	873	rBV	519903	1173047	61.55%	14.355%
2	6.526	903	917	939	rBV	253667	582300	30.55%	7.126%
3	7.028	1003	1013	1027	rBV	676167	1402761	73.60%	17.167%
4	7.148	1033	1036	1070	rVB6	4034	20677	1.08%	0.253%
5	8.702	1320	1333	1380	rBV	922547	1905986	100.00%	23.325%
6	10.370	1640	1652	1693	rBV	836474	1654633	86.81%	20.249%
7	11.772	1910	1920	1947	rBV	727271	1409479	73.95%	17.249%
8	18.393	3174	3186	3192	rBV4	9789	22540	1.18%	0.276%

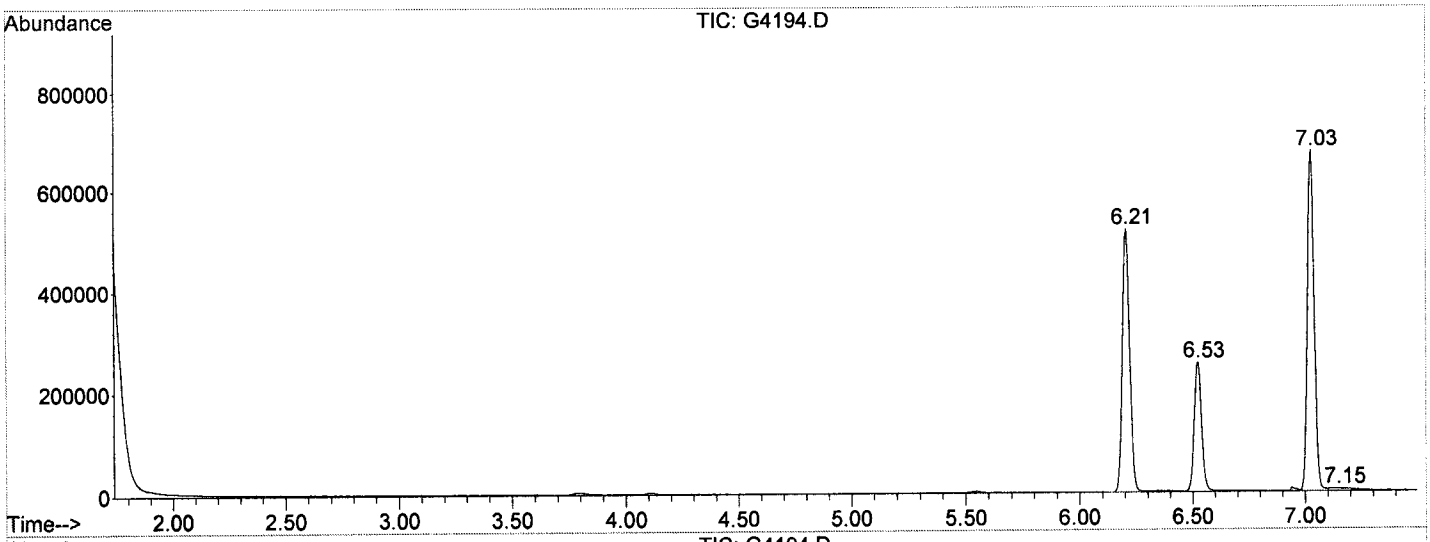
Sum of corrected areas: 8171423

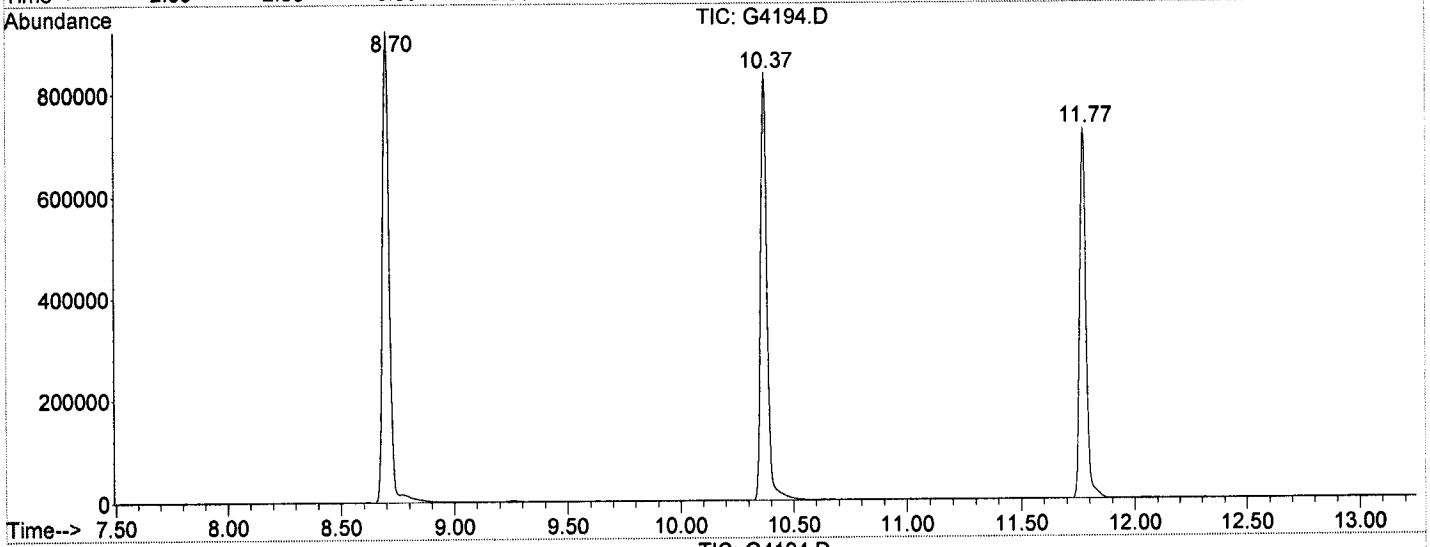
LSC Report - Integrated Chromatogram

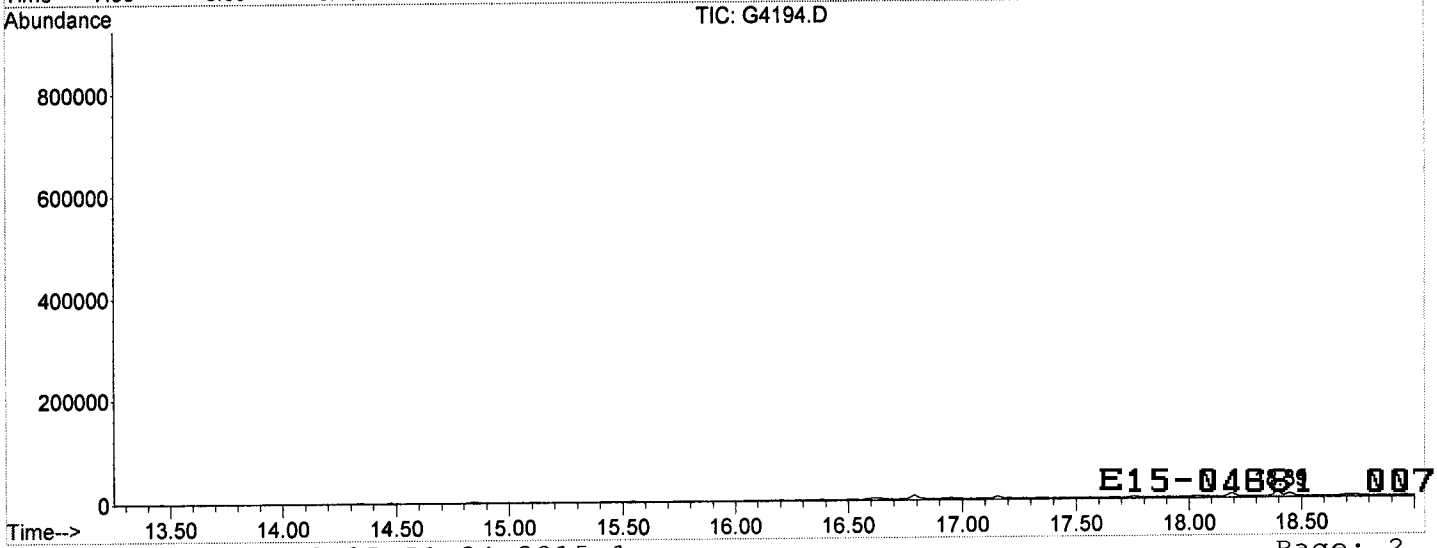
Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4194.D
Acq On : 9 Jun 2015 14:52
Operator : Sylvia
Sample : FB,04681-005,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-04681 0077

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4195.D
Acq On : 9 Jun 2015 15:20
Operator : Sylvia
Sample : TB,04681-006,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 09 15:52:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	437903	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	660220	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	611387	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	213176	43.71	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 87.42%			
41) Toluene-d8	8.70	98	786888	49.51	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.02%			
59) Bromofluorobenzene	11.77	95	330290	48.68	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 97.36%			

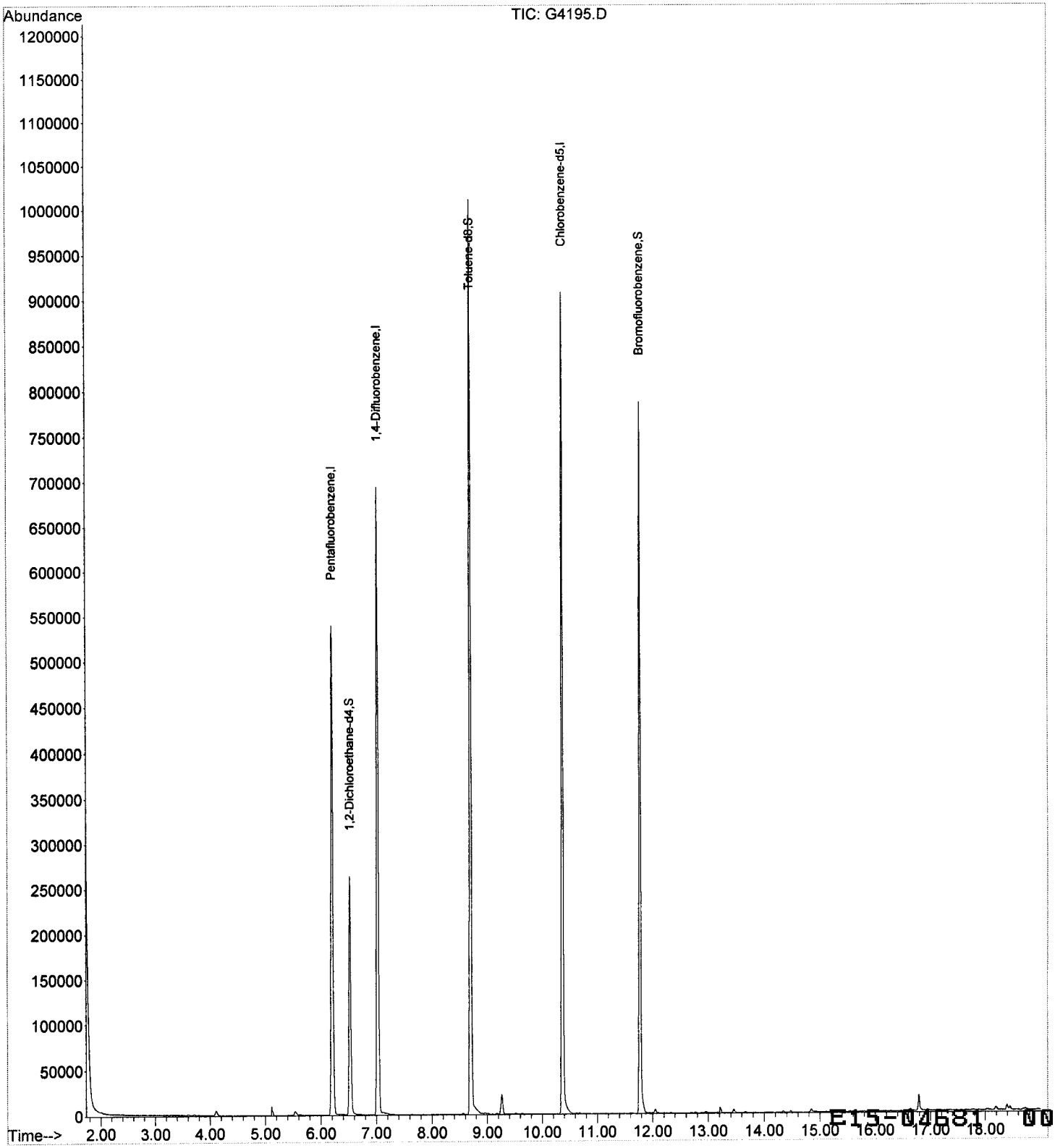
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4195.D
Acq On : 9 Jun 2015 15:20
Operator : Sylvia
Sample : TB,04681-006,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 09 15:52:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration



E15-04681 0079

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4195.D
Acq On : 9 Jun 2015 15:20
Operator : Sylvia
Sample : TB,04681-006,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON
Sampling : 1
Start Thrs: 0.1
Stop Thrs : 0.1

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	844	856	878	rBV	539470	1207222	59.63%	13.966%
2	6.521	905	916	943	rBV	263105	594209	29.35%	6.874%
3	7.028	1001	1013	1043	rBV	693320	1466626	72.44%	16.967%
4	8.702	1320	1333	1377	rBV	1011691	2024480	100.00%	23.420%
5	9.261	1429	1440	1453	rVB2	21810	51707	2.55%	0.598%
6	10.370	1639	1652	1688	rBV	907872	1783138	88.08%	20.628%
7	11.772	1905	1920	1947	rBV	786790	1477770	73.00%	17.096%
8	16.788	2869	2879	2895	rBV4	17960	38931	1.92%	0.450%

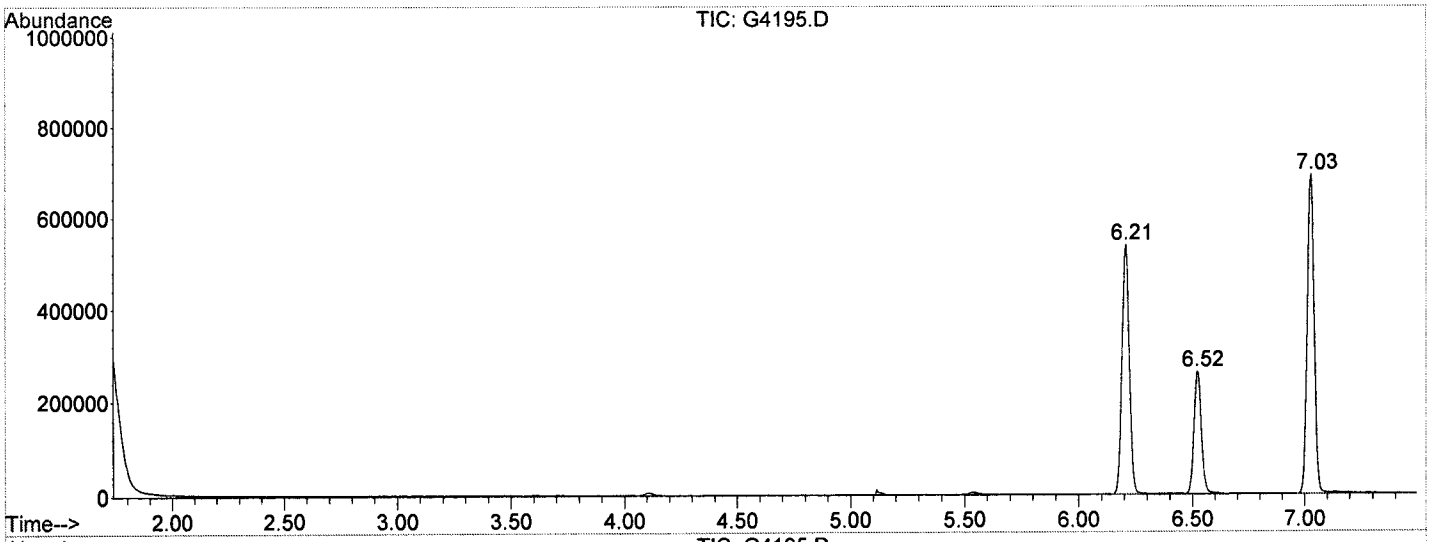
Sum of corrected areas: 8644083

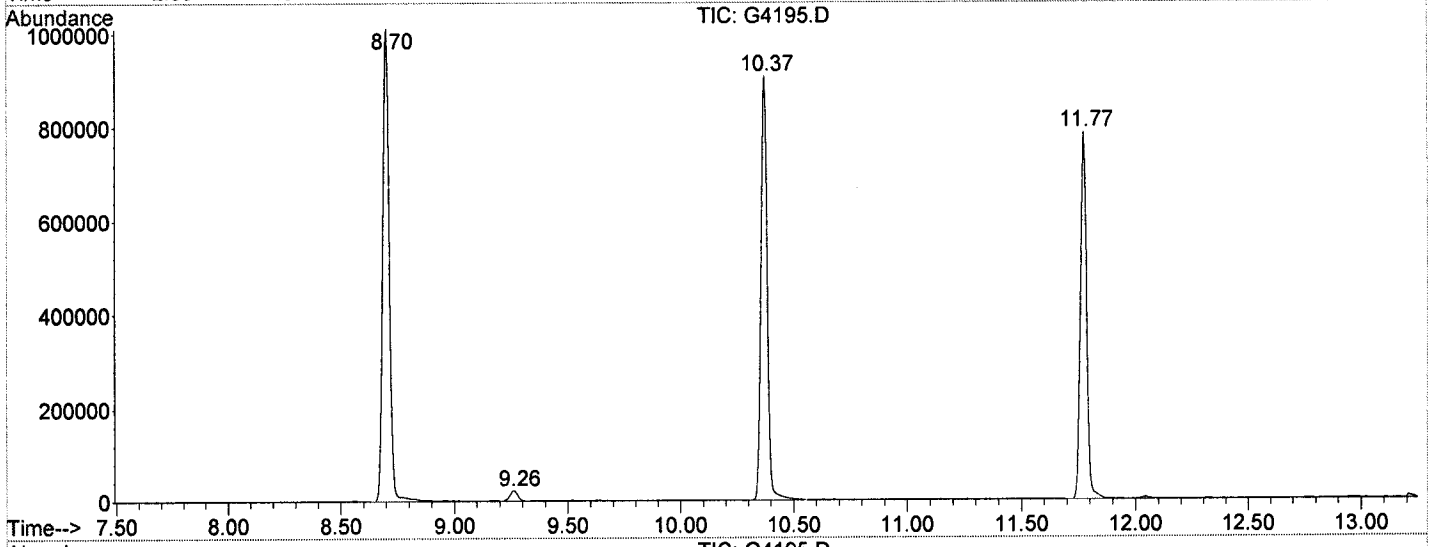
LSC Report - Integrated Chromatogram

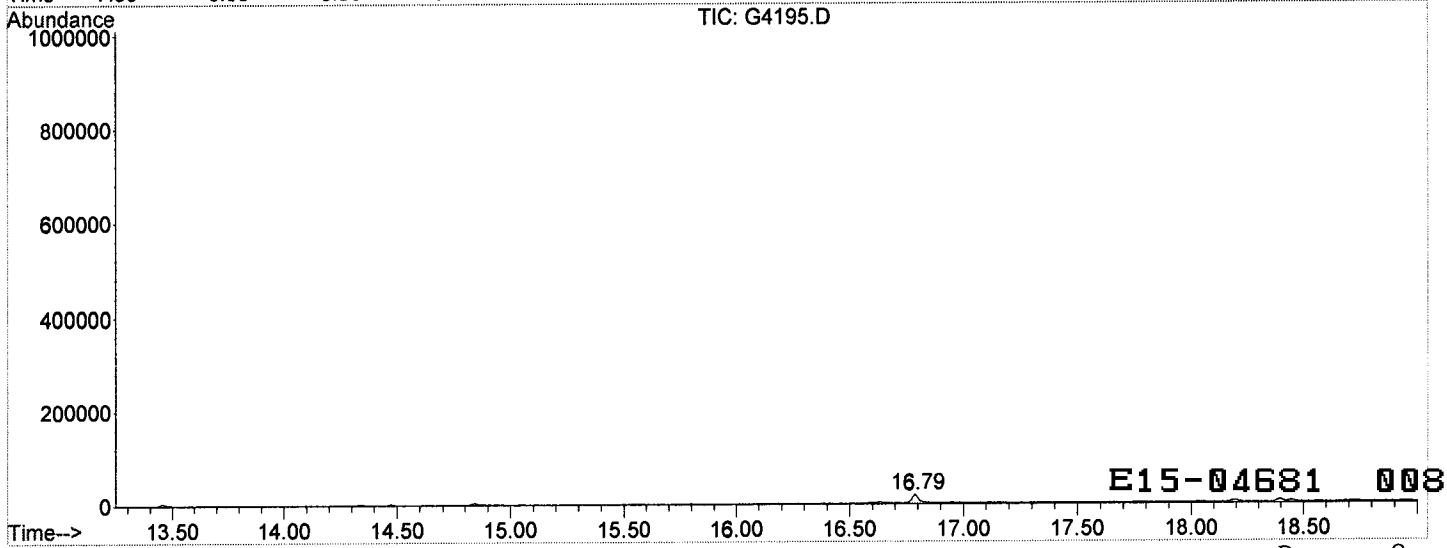
Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4195.D
Acq On : 9 Jun 2015 15:20
Operator : Sylvia
Sample : TB,04681-006,A,5mL,100
Misc : GEI/SEA_ISLE_CITY,06/03/15,06/04/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-04681 0081

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150609a
Client ID: BLKA150609a
Date Received: NA
Date Analyzed: 06/09/2015
Data file: G4185.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
tert-Butyl alcohol (TBA)	ND		4.00	1.87
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150609a
Client ID: BLKA150609a
Date Received: NA
Date Analyzed: 06/09/2015
Data file: G4185.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (53): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA150609a
Client ID: BLKA150609a
Date Received: NA
Date Analyzed: 06/09/2015
Data file: G4185.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4185.D
Acq On : 9 Jun 2015 10:40
Operator : Sylvia
Sample : BLKA150609a,BLKA150609a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 09 12:56:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	445564	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	680515	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	644540	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	224234	45.18	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 90.36%			
41) Toluene-d8	8.70	98	824653	50.34	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.68%			
59) Bromofluorobenzene	11.77	95	357836	50.03	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 100.06%			

Target Compounds	Qvalue

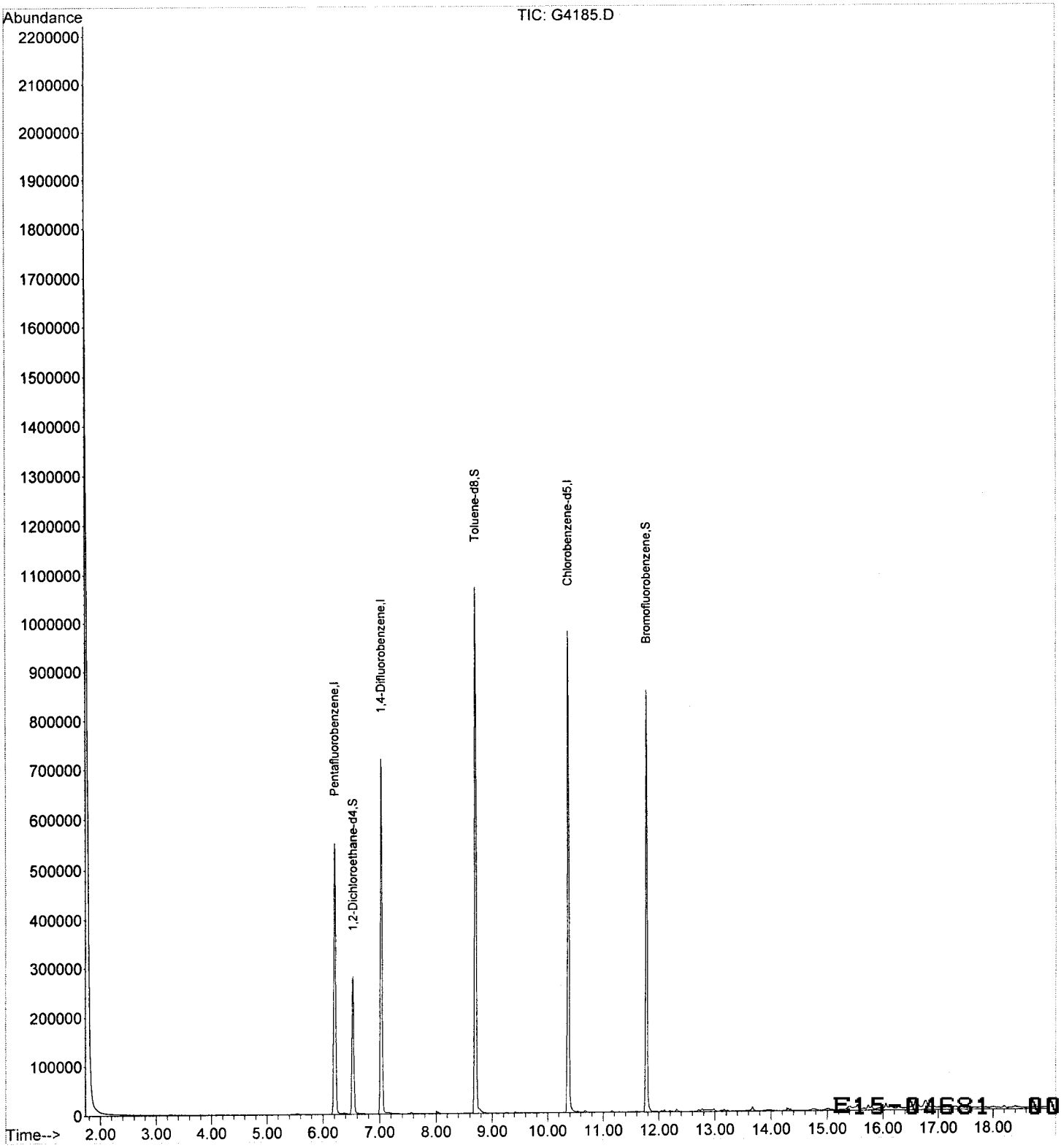
(#) = qualifier out of range (m) = manual integration (+) = signals summed

E15-04681 0085

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4185.D
Acq On : 9 Jun 2015 10:40
Operator : Sylvia
Sample : BLKA150609a,BLKA150609a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 09 12:56:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Wed May 27 14:47:55 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4185.D
Acq On : 9 Jun 2015 10:40
Operator : Sylvia
Sample : BLKA150609a,BLKA150609a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON
Sampling : 1
Start Thrs: 0.1
Stop Thrs : 0.1

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8052715.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	844	856	876	rBV	551600	1224064	57.66%	13.417%
2	6.526	906	917	930	rBV	280020	621000	29.25%	6.807%
3	7.028	1000	1013	1031	rBV	719154	1495945	70.46%	16.397%
4	8.702	1317	1333	1372	rBV	1070037	2123038	100.00%	23.270%
5	10.370	1639	1652	1681	rBV	977852	1868874	88.03%	20.485%
6	11.772	1910	1920	1945	rBV	856376	1600578	75.39%	17.544%
7	15.396	2594	2613	2626	rBV8	7025	37404	1.76%	0.410%
8	16.050	2728	2738	2747	rBV4	10168	23764	1.12%	0.260%
9	16.589	2826	2841	2862	rBV6	17907	69250	3.26%	0.759%
10	16.762	2862	2874	2895	rVB8	14113	59403	2.80%	0.651%

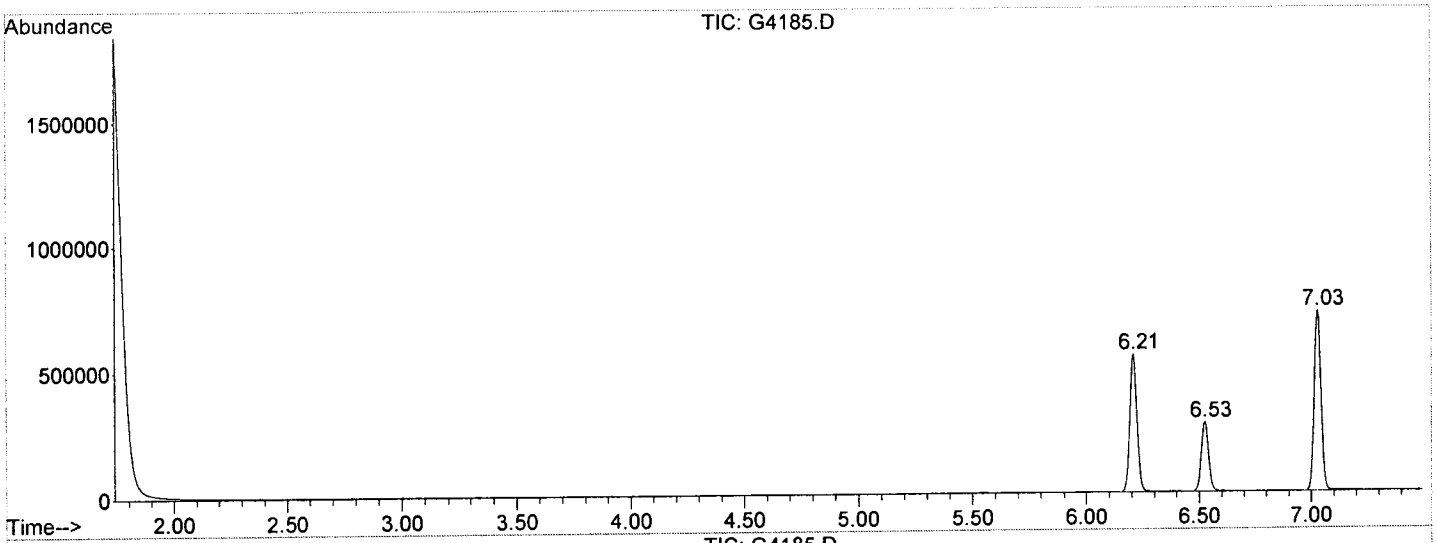
Sum of corrected areas: 9123320

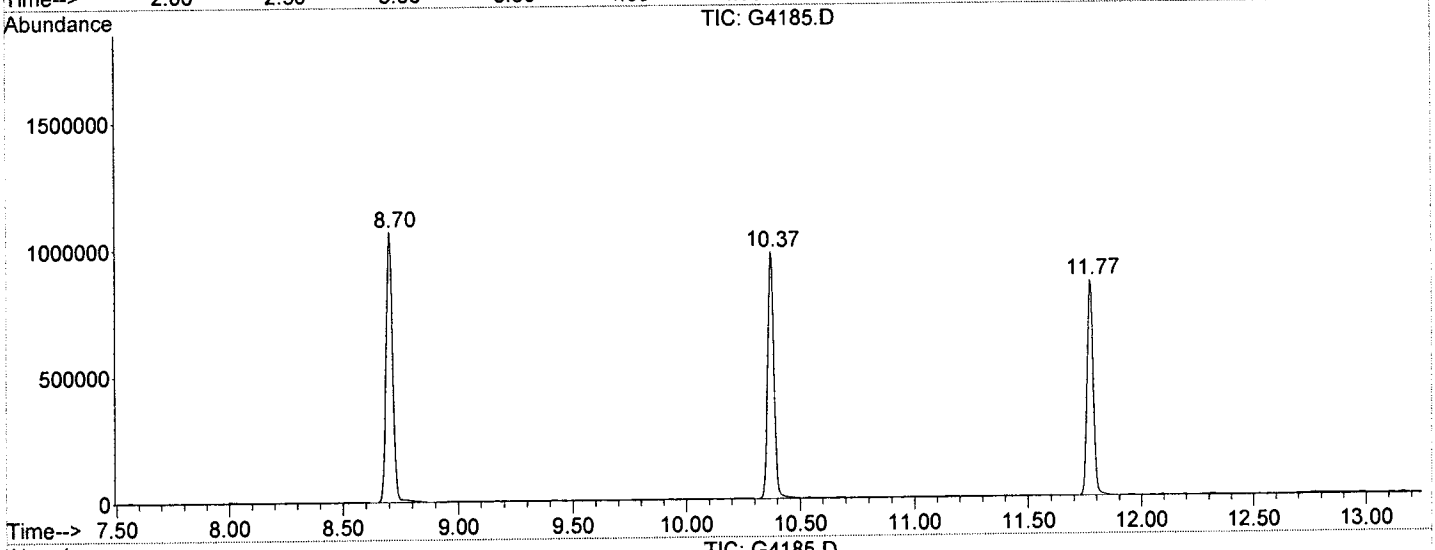
LSC Report - Integrated Chromatogram

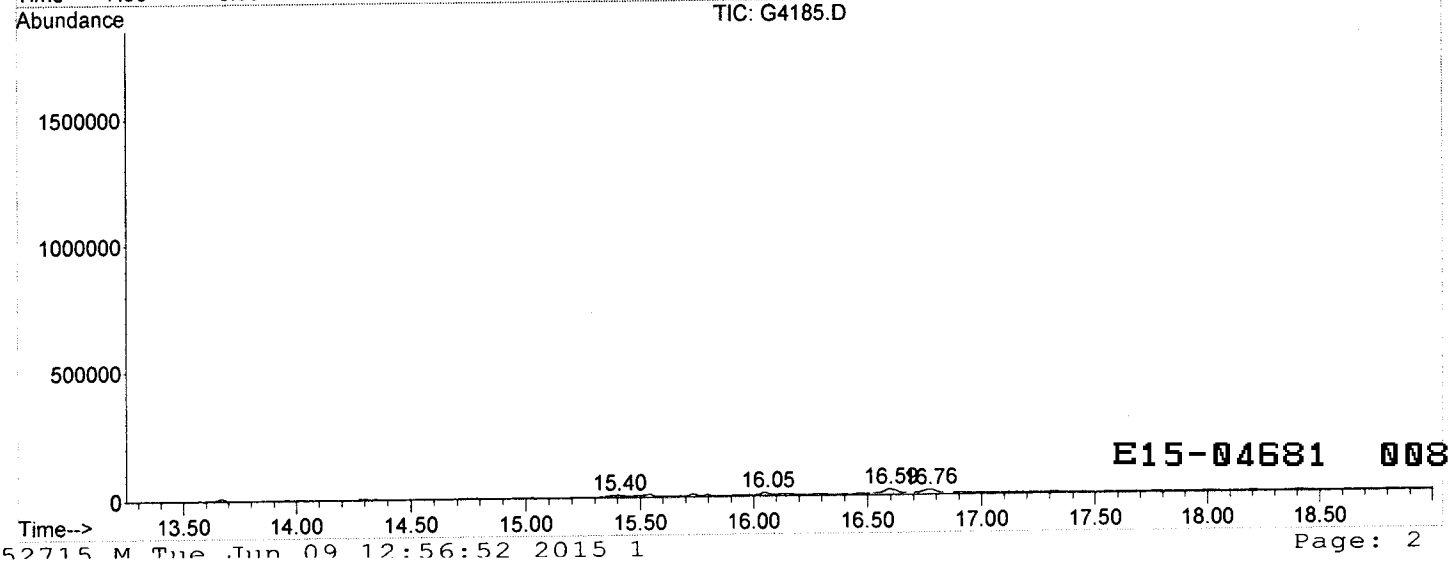
Data Path : C:\MSDChem\1\DATA\06-09-15\
Data File : G4185.D
Acq On : 9 Jun 2015 10:40
Operator : Sylvia
Sample : BLKA150609a,BLKA150609a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8052715.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-04681 0088

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS QC SUMMARY

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 06/05/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2		B0129.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKA150604-05	AQUEOUS	B0130.D	42		43		43		50		34		48	
LCSA150604-05	AQUEOUS	B0131.D	43		42		63		70		56		73	
E15-04515-001MS	AQUEOUS	B0132.D	56		46		88		80		82		82	
E15-04515-001MSD	AQUEOUS	B0133.D	55		44		76		79		85		84	
E15-04515-001	AQUEOUS	B0134.D	N/A		N/A		63		72		N/A		75	
E15-04514-001	AQUEOUS	B0135.D	N/A		N/A		61		70		N/A		74	
E15-04557-001	AQUEOUS	B0136.D	N/A		N/A		64		76		N/A		77	
E15-04557-002	AQUEOUS	B0137.D	N/A		N/A		60		67		N/A		72	
E15-04605-001	AQUEOUS	B0138.D	N/A		N/A		63		77		N/A		82	
E15-04605-002	AQUEOUS	B0139.D	N/A		N/A		61		70		N/A		75	
E15-04560-001	AQUEOUS	B0140.D	N/A		N/A		49		56		N/A		52	
E15-04608-001	AQUEOUS	B0141.D	N/A		N/A		33		40		N/A		52	
E15-04608-002	AQUEOUS	B0142.D	N/A		N/A		52		63		N/A		67	
E15-04694-001	AQUEOUS	B0143.D	N/A		N/A		55		62		N/A		60	
E15-04695-001	AQUEOUS	B0144.D	N/A		N/A		50		49		N/A		47	
E15-04679-001	AQUEOUS	B0145.D	N/A		N/A		44		53		N/A		64	
E15-04684-001	AQUEOUS	B0146.D	N/A		N/A		54		63		N/A		70	
E15-04703-001	AQUEOUS	B0147.D	N/A		N/A		54		55		N/A		55	
E15-04683-001	AQUEOUS	B0148.D	N/A		N/A		34		45		N/A		64	
E15-04681-001	AQUEOUS	B0149.D	N/A		N/A		34		41		N/A		61	
E15-04681-002	AQUEOUS	B0150.D	N/A		N/A		57		64		N/A		68	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10-100	28-108
S2 (PHL) = Phenol-d5	15-110	30-130	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	22-115	35-126
S6 (TPH) = Terphenyl-d14	30-130	30-130	23-124	32-135

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 06/05/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
E15-04681-003	AQUEOUS	B0151.D	N/A		N/A		55		64		N/A		71	
E15-04681-004	AQUEOUS	B0152.D	N/A		N/A		53		62		N/A		71	
E15-04681-005	AQUEOUS	B0153.D	N/A		N/A		38		46		N/A		71	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10-100	28-108
S2 (PHL) = Phenol-d5	15-110	30-130	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	22-115	35-126
S6 (TPH) = Terphenyl-d14	30-130	30-130	23-124	32-135

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-04515-001
Date Received: 06/01/2015
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
MS Data file: B0132.D
MSD Data file: B0133.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD limits IAL	DKQP
N-Nitrosodimethylamine	40.0	0.0	20.5	51	$	20.9	52	$	2		40-140/20	70-130/20
Pyridine	40.0	0.0	15.7	39		15.5	39		1		20-120/20	20-160/20
Benzaldehyde	40.0	0.0	6.3	16	$	6.7	17	$	6		10-110/20	20-160/20
Phenol	40.0	0.0	24.5	61		24.4	61		0		30-140/20	20-160/20
Aniline	40.0	0.0	27.3	68	$	26.8	67	$	2		40-140/20	70-130/20
Bis(2-chloroethyl) ether	40.0	0.0	29.9	75		29.5	74		1		40-140/20	70-130/20
2-Chlorophenol	40.0	0.0	26.1	65		25.4	64		3		30-140/20	20-160/20
1,3-Dichlorobenzene	40.0	0.0	29.1	73		28.9	72		1		40-140/20	70-130/20
1,4-Dichlorobenzene	40.0	0.0	25.8	65	$	25.8	65	$	0		40-140/20	70-130/20
Benzyl alcohol	40.0	0.0	27.8	70		27.9	70		0		40-140/20	70-130/20
1,2-Dichlorobenzene	40.0	0.0	28.4	71		28.2	71		1		40-140/20	70-130/20
2-Methylphenol	40.0	0.0	27.4	69		27.2	68		1		30-140/20	20-160/20
Bis(2-chloroisopropyl) ether	40.0	0.0	33.1	83		32.6	82		2		40-140/20	70-130/20
4-Methylphenol	40.0	0.0	27.4	69	$	27.2	68	$	1		30-140/20	70-130/20
N-Nitrosodi-n-propylamine	40.0	0.0	33.3	83		32.9	82		1		40-140/20	70-130/20
Acetophenone	40.0	0.0	29.5	74		29.5	74		0		40-140/20	70-130/20
3-Methylphenol	40.0	0.0	27.4	69		27.2	68		1		30-140/20	20-160/20
Hexachloroethane	40.0	0.0	27.4	69	$	27.5	69	$	0		40-140/20	70-130/20
Nitrobenzene	40.0	0.0	34.3	86		29.5	74		15		40-140/20	70-130/20
Isophorone	40.0	0.0	37.3	93		31.8	80		16		40-140/20	70-130/20
2-Nitrophenol	40.0	0.0	30.7	77		27.0	68		13		30-140/20	20-160/20
2,4-Dimethylphenol	40.0	0.0	35.2	88		30.6	77		14		30-140/20	20-160/20
Bis(2-chloroethoxy) methane	40.0	0.0	36.5	91		31.4	79		15		40-140/20	70-130/20
Benzoic acid	40.0	0.0	12.3	31		13.7	34		11		30-140/20	20-160/20
2,4-Dimethylaniline	40.0	0.0	44.2	111		37.8	95		16		40-140/20	70-130/20
2,4-Dichlorophenol	40.0	0.0	32.4	81		28.2	71		14		30-140/20	20-160/20
1,2,4-Trichlorobenzene	40.0	0.0	33.7	84		29.1	73		15		40-140/20	70-130/20
Naphthalene	40.0	0.0	34.0	85		29.1	73		16		40-140/20	70-130/20
4-Chloroaniline	40.0	0.0	48.3	121		41.9	105		14		40-140/20	70-130/20
Hexachlorobutadiene	40.0	0.0	33.7	84		27.9	70		19		40-140/20	70-130/20
Caprolactam	40.0	0.0	29.0	73		27.3	68	$	6		40-140/20	70-130/20
4-Chloro-3-methylphenol	40.0	0.0	37.8	95		32.4	81		15		30-140/20	20-160/20
2-Methylnaphthalene	40.0	0.0	35.9	90		30.9	77		15		40-140/20	70-130/20
Hexachlorocyclopentadiene	40.0	0.0	32.0	80		32.9	82		3		5-105/20	20-160/20
2,4,6-Trichlorophenol	40.0	0.0	24.1	60		26.3	66		9		30-140/20	20-160/20
2,4,5-Trichlorophenol	40.0	0.0	27.2	68		29.3	73		7		30-140/20	20-160/20
1,1'-Biphenyl	40.0	0.0	29.6	74		29.5	74		0		40-140/20	70-130/20
2-Chloronaphthalene	40.0	0.0	30.4	76		30.5	76		0		40-140/20	70-130/20
2-Nitroaniline	40.0	0.0	33.6	84		35.1	88		4		40-140/20	70-130/20
Dimethyl phthalate	40.0	0.0	34.2	86		34.0	85		1		40-140/20	70-130/20
2,6-Dinitrotoluene	40.0	0.0	38.1	95		38.4	96		1		40-140/20	70-130/20
Acenaphthylene	40.0	0.0	32.1	80		32.6	82		2		40-140/20	70-130/20
3-Nitroaniline	40.0	0.0	35.9	90		36.3	91		1		40-140/20	70-130/20
Acenaphthene	40.0	0.0	31.4	79		31.7	79		1		40-140/20	20-160/20
2,4-Dinitrophenol	40.0	0.0	18.5	46		19.1	48		3		5-105/20	20-160/20

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-04515-001
Date Received: 06/01/2015
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
MS Data file: B0132.D
MSD Data file: B0133.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD IAL Limits	Rec/RPD DKQP Limits
4-Nitrophenol	40.0	0.0	18.9	47		22.0	55		15		30-140/20	20-160/20
2,4-Dinitrotoluene	40.0	0.0	36.6	92		37.3	93		2		40-140/20	70-130/20
Dibenzofuran	40.0	0.0	31.8	80		31.9	80		0		40-140/20	70-130/20
Diethyl phthalate	40.0	0.0	36.0	90		36.2	91		1		40-140/20	70-130/20
Fluorene	40.0	0.0	33.5	84		33.7	84		1		40-140/20	70-130/20
4-Chlorophenyl phenyl ether	40.0	0.0	35.0	88		34.5	86		1		40-140/20	70-130/20
4-Nitroaniline	40.0	0.0	31.5	79		32.0	80		2		40-140/20	70-130/20
1,2,4,5-Tetrachlorobenzene	40.0	0.0	17.7	44	$	17.7	44	$	0		40-140/20	70-130/20
2,3,4,6-Tetrachlorophenol	40.0	0.0	35.5	89		42.0	105		17		40-140/20	70-130/20
4,6-Dinitro-2-methylphenol	40.0	0.0	25.6	64		25.5	64		0		10-110/20	20-160/20
N-Nitrosodiphenylamine	40.0	0.0	34.9	87		35.0	88		0		40-140/20	70-130/20
1,2-Diphenylhydrazine	40.0	0.0	30.8	77		30.3	76		2		40-140/20	70-130/20
4-Bromophenyl phenyl ether	40.0	0.0	32.9	82		32.1	80		2		40-140/20	70-130/20
Hexachlorobenzene	40.0	0.0	32.9	82		32.4	81		2		40-140/20	70-130/20
Atrazine	40.0	0.0	31.8	80		32.6	82		2		20-120/20	20-160/20
Pentachlorophenol	40.0	0.0	16.9	42		19.0	48		12		30-140/20	20-160/20
Phenanthrene	40.0	0.0	32.1	80		32.3	81		1		40-140/20	70-130/20
Anthracene	40.0	0.0	34.2	86		34.0	85		1		40-140/20	70-130/20
Carbazole	40.0	0.0	35.4	89		35.8	90		1		40-140/20	70-130/20
Di-n-butyl phthalate	40.0	0.0	36.9	92		37.4	94		1		40-140/20	70-130/20
Fluoranthene	40.0	0.0	34.4	86		34.8	87		1		40-140/20	70-130/20
Benzidine	40.0	0.0	17.2	43		18.3	46		6		5-105/20	20-160/20
Pyrene	40.0	0.0	32.2	81		32.8	82		2		40-140/20	70-130/20
3,3'-Dimethylbenzidine	40.0	0.0	15.7	39		15.9	40		1		5-105/20	20-160/20
Butyl benzyl phthalate	40.0	0.0	34.6	87		35.9	90		4		40-140/20	70-130/20
3,3'-Dichlorobenzidine	40.0	0.0	32.6	82		34.0	85		4		40-140/20	70-130/20
Benzo[a]anthracene	40.0	0.0	31.5	79		32.6	82		3		40-140/20	70-130/20
Chrysene	40.0	0.0	31.3	78		32.2	81		3		40-140/20	70-130/20
Bis(2-ethylhexyl) phthalate	40.0	0.0	34.0	85		35.1	88		3		40-140/20	70-130/20
Di-n-octyl phthalate	40.0	0.0	37.1	93		39.0	98		5		40-140/20	70-130/20
Benzo[b]fluoranthene	40.0	0.0	34.9	87		37.3	93		7		40-140/20	70-130/20
Benzo[k]fluoranthene	40.0	0.0	32.6	82		32.8	82		1		40-140/20	70-130/20
Benzo[a]pyrene	40.0	0.0	33.2	83		34.8	87		5		40-140/20	70-130/20
Indeno[1,2,3-cd]pyrene	40.0	0.0	32.3	81		33.7	84		4		40-140/20	70-130/20
Dibenz[a,h]anthracene	40.0	0.0	32.3	81		33.6	84		4		40-140/20	70-130/20
Benzo[g,h,i]perylene	40.0	0.0	31.4	79		33.4	84		6		40-140/20	70-130/20

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E15-04681 0094

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150604-05
Date Received: NA
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0131.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
N-Nitrosodimethylamine	30.0	18.2	61	$	40-140	70-130
Pyridine	30.0	14.2	47		20-120	20-160
Benzaldehyde	30.0	3.1	10	$	10-110	20-160
Phenol	30.0	19.9	66		30-140	20-160
Aniline	30.0	20.6	69	$	40-140	70-130
Bis(2-chloroethyl) ether	30.0	21.9	73		40-140	70-130
2-Chlorophenol	30.0	15.1	50		30-140	20-160
1,3-Dichlorobenzene	30.0	21.7	72		40-140	70-130
1,4-Dichlorobenzene	30.0	19.3	64	$	40-140	70-130
Benzyl alcohol	30.0	21.9	73		40-140	70-130
1,2-Dichlorobenzene	30.0	21.1	70		40-140	70-130
2-Methylphenol	30.0	20.3	68		30-140	20-160
Bis(2-chloroisopropyl) ether	30.0	24.4	81		40-140	70-130
4-Methylphenol	30.0	20.8	69	$	30-140	70-130
N-Nitrosodi-n-propylamine	30.0	24.3	81		40-140	70-130
Acetophenone	30.0	21.8	73		40-140	70-130
3-Methylphenol	30.0	20.8	69		30-140	20-160
Hexachloroethane	30.0	20.0	67	$	40-140	70-130
Nitrobenzene	30.0	21.5	72		40-140	70-130
Isophorone	30.0	23.5	78		40-140	70-130
2-Nitrophenol	30.0	14.6	49		30-140	20-160
2,4-Dimethylphenol	30.0	22.5	75		30-140	20-160
Bis(2-chloroethoxy) methane	30.0	23.1	77		40-140	70-130
Benzoic acid	30.0	14.9	50		30-140	20-160
2,4-Dimethylaniline	30.0	27.1	90		40-140	70-130
2,4-Dichlorophenol	30.0	16.1	54		30-140	20-160
1,2,4-Trichlorobenzene	30.0	21.5	72		40-140	70-130
Naphthalene	30.0	21.7	72		40-140	70-130
4-Chloroaniline	30.0	30.6	102		40-140	70-130
Hexachlorobutadiene	30.0	20.9	70		40-140	70-130
Caprolactam	30.0	17.2	57	$	40-140	70-130
4-Chloro-3-methylphenol	30.0	22.5	75		30-140	20-160
2-Methylnaphthalene	30.0	23.0	77		40-140	70-130
Hexachlorocyclopentadiene	30.0	21.9	73		5-105	20-160
2,4,6-Trichlorophenol	30.0	14.3	48		30-140	20-160
2,4,5-Trichlorophenol	30.0	16.2	54		30-140	20-160
1,1'-Biphenyl	30.0	22.1	74		40-140	70-130
2-Chloronaphthalene	30.0	22.5	75		40-140	70-130
2-Nitroaniline	30.0	23.9	80		40-140	70-130
Dimethyl phthalate	30.0	25.4	85		40-140	70-130
2,6-Dinitrotoluene	30.0	24.9	83		40-140	70-130
Acenaphthylene	30.0	23.9	80		40-140	70-130
3-Nitroaniline	30.0	25.6	85		40-140	70-130
Acenaphthene	30.0	23.6	79		40-140	20-160
2,4-Dinitrophenol	30.0	12.3	41		5-105	20-160

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150604-05
Date Received: NA
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0131.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	30.0	15.9	53		30-140	20-160
2,4-Dinitrotoluene	30.0	25.2	84		40-140	70-130
Dibenzofuran	30.0	24.2	81		40-140	70-130
Diethyl phthalate	30.0	27.1	90		40-140	70-130
Fluorene	30.0	25.2	84		40-140	70-130
4-Chlorophenyl phenyl ether	30.0	26.1	87		40-140	70-130
4-Nitroaniline	30.0	24.9	83		40-140	70-130
1,2,4,5-Tetrachlorobenzene	30.0	13.4	45	$	40-140	70-130
2,3,4,6-Tetrachlorophenol	30.0	23.0	77		40-140	70-130
4,6-Dinitro-2-methylphenol	30.0	16.0	53		10-110	20-160
N-Nitrosodiphenylamine	30.0	25.9	86		40-140	70-130
1,2-Diphenylhydrazine	30.0	23.0	77		40-140	70-130
4-Bromophenyl phenyl ether	30.0	24.2	81		40-140	70-130
Hexachlorobenzene	30.0	24.5	82		40-140	70-130
Atrazine	30.0	23.2	77		20-120	20-160
Pentachlorophenol	30.0	12.6	42		30-140	20-160
Phenanthrene	30.0	24.7	82		40-140	70-130
Anthracene	30.0	25.3	84		40-140	70-130
Carbazole	30.0	26.6	89		40-140	70-130
Di-n-butyl phthalate	30.0	26.4	88		40-140	70-130
Fluoranthene	30.0	25.5	85		40-140	70-130
Benzidine	30.0	11.4	38		5-105	20-160
Pyrene	30.0	23.9	80		40-140	70-130
3,3'-Dimethylbenzidine	30.0	11.8	39		5-105	20-160
Butyl benzyl phthalate	30.0	24.7	82		40-140	70-130
3,3'-Dichlorobenzidine	30.0	24.8	83		40-140	70-130
Benzo[a]anthracene	30.0	24.0	80		40-140	70-130
Chrysene	30.0	23.8	79		40-140	70-130
Bis(2-ethylhexyl) phthalate	30.0	24.2	81		40-140	70-130
Di-n-octyl phthalate	30.0	25.4	85		40-140	70-130
Benzo[b]fluoranthene	30.0	21.9	73		40-140	70-130
Benzo[k]fluoranthene	30.0	28.1	94		40-140	70-130
Benzo[a]pyrene	30.0	24.8	83		40-140	70-130
Indeno[1,2,3-cd]pyrene	30.0	24.2	81		40-140	70-130
Dibenz[a,h]anthracene	30.0	24.3	81		40-140	70-130
Benzo[g,h,i]perylene	30.0	24.2	81		40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B0130.D

Instrument ID: MSDB

Date Extracted: 06/04/15

Matrix: AQUEOUS

Date Analyzed: 06/05/2015

Time Analyzed: 14:40

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSA150604-05	06/05/2015	14:57
.	E15-04515-001MS	06/05/2015	15:15
.	E15-04515-001MSD	06/05/2015	15:32
MW-1	E15-04515-001	06/05/2015	15:49
PW-1	E15-04514-001	06/05/2015	16:07
KO-1	E15-04557-001	06/05/2015	16:24
KO-2	E15-04557-002	06/05/2015	16:41
K01	E15-04605-001	06/05/2015	16:59
K02	E15-04605-002	06/05/2015	17:16
BR-MW-1	E15-04560-001	06/05/2015	17:33
K01	E15-04608-001	06/05/2015	17:51
K02	E15-04608-002	06/05/2015	18:08
UR-MW1	E15-04694-001	06/05/2015	18:25
MW-1	E15-04695-001	06/05/2015	18:43
GW-1	E15-04679-001	06/05/2015	19:00
MW	E15-04684-001	06/05/2015	19:18
RR-MW1R	E15-04703-001	06/05/2015	19:35
TWP-1/6.	E15-04683-001	06/05/2015	19:53
MW-11	E15-04681-001	06/05/2015	20:10
MW-20	E15-04681-002	06/05/2015	20:27
MW-21	E15-04681-003	06/05/2015	20:45
MW-22	E15-04681-004	06/05/2015	21:02
FB	E15-04681-005	06/05/2015	21:19

By

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B0111.D

Instrument ID: MSDB

Date Extracted: 06/04/15

Matrix: AQUEOUS

Date Analyzed: 06/05/2015

Time Analyzed: 09:40

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
MW-1	E15-04515-001	06/05/2015	09:56
PW-1	E15-04514-001	06/05/2015	10:12
KO-1	E15-04557-001	06/05/2015	10:28
KO-2	E15-04557-002	06/05/2015	10:44
K01	E15-04605-001	06/05/2015	11:00
K02	E15-04605-002	06/05/2015	11:16
BR-MW-1	E15-04560-001	06/05/2015	11:32
K01	E15-04608-001	06/05/2015	11:48
K02	E15-04608-002	06/05/2015	12:04
UR-MW1	E15-04694-001	06/05/2015	12:20
MW-1	E15-04695-001	06/05/2015	12:36
GW-1	E15-04679-001	06/05/2015	12:52
MW	E15-04684-001	06/05/2015	13:08
RR-MW1R	E15-04703-001	06/05/2015	13:24
TWP-1/6.	E15-04683-001	06/05/2015	13:40
MW-11	E15-04681-001	06/08/2015	07:45
MW-20	E15-04681-002	06/08/2015	08:18
MW-21	E15-04681-003	06/08/2015	08:34
MW-22	E15-04681-004	06/08/2015	08:50
FB	E15-04681-005	06/08/2015	09:06

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B9951.D

DFTPP Injection Date : 05/29/2015

Inst ID: MSDB

DFTPP Injection Time: 08:41

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	52.0	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	54.5	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	40.0 - 60.0% of mass 198	59.4	
197	Less than 1.0% of mass 198	0.7	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	22.1	
365	Greater than 1.0% of mass 198	1.6	
441	Present, but less than mass 443	7.98	(63.3)3
442	40.0 - 100.0% of mass 198	60.9	
443	17.0 - 23.0% of mass 442	12.6	(20.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN040-15	ICC040BNA1	B9952.D	05/29/2015	08:52
ABN037-15	ICC001BNA1	B9953.D	05/29/2015	09:09
ABN038-15	ICC010BNA1	B9954.D	05/29/2015	09:27
ABN039-15	ICC020BNA1	B9955.D	05/29/2015	09:44
ABN041-15	ICC080BNA1	B9956.D	05/29/2015	10:02
ABN042-15	ICC160BNA1	B9957.D	05/29/2015	10:19
ABN048-15	ICC160BNA2	B9958.D	05/29/2015	10:37
ABN047-15	ICC080BNA2	B9959.D	05/29/2015	10:54
ABN046-15	ICC040BNA2	B9960.D	05/29/2015	11:16
ABN045-15	ICC020BNA2	B9961.D	05/29/2015	11:33
ABN044-15	ICC010BNA2	B9962.D	05/29/2015	11:51
ABN043-15	ICC001BNA2	B9963.D	05/29/2015	12:08
ABN049-15	ICV040BNA1	B9969.D	05/29/2015	13:46
ABN050-15	ICV040BNA2	B9970.D	05/29/2015	14:03

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B9951.D

DFTPP Injection Date : 05/29/2015

Inst ID: MSDB

DFTPP Injection Time: 08:41

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	52.0	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	54.5	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	40.0 - 60.0% of mass 198	59.4	
197	Less than 1.0% of mass 198	0.7	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	22.1	
365	Greater than 1.0% of mass 198	1.6	
441	Present, but less than mass 443	7.98	(63.3)3
442	40.0 - 100.0% of mass 198	60.9	
443	17.0 - 23.0% of mass 442	12.6	(20.7)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN027-15	ICC000.5SIM	B9964.D	05/29/2015	12:25
ABN025-15	ICC000.1SIM	B9965.D	05/29/2015	12:41
ABN026-15	ICC000.2SIM	B9966.D	05/29/2015	12:57
ABN028-15	ICC0001SIM	B9967.D	05/29/2015	13:13
ABN029-15	ICC0002SIM	B9968.D	05/29/2015	13:29
ABN030-15	ICV000.5SIM	B9971.D	05/29/2015	14:20

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B0127.D

DFTPP Injection Date : 06/05/2015

Inst ID: MSDB

DFTPP Injection Time: 13:54

m/z	Ion Abudance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	34.9		
68	Less than 2.0% of mass 69	0.0	(0.0	)1
69	Mass 69 relative abundance	36.9		
70	Less than 2.0% of mass 69	0.3	(0.7	)1
127	40.0 - 60.0% of mass 198	46.9		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	6.6		
275	10.0 - 30.0% of mass 198	26.8		
365	Greater than 1.0% of mass 198	2.6		
441	Present, but less than mass 443	13.35	(70.3	)3
442	40.0 - 100.0% of mass 198	96.9		
443	17.0 - 23.0% of mass 442	19.0	(19.6	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN049-15	CCV040BNA1	B0128.D	06/05/2015	14:05
ABN050-15	CCV040BNA2	B0129.D	06/05/2015	14:23
.	BLKA150604-05	B0130.D	06/05/2015	14:40
.	LCSA150604-05	B0131.D	06/05/2015	14:57
.	E15-04515-001MS	B0132.D	06/05/2015	15:15
.	E15-04515-001MSD	B0133.D	06/05/2015	15:32
MW-1	E15-04515-001	B0134.D	06/05/2015	15:49
PW-1	E15-04514-001	B0135.D	06/05/2015	16:07
KO-1	E15-04557-001	B0136.D	06/05/2015	16:24
KO-2	E15-04557-002	B0137.D	06/05/2015	16:41
K01	E15-04605-001	B0138.D	06/05/2015	16:59
K02	E15-04605-002	B0139.D	06/05/2015	17:16
BR-MW-1	E15-04560-001	B0140.D	06/05/2015	17:33
K01	E15-04608-001	B0141.D	06/05/2015	17:51
K02	E15-04608-002	B0142.D	06/05/2015	18:08
UR-MW1	E15-04694-001	B0143.D	06/05/2015	18:25
MW-1	E15-04695-001	B0144.D	06/05/2015	18:43
GW-1	E15-04679-001	B0145.D	06/05/2015	19:00
MW	E15-04684-001	B0146.D	06/05/2015	19:18
RR-MW1R	E15-04703-001	B0147.D	06/05/2015	19:35
TWP-1/6.	E15-04683-001	B0148.D	06/05/2015	19:53
MW-11	E15-04681-001	B0149.D	06/05/2015	20:10
MW-20	E15-04681-002	B0150.D	06/05/2015	20:27

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B0127.D

DFTPP Injection Date : 06/05/2015

Inst ID: MSDB

DFTPP Injection Time: 13:54

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	34.9	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	36.9	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	46.9	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.6	
275	10.0 - 30.0% of mass 198	26.8	
365	Greater than 1.0% of mass 198	2.6	
441	Present, but less than mass 443	13.35	(70.3)3
442	40.0 - 100.0% of mass 198	96.9	
443	17.0 - 23.0% of mass 442	19.0	(19.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
MW-21	E15-04681-003	B0151.D	06/05/2015	20:45
MW-22	E15-04681-004	B0152.D	06/05/2015	21:02
FB	E15-04681-005	B0153.D	06/05/2015	21:19

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B0109.D

DFTPP Injection Date : 06/05/2015

Inst ID: MSDB

DFTPP Injection Time: 09:14

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	34.1	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	37.5	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	47.7	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.6	
275	10.0 - 30.0% of mass 198	27.3	
365	Greater than 1.0% of mass 198	3.1	
441	Present, but less than mass 443	13.48	(70.7)3
442	40.0 - 100.0% of mass 198	97.8	
443	17.0 - 23.0% of mass 442	19.1	(19.5)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN030-15	CCV000.5SIM	B0110.D	06/05/2015	09:24
.	BLKA150604-05	B0111.D	06/05/2015	09:40
MW-1	E15-04515-001	B0112.D	06/05/2015	09:56
PW-1	E15-04514-001	B0113.D	06/05/2015	10:12
KO-1	E15-04557-001	B0114.D	06/05/2015	10:28
KO-2	E15-04557-002	B0115.D	06/05/2015	10:44
K01	E15-04605-001	B0116.D	06/05/2015	11:00
K02	E15-04605-002	B0117.D	06/05/2015	11:16
BR-MW-1	E15-04560-001	B0118.D	06/05/2015	11:32
K01	E15-04608-001	B0119.D	06/05/2015	11:48
K02	E15-04608-002	B0120.D	06/05/2015	12:04
UR-MW1	E15-04694-001	B0121.D	06/05/2015	12:20
MW-1	E15-04695-001	B0122.D	06/05/2015	12:36
GW-1	E15-04679-001	B0123.D	06/05/2015	12:52
MW	E15-04684-001	B0124.D	06/05/2015	13:08
RR-MW1R	E15-04703-001	B0125.D	06/05/2015	13:24
TWP-1/6.	E15-04683-001	B0126.D	06/05/2015	13:40

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B0154.D

DFTPP Injection Date : 06/08/2015

Inst ID: MSDB

DFTPP Injection Time: 07:19

m/z	Ion Abudance Criteria	%Relative Abundance		
51	30.0 - 60.0% of mass 198	52.6		
68	Less than 2.0% of mass 69	0.0	(0.0	)1
69	Mass 69 relative abundance	54.3		
70	Less than 2.0% of mass 69	0.9	(1.7	)1
127	40.0 - 60.0% of mass 198	59.6		
197	Less than 1.0% of mass 198	0.0		
198	Base peak, 100% relative abundance	100.0		
199	5.0 - 9.0% of mass 198	7.2		
275	10.0 - 30.0% of mass 198	21.7		
365	Greater than 1.0% of mass 198	2.1		
441	Present, but less than mass 443	7.37	(72.9	)3
442	40.0 - 100.0% of mass 198	48.4		
443	17.0 - 23.0% of mass 442	10.1	(20.9	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN030-15	CCV000.5SIM	B0155.D	06/08/2015	07:30
MW-11	E15-04681-001	B0156.D	06/08/2015	07:45
MW-20	E15-04681-002	B0157.D	06/08/2015	08:18
MW-21	E15-04681-003	B0158.D	06/08/2015	08:34
MW-22	E15-04681-004	B0159.D	06/08/2015	08:50
FB	E15-04681-005	B0160.D	06/08/2015	09:06

Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BW0615.M
Title : BNA CALIBRATION METHOD
Last Update : Fri May 29 12:37:55 2015
Response Via : Initial Calibration

Calibration Files
1 =B9953.D 10 =B9954.D 20 =B9955.D
40 =B9952.D 80 =B9956.D 160 =B9957.D =

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)	T	N-Nitrosodimethyl	0.707	0.757	0.762	0.762	0.807	0.805	0.767	4.82
3)	T	Pyridine	0.695	0.885	0.845	0.895	0.922	0.910	0.859	9.81
4)	S	2-Fluorophenol	1.192	1.212	1.200	1.232	1.249	1.291	1.229	2.99
5)	T	Benzaldehyde	0.617	0.664	0.732	0.574	0.516	0.437	0.590	17.84
6)	S	Phenol-d5	1.412	1.437	1.412	1.438	1.435	1.497	1.439	2.17
7)	MC	Phenol	1.656	1.559	1.508	1.551	1.607	1.660	1.590	3.84
8)	T	Aniline	0.624	0.688	0.633	0.632	0.661	0.615	0.642	4.22
9)	T	Bis(2-chloroethyl	0.863	0.811	0.781	0.793	0.821	0.898	0.828	5.38
10)	M	2-Chlorophenol	1.421	1.354	1.328	1.359	1.445	1.449	1.393	3.72
11)	T	1,3-Dichlorobenze	1.557	1.601	1.519	1.554	1.623	1.647	1.584	3.04
12)	MC	1,4-Dichlorobenze	1.727	1.670	1.589	1.628	1.701	1.663	1.663	2.98
13)	T	Benzyl alcohol	0.771	0.785	0.748	0.774	0.822	0.828	0.788	3.92
14)	T	1,2-Dichlorobenze	1.563	1.538	1.467	1.491	1.572	1.548	1.530	2.73
15)	T	2-Methylphenol	1.172	1.155	1.127	1.147	1.195	1.209	1.168	2.62
16)	T	Bis(2-chloroisopr	1.510	1.432	1.338	1.354	1.396	1.375	1.401	4.48
17)	T	4-Methylphenol	1.071	1.149	1.115	1.136	1.192	1.209	1.145	4.41
18)	MP	N-Nitrosodi-n-pro	0.810	0.818	0.794	0.802	0.843	0.833	0.817	2.29
19)	T	Acetophenone	1.866	1.831	1.725	1.738	1.802	1.810	1.795	3.03
20)	T	3-Methylphenol	1.071	1.149	1.115	1.136	1.192	1.208	1.145	4.39
21)	T	Hexachloroethane	0.524	0.531	0.507	0.523	0.559	0.563	0.535	4.11
23)	I	Naphthalene-d8	----------ISTD----------							
24)	S	Nitrobenzene-d5	0.305	0.305	0.304	0.317	0.343	0.378	0.325	9.17
25)	T	Nitrobenzene	0.367	0.313	0.311	0.297	0.319	0.321	0.321	7.45
26)	T	Isophorone	0.610	0.573	0.567	0.564	0.597	0.595	0.584	3.17
27)	TC	2-Nitrophenol	0.154	0.176	0.172	0.180	0.201	0.203	0.181	10.30
28)	T	2,4-Dimethylpheno	0.284	0.310	0.306	0.313	0.329	0.329	0.312	5.35
29)	T	Bis(2-chloroethox	0.364	0.371	0.361	0.363	0.386	0.379	0.371	2.66
30)	T	Benzoic acid	0.109	0.153	0.171	0.193	0.172	0.162	0.160	17.55
31)	T	2,4-Dimethylanili	0.313	0.372	0.358	0.377	0.395	0.391	0.368	8.17
32)	TC	2,4-Dichloropheno	0.273	0.304	0.296	0.306	0.325	0.324	0.304	6.31
33)	M	1,2,4-Trichlorobe	0.396	0.370	0.364	0.362	0.385	0.385	0.377	3.66
34)	T	Naphthalene	1.131	1.060	1.024	1.032	1.080	1.057	1.064	3.61
35)	T	4-Chloroaniline	0.358	0.399	0.400	0.401	0.380	0.404	0.390	4.61
36)	T	4-Aminotoluene	0.470	0.535	0.514	0.522	0.546	0.574	0.527	6.60
37)	TC	Hexachlorobutadie	0.235	0.223	0.223	0.218	0.239	0.242	0.230	4.23
38)	T	Caprolactam	0.100	0.116	0.114	0.116	0.122	0.125	0.116	7.51
39)	T	2-Aminotoluene	0.470	0.535	0.514	0.522	0.546	0.574	0.527	6.60
40)	MC	4-Chloro-3-methyl	0.244	0.254	0.248	0.251	0.270	0.271	0.256	4.41
41)	T	2-Methylnaphthale	0.696	0.680	0.656	0.661	0.699	0.683	0.679	2.59
43)	I	Acenaphthene-d10	----------ISTD----------							
44)	TP	Hexachlorocyclope	0.201	0.268	0.297	0.349	0.337	0.323	0.296	18.60
45)	TC	2,4,6-Trichloroph	0.314	0.359	0.357	0.380	0.408	0.417	0.373	10.10
46)	T	2,4,5-Trichloroph	0.337	0.376	0.363	0.392	0.419	0.424	0.385	8.70
47)	S	2-Fluorobiphenyl	1.304	1.289	1.242	1.305	1.291	1.268	1.283	1.88
48)	T	1,1'-Biphenyl	1.687	1.500	1.439	1.481	1.543	1.532	1.530	5.57
49)	T	2-Chloronaphthale	1.128	1.111	1.071	1.117	1.180	1.171	1.130	3.57
50)	T	2-Nitroaniline	0.191	0.202	0.207	0.217	0.236	0.242	0.216	9.23
51)	T	Dimethyl phthalat	1.150	1.162	1.133	1.156	1.226	1.229	1.176	3.49
52)	T	2,6-Dinitrotoluen	0.173	0.209	0.220	0.235	0.266	0.277	0.230	16.64
53)	T	Acenaphthylene	1.554	1.634	1.614	1.677	1.772	1.724	1.663	4.74

54)	T	3-Nitroaniline	0.174	0.245	0.252	0.260	0.282	0.286	0.250	16.17
55)	MC	Acenaphthene	1.127	1.076	1.034	1.065	1.119	1.099	1.087	3.24
56)	TP	2,4-Dinitrophenol		0.068	0.069	0.086	0.096	0.105	0.085	19.41
57)	MP	4-Nitrophenol	0.178	0.151	0.149	0.168	0.176	0.180	0.167	8.26
58)	M	2,4-Dinitrotoluen	0.241	0.273	0.290	0.315	0.353	0.370	0.307	15.84
59)	T	Dibenzofuran	1.667	1.593	1.530	1.588	1.640	1.630	1.608	3.00
60)	T	Diethyl phthalate	1.074	1.099	1.068	1.085	1.153	1.154	1.106	3.49
61)	T	Fluorene	1.274	1.301	1.247	1.284	1.335	1.329	1.295	2.60
62)	T	4-Chlorophenyl ph	0.702	0.669	0.652	0.671	0.709	0.719	0.687	3.84
63)	T	4-Nitroaniline	0.202	0.269	0.272	0.289	0.311	0.314	0.276	14.85
64)		1,2,4,5-Tetrachlo	1.348	1.270	1.219	1.271	1.357	1.327	1.299	4.16
65)	T	2,3,4,6-Tetrachlo	0.228	0.285	0.294	0.314	0.322	0.340	0.297	13.18
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met		0.073	0.079	0.099	0.082	0.112	0.089	17.88
68)	TC	N-Nitrosodiphenyl	0.533	0.553	0.541	0.568	0.602	0.613	0.568	5.74
69)	T	1,2-Diphenylhydra	0.600	0.683	0.679	0.710	0.756	0.743	0.695	8.06
70)	S	2,4,6-Tribromophe	0.199	0.208	0.207	0.214	0.215	0.223	0.211	3.93
71)	T	4-Bromophenyl phe	0.272	0.265	0.262	0.275	0.297	0.301	0.279	5.84
72)	T	Hexachlorobenzene	0.332	0.337	0.335	0.341	0.367	0.374	0.348	5.19
73)	T	Atrazine	0.190	0.212	0.212	0.221	0.241	0.235	0.218	8.38
74)	MC	Pentachlorophenol	0.144	0.136	0.154	0.172	0.198	0.218	0.170	19.03
75)	T	Phenanthrene	1.176	1.089	1.045	1.067	1.129	1.131	1.106	4.37
76)	T	Anthracene	0.985	1.021	1.023	1.060	1.125	1.129	1.057	5.59
77)	T	Carbazole	0.851	0.908	0.888	0.918	0.957	0.980	0.917	5.07
78)	T	Di-n-butyl phthal	0.787	0.942	0.954	1.021	1.096	1.112	0.985	12.15
79)	TC	Fluoranthene	0.936	1.024	1.033	1.078	1.145	1.184	1.067	8.39
80)	T	Benzidine	0.286	0.340	0.452	0.475	0.471	0.436	0.410	19.08
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.074	1.104	1.105	1.101	1.194	1.181	1.127	4.33
84)	S	Terphenyl-d14	1.052	0.993	0.971	0.977	0.986	0.937	0.986	3.83
85)	T	3,3'-Dimethylbenz	0.359	0.442	0.564	0.580	0.522	0.433	0.483	17.82
86)	T	Butyl benzyl phth	0.280	0.365	0.373	0.388	0.439	0.446	0.382	15.81
87)	T	3,3'-Dichlorobenz	0.284	0.360	0.361	0.370	0.350	0.382	0.351	9.91
88)	T	Benzo[a]anthracen	1.013	1.036	1.002	1.020	1.128	1.118	1.053	5.26
89)	T	Chrysene	1.099	0.963	0.971	0.959	1.010	1.050	1.009	5.57
90)	T	Bis(2-ethylhexyl)	0.339	0.475	0.495	0.533	0.594	0.618	0.509	19.67
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	0.780	0.946	0.993	1.113	1.235	1.325	1.066	18.73
94)	T	Benzo[b]fluoranth	1.222	1.293	1.335	1.521	1.716	1.698	1.464	14.51
95)	T	Benzo[k]fluoranth	1.351	1.490	1.439	1.351	1.406	1.543	1.430	5.40
96)	TC	Benzo[a]pyrene	1.317	1.287	1.291	1.343	1.478	1.554	1.379	8.06
97)	T	Indeno[1,2,3-cd]p	1.279	1.520	1.626	1.783	2.008	2.118	1.722	18.14
98)	T	Dibenz[a,h]anthra	1.074	1.280	1.365	1.490	1.689	1.788	1.447	18.29
99)	T	Benzo[g,h,i]peryl	1.269	1.340	1.399	1.517	1.710	1.782	1.503	13.75

(#) = Out of Range

BW0615.M Fri May 29 12:38:01 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-29-15\
Data File : B9969.D
Acq On : 29 May 2015 13:46
Operator : DANA
Sample : ABN049-15,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 29 14:05:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 12:37:55 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00
2	T	N-Nitrosodimethylamine	0.767	0.745	2.9	97	0.00
3	T	Pyridine	0.859	0.879	-2.3	97	0.00
4	S	2-Fluorophenol	1.229	1.199	2.4	96	0.00
5	T	Benzaldehyde	0.590	0.622	-5.4	110	0.00
6	S	Phenol-d5	1.439	1.413	1.8	97	0.00
7	MC	Phenol	1.590	1.553	2.3	99	0.00
8	T	Aniline	0.642	0.642	0.0	101	0.00
9	T	Bis(2-chloroethyl) ether	0.828	0.798	3.6	100	0.00
10	M	2-Chlorophenol	1.393	1.351	3.0	99	0.00
11	T	1,3-Dichlorobenzene	1.584	1.569	0.9	100	0.00
12	MC	1,4-Dichlorobenzene	1.663	1.628	2.1	99	0.00
13	T	Benzyl alcohol	0.788	0.739	6.2	94	0.00
14	T	1,2-Dichlorobenzene	1.530	1.491	2.5	99	0.00
15	T	2-Methylphenol	1.168	1.158	0.9	100	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.401	1.349	3.7	99	0.00
17	T	4-Methylphenol	1.145	1.137	0.7	99	0.00
18	MP	N-Nitrosodi-n-propylamine	0.817	0.809	1.0	100	0.00
19	T	Acetophenone	1.795	1.760	1.9	100	0.00
20	T	3-Methylphenol	1.145	1.137	0.7	99	0.00
21	T	Hexachloroethane	0.535	0.523	2.2	99	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	97	0.00
24	S	Nitrobenzene-d5	0.325	0.312	4.0	95	0.00
25	T	Nitrobenzene	0.321	0.310	3.4	101	0.00
26	T	Isophorone	0.584	0.575	1.5	99	0.00
27	TC	2-Nitrophenol	0.181	0.180	0.6	97	0.00
28	T	2,4-Dimethylphenol	0.312	0.319	-2.2	99	0.00
29	T	Bis(2-chloroethoxy) methane	0.371	0.372	-0.3	99	0.00
30	T	Benzoic acid	0.160	0.184	-15.0	93	0.00
31	T	2,4-Dimethylaniline	0.368	0.384	-4.3	99	0.00
32	TC	2,4-Dichlorophenol	0.304	0.311	-2.3	99	0.00
33	M	1,2,4-Trichlorobenzene	0.377	0.372	1.3	100	0.00
34	T	Naphthalene	1.064	1.060	0.4	100	0.00
35	T	4-Chloroaniline	0.390	0.411	-5.4	100	0.00
36	T	4-Aminotoluene	0.527	0.531	-0.8	99	0.00
37	TC	Hexachlorobutadiene	0.230	0.229	0.4	102	0.00
38	T	Caprolactam	0.116	0.116	0.0	98	0.00
39	T	2-Aminotoluene	0.527	0.531	-0.8	99	0.00
40	MC	4-Chloro-3-methylphenol	0.256	0.258	-0.8	100	0.00
41	T	2-Methylnaphthalene	0.679	0.683	-0.6	100	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	97	0.00
44	TP	Hexachlorocyclopentadiene	0.296	0.326	-10.1	91	0.00
45	TC	2,4,6-Trichlorophenol	0.373	0.386	-3.5	99	0.00
46	T	2,4,5-Trichlorophenol	0.385	0.394	-2.3	98	0.00

47	S	2-Fluorobiphenyl	1.283	1.294	-0.9	96	0.00
48	T	1,1'-Biphenyl	1.530	1.527	0.2	100	0.00
49	T	2-Chloronaphthalene	1.130	1.129	0.1	98	0.00
50	T	2-Nitroaniline	0.216	0.219	-1.4	98	0.00
51	T	Dimethyl phthalate	1.176	1.193	-1.4	100	0.00
52	T	2,6-Dinitrotoluene	0.230	0.236	-2.6	97	0.00
53	T	Acenaphthylene	1.663	1.712	-2.9	99	0.00
54	T	3-Nitroaniline	0.250	0.267	-6.8	100	0.00
55	MC	Acenaphthene	1.087	1.094	-0.6	100	0.00
56	TP	2,4-Dinitrophenol	0.085	0.084	1.2	95	0.00
57	MP	4-Nitrophenol	0.167	0.159	4.8	92	0.00
58	M	2,4-Dinitrotoluene	0.307	0.314	-2.3	97	0.00
59	T	Dibenzofuran	1.608	1.621	-0.8	99	0.00
60	T	Diethyl phthalate	1.106	1.129	-2.1	101	0.00
61	T	Fluorene	1.295	1.299	-0.3	98	0.00
62	T	4-Chlorophenyl phenyl ether	0.687	0.690	-0.4	100	0.00
63	T	4-Nitroaniline	0.276	0.282	-2.2	95	0.00
64		1,2,4,5-Tetrachlorobenzene	1.299	1.316	-1.3	101	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.297	0.306	-3.0	95	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	95	0.00
67	T	4,6-Dinitro-2-methylphenol	0.089	0.097	-9.0	92	0.00
68	TC	N-Nitrosodiphenylamine	0.568	0.594	-4.6	99	0.00
69	T	1,2-Diphenylhydrazine	0.695	0.748	-7.6	100	0.00
70	S	2,4,6-Tribromophenol	0.211	0.215	-1.9	95	0.00
71	T	4-Bromophenyl phenyl ether	0.279	0.289	-3.6	99	0.00
72	T	Hexachlorobenzene	0.348	0.357	-2.6	99	0.00
73	T	Atrazine	0.218	0.229	-5.0	98	0.00
74	MC	Pentachlorophenol	0.170	0.176	-3.5	97	0.00
75	T	Phenanthrene	1.106	1.104	0.2	98	0.00
76	T	Anthracene	1.057	1.105	-4.5	99	0.00
77	T	Carbazole	0.917	0.939	-2.4	97	0.00
78	T	Di-n-butyl phthalate	0.985	1.025	-4.1	95	0.01
79	TC	Fluoranthene	1.067	1.087	-1.9	95	0.02
80	T	Benzidine	0.410	0.436	-6.3	100	0.03
82	I	Chrysene-d12	1.000	1.000	0.0	91	0.04
83	M	Pyrene	1.127	1.178	-4.5	98	0.02
84	S	Terphenyl-d14	0.986	0.993	-0.7	93	0.02
85	T	3,3'-Dimethylbenzidine	0.483	0.529	-9.5	94	0.05
86	T	Butyl benzyl phthalate	0.382	0.399	-4.5	94	0.03
87	T	3,3'-Dichlorobenzidine	0.351	0.378	-7.7	93	0.04
88	T	Benzo[a]anthracene	1.053	1.073	-1.9	96	0.04
89	T	Chrysene	1.009	1.015	-0.6	97	0.04
90	T	Bis(2-ethylhexyl) phthalate	0.509	0.533	-4.7	91	0.04
92	I	Perylene-d12	1.000	1.000	0.0	98	0.04
93	TC	Di-n-octyl phthalate	1.066	0.977	8.3	86	0.04
94	T	Benzo[b]fluoranthene	1.464	1.534	-4.8	99	0.04
95	T	Benzo[k]fluoranthene	1.430	1.300	9.1	94	0.04
96	TC	Benzo[a]pyrene	1.379	1.314	4.7	96	0.03
97	T	Indeno[1,2,3-cd]pyrene	1.722	1.755	-1.9	96	0.03
98	T	Dibenz[a,h]anthracene	1.447	1.489	-2.9	98	0.03
99	T	Benzo[g,h,i]perylene	1.503	1.502	0.1	97	0.03

(#) = Out of Range

BW0615.M Fri May 29 14:17:36 2015 MSD_B

Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BSIM0615.M
Title : BNA CALIBRATION METHOD
Last Update : Fri May 29 14:03:45 2015
Response Via : Initial Calibration

Calibration Files
0.1 =B9965.D 0.2 =B9966.D 0.5 =B9964.D
1.0 =B9967.D 2.0 =B9968.D

		Compound	0.1	0.2	0.5	1.0	2.0	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
23)	I	Naphthalene-d8	----------ISTD----------						
43)	I	Acenaphthene-d10	----------ISTD----------						
66)	I	Phenanthrene-d10	----------ISTD----------						
72)	T	Hexachlorobenzene	0.406	0.345	0.411	0.344	0.304	0.362	12.57
74)	MC	Pentachlorophenol	0.053	0.055	0.056	0.051	0.053	0.054	3.32
82)	I	Chrysene-d12	----------ISTD----------						
88)	T	Benzo[a]anthracene	1.201	1.134	1.236	1.146	1.148	1.173	3.73
92)	I	Perylene-d12	----------ISTD----------						
94)	T	Benzo[b]fluoranthen	1.804	1.894	2.056	1.950	1.926	1.926	4.75
95)	T	Benzo[k]fluoranthen	2.641	2.449	2.619	2.472	2.612	2.559	3.53
96)	TC	Benzo[a]pyrene	1.861	1.776	1.849	1.952	1.956	1.879	4.05
97)	T	Indeno[1,2,3-cd]pyr	2.189	2.157	2.188	2.201	2.251	2.197	1.55
98)	T	Dibenz[a,h]anthrace	2.042	1.984	1.811	1.996	2.047	1.976	4.89

(#) = Out of Range

BSIM0615.M Fri May 29 14:03:50 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\05-29-15\
Data File : B9971.D
Acq On : 29 May 2015 14:20
Operator : DANA
Sample : ABN030-15,ICV000.5SIM,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: May 29 14:33:28 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 14:03:45 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	96	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	97	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	102	0.02
66	I	Phenanthrene-d10	1.000	1.000	0.0	103	0.05
72	T	Hexachlorobenzene	0.362	0.386	-6.6	97	0.04
74	MC	Pentachlorophenol	0.054	0.053	1.9	97	0.05
82	I	Chrysene-d12	1.000	1.000	0.0	103	0.06
88	T	Benzo[a]anthracene	1.173	1.241	-5.8	103	0.06
92	I	Perylene-d12	1.000	1.000	0.0	98	0.08
94	T	Benzo[b]fluoranthene	1.926	1.843	4.3	88	0.07
95	T	Benzo[k]fluoranthene	2.559	2.598	-1.5	97	0.07
96	TC	Benzo[a]pyrene	1.879	1.867	0.6	99	0.08
97	T	Indeno[1,2,3-cd]pyrene	2.197	2.174	1.0	97	0.10
98	T	Dibenz[a,h]anthracene	1.976	1.863	5.7	101	0.10

(#) = Out of Range

BSIM0615.M Fri May 29 14:33:32 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\06-05-15\
Data File : B0128.D
Acq On : 5 Jun 2015 14:05
Operator : DANA
Sample : ABN049-15,CCV040BNA1
Misc : NA, ,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 05 14:18:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	69	0.00
2	T	N-Nitrosodimethylamine	0.767	0.779	-1.6	71	0.00
3	T	Pyridine	0.859	0.896	-4.3	69	-0.01
4	S	2-Fluorophenol	1.229	1.219	0.8	69	0.00
5	T	Benzaldehyde	0.590	0.621	-5.3	79	-0.03
6	S	Phenol-d5	1.439	1.468	-2.0	71	0.00
7	MC	Phenol	1.590	1.610	-1.3	72	0.00
8	T	Aniline	0.642	0.655	-2.0	72	0.00
9	T	Bis(2-chloroethyl) ether	0.828	0.832	-0.5	73	0.00
10	M	2-Chlorophenol	1.393	1.417	-1.7	72	0.00
11	T	1,3-Dichlorobenzene	1.584	1.571	0.8	70	0.00
12	MC	1,4-Dichlorobenzene	1.663	1.651	0.7	70	0.00
13	T	Benzyl alcohol	0.788	0.819	-3.9	73	0.00
14	T	1,2-Dichlorobenzene	1.530	1.511	1.2	70	0.00
15	T	2-Methylphenol	1.168	1.195	-2.3	72	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.401	1.426	-1.8	73	0.00
17	T	4-Methylphenol	1.145	1.215	-6.1	74	0.00
18	MP	N-Nitrosodi-n-propylamine	0.817	0.859	-5.1	74	0.00
19	T	Acetophenone	1.795	1.813	-1.0	72	0.00
20	T	3-Methylphenol	1.145	1.215	-6.1	74	0.00
21	T	Hexachloroethane	0.535	0.528	1.3	70	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	71	0.00
24	S	Nitrobenzene-d5	0.325	0.319	1.8	71	0.00
25	T	Nitrobenzene	0.321	0.312	2.8	74	0.00
26	T	Isophorone	0.584	0.604	-3.4	76	0.00
27	TC	2-Nitrophenol	0.181	0.180	0.6	71	0.00
28	T	2,4-Dimethylphenol	0.312	0.325	-4.2	73	0.00
29	T	Bis(2-chloroethoxy) methane	0.371	0.386	-4.0	75	0.00
30	T	Benzoic acid	0.160	0.154	3.8	57	0.00
31	T	2,4-Dimethylaniline	0.368	0.388	-5.4	73	0.00
32	TC	2,4-Dichlorophenol	0.304	0.317	-4.3	73	0.00
33	M	1,2,4-Trichlorobenzene	0.377	0.371	1.6	73	0.00
34	T	Naphthalene	1.064	1.057	0.7	73	0.00
35	T	4-Chloroaniline	0.390	0.423	-8.5	75	0.00
36	T	4-Aminotoluene	0.527	0.518	1.7	70	0.00
37	TC	Hexachlorobutadiene	0.230	0.226	1.7	73	0.00
38	T	Caprolactam	0.116	0.134	-15.5	82	0.00
39	T	2-Aminotoluene	0.527	0.518	1.7	70	0.00
40	MC	4-Chloro-3-methylphenol	0.256	0.276	-7.8	78	0.00
41	T	2-Methylnaphthalene	0.679	0.693	-2.1	74	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	75	0.00
44	TP	Hexachlorocyclopentadiene	0.296	0.293	1.0	63	0.00
45	TC	2,4,6-Trichlorophenol	0.373	0.382	-2.4	76	0.00
46	T	2,4,5-Trichlorophenol	0.385	0.400	-3.9	77	0.00

47	S	2-Fluorobiphenyl	1.283	1.242	3.2	72	0.00
48	T	1,1'-Biphenyl	1.530	1.473	3.7	75	0.00
49	T	2-Chloronaphthalene	1.130	1.104	2.3	75	0.00
50	T	2-Nitroaniline	0.216	0.230	-6.5	80	0.00
51	T	Dimethyl phthalate	1.176	1.231	-4.7	80	0.00
52	T	2,6-Dinitrotoluene	0.230	0.241	-4.8	77	0.00
53	T	Acenaphthylene	1.663	1.706	-2.6	77	0.00
54	T	3-Nitroaniline	0.250	0.276	-10.4	80	0.00
55	MC	Acenaphthene	1.087	1.092	-0.5	77	0.00
56	TP	2,4-Dinitrophenol	0.085	0.099	-16.5	86	0.00
57	MP	4-Nitrophenol	0.167	0.179	-7.2	80	0.00
58	M	2,4-Dinitrotoluene	0.307	0.335	-9.1	80	0.00
59	T	Dibenzofuran	1.608	1.627	-1.2	77	0.00
60	T	Diethyl phthalate	1.106	1.206	-9.0	84	0.00
61	T	Fluorene	1.295	1.349	-4.2	79	0.00
62	T	4-Chlorophenyl phenyl ether	0.687	0.709	-3.2	80	0.00
63	T	4-Nitroaniline	0.276	0.319	-15.6	83	0.00
64		1,2,4,5-Tetrachlorobenzene	1.299	1.248	3.9	74	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.297	0.327	-10.1	79	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	82	0.00
67	T	4,6-Dinitro-2-methylphenol	0.089	0.098	-10.1	81	0.00
68	TC	N-Nitrosodiphenylamine	0.568	0.568	0.0	82	0.00
69	T	1,2-Diphenylhydrazine	0.695	0.704	-1.3	81	0.00
70	S	2,4,6-Tribromophenol	0.211	0.207	1.9	79	0.00
71	T	4-Bromophenyl phenyl ether	0.279	0.272	2.5	81	0.00
72	T	Hexachlorobenzene	0.348	0.339	2.6	81	0.00
73	T	Atrazine	0.218	0.226	-3.7	83	0.00
74	MC	Pentachlorophenol	0.170	0.183	-7.6	87	0.00
75	T	Phenanthrene	1.106	1.075	2.8	82	0.00
76	T	Anthracene	1.057	1.075	-1.7	83	0.00
77	T	Carbazole	0.917	0.950	-3.6	84	0.00
78	T	Di-n-butyl phthalate	0.985	1.081	-9.7	86	-0.01
79	TC	Fluoranthene	1.067	1.144	-7.2	87	-0.02
80	T	Benzidine	0.410	0.459	-12.0	83	-0.05
82	I	Chrysene-d12	1.000	1.000	0.0	85	-0.03
83	M	Pyrene	1.127	1.136	-0.8	87	-0.02
84	S	Terphenyl-d14	0.986	0.962	2.4	83	-0.02
85	T	3,3'-Dimethylbenzidine	0.483	0.571	-18.2	89	-0.07
86	T	Butyl benzyl phthalate	0.382	0.423	-10.7	92	-0.02
87	T	3,3'-Dichlorobenzidine	0.351	0.402	-14.5	92	-0.03
88	T	Benzo[a]anthracene	1.053	1.072	-1.8	89	-0.03
89	T	Chrysene	1.009	1.044	-3.5	92	-0.03
90	T	Bis(2-ethylhexyl) phthalate	0.509	0.575	-13.0	91	-0.03
92	I	Perylene-d12	1.000	1.000	0.0	93	-0.04
93	TC	Di-n-octyl phthalate	1.066	1.152	-8.1	96	-0.04
94	T	Benzo[b]fluoranthene	1.464	1.346	8.1	82	-0.03
95	T	Benzo[k]fluoranthene	1.430	1.530	-7.0	105	-0.04
96	TC	Benzo[a]pyrene	1.379	1.358	1.5	94	-0.04
97	T	Indeno[1,2,3-cd]pyrene	1.722	1.718	0.2	89	-0.05
98	T	Dibenz[a,h]anthracene	1.447	1.451	-0.3	90	-0.05
99	T	Benzo[g,h,i]perylene	1.503	1.460	2.9	89	-0.05

(#) = Out of Range

BW0615.M Fri Jun 05 14:40:56 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0110.D
Acq On : 5 Jun 2015 9:24
Operator : DANA
Sample : ABN030-15,CCV000.5SIM
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 05 09:39:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	70	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	68	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	71	0.01
66	I	Phenanthrene-d10	1.000	1.000	0.0	75	0.02
72	T	Hexachlorobenzene	0.362	0.408	-12.7	74	0.02
74	MC	Pentachlorophenol	0.054	0.052	3.7	70	0.02
82	I	Chrysene-d12	1.000	1.000	0.0	80	0.00
88	T	Benzo[a]anthracene	1.173	1.227	-4.6	80	0.01
92	I	Perylene-d12	1.000	1.000	0.0	91	0.04
94	T	Benzo[b]fluoranthene	1.926	1.865	3.2	83	0.04
95	T	Benzo[k]fluoranthene	2.559	2.444	4.5	85	0.04
96	TC	Benzo[a]pyrene	1.879	1.771	5.7	87	0.05
97	T	Indeno[1,2,3-cd]pyrene	2.197	1.970	10.3	82	0.08
98	T	Dibenz[a,h]anthracene	1.976	1.695	14.2	85	0.08

(#) = Out of Range

BSIM0615.M Fri Jun 05 14:00:00 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\06-08-15\
Data File : B0155.D
Acq On : 8 Jun 2015 7:30
Operator : DANA
Sample : ABN030-15,CCV000.5SIM
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 08 07:43:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	102	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	109	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	116	0.01
72	T	Hexachlorobenzene	0.362	0.422	-16.6	119	0.01
74	MC	Pentachlorophenol	0.054	0.049	9.3	101	0.02
82	I	Chrysene-d12	1.000	1.000	0.0	127	0.00
88	T	Benzo[a]anthracene	1.173	1.381	-17.7	142	0.00
92	I	Perylene-dl2	1.000	1.000	0.0	133	0.03
94	T	Benzo[b]fluoranthene	1.926	2.119	-10.0	137	0.03
95	T	Benzo[k]fluoranthene	2.559	2.564	-0.2	130	0.03
96	TC	Benzo[a]pyrene	1.879	1.912	-1.8	137	0.03
97	T	Indeno[1,2,3-cd]pyrene	2.197	1.885	14.2	114	0.07
98	T	Dibenz[a,h]anthracene	1.976	1.642	16.9	121	0.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0

BSIM0615.M Mon Jun 08 10:14:50 2015 MSD_B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B9952.D

Date Analyzed: 05/29/2015

Instrument ID: MSDB

Time Analyzed: 08:52

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	97421		3.65		364630		4.42		219228		5.44	
	UPPER LIMIT	194842		4.15		729260		4.92		438456		5.94	
	LOWER LIMIT	48711		3.15		182315		3.92		109614		4.94	
	LAB SAMPLE ID												
01	ICC001BNA1	100912		3.65		380294		4.42		233777		5.44	
02	ICC010BNA1	97601		3.65		372223		4.42		233856		5.44	
03	ICC020BNA1	95894		3.65		357764		4.42		225023		5.44	
04	ICC080BNA1	94964		3.65		350711		4.42		210768		5.44	
05	ICC160BNA1	94834		3.65		354581		4.42		213298		5.44	
06	ICC160BNA2	100488		3.65		379942		4.41		236747		5.44	
07	ICC080BNA2	101328		3.65		381171		4.41		232091		5.44	
08	ICC040BNA2	98903		3.65		378313		4.42		237848		5.44	
09	ICC020BNA2	108715		3.65		412362		4.41		251609		5.44	
10	ICC010BNA2	100261		3.65		376053		4.41		236550		5.44	
11	ICC001BNA2	100673		3.65		377434		4.42		230318		5.44	
12	ICV040BNA1	96482		3.65		353817		4.42		213152		5.44	
13	ICV040BNA2	98980		3.65		370465		4.42		227424		5.44	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B9952.D

Date Analyzed: 05/29/2015

Instrument ID: MSDB

Time Analyzed: 08:52

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	345624	6.35	343697	7.95	231364	9.22
	UPPER LIMIT	691248	6.85	687394	8.45	462728	9.72
	LOWER LIMIT	172812	5.85	171849	7.45	115682	8.72
	LAB SAMPLE ID						
01	ICC001BNA1	388826	6.35	355790	7.95	220573	9.21
02	ICC010BNA1	380298	6.35	368113	7.95	231712	9.22
03	ICC020BNA1	358624	6.35	348822	7.96	228052	9.23
04	ICC080BNA1	328276	6.35	320433	7.97	225570	9.24
05	ICC160BNA1	326515	6.35	327917	7.98	237063	9.26
06	ICC160BNA2	383633	6.36	359642	7.98	257881	9.26
07	ICC080BNA2	384461	6.35	360147	7.97	260361	9.26
08	ICC040BNA2	392336	6.37	364927	8.03	260650	9.30
09	ICC020BNA2	417878	6.35	381860	8.01	264856	9.29
10	ICC010BNA2	388805	6.35	365241	7.95	252910	9.22
11	ICC001BNA2	377773	6.35	338175	7.95	239446	9.21
12	ICV040BNA1	327047	6.36	314330	7.99	225987	9.26
13	ICV040BNA2	378361	6.36	353778	8.01	240601	9.29
14							
15							
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20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B9964.D

Date Analyzed: 05/29/2015

Instrument ID: MSDB

Time Analyzed: 12:25

	1 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	29044		2.22		76914		2.76		38789		3.56	
	UPPER LIMIT	58088		2.72		153828		3.26		77578		4.06	
	LOWER LIMIT	14522		1.72		38457		2.26		19395		3.06	
	LAB SAMPLE ID												
01	ICC000.1SIM	26121		2.22		70417		2.76		36718		3.57	
02	ICC000.2SIM	25520		2.22		67107		2.76		35311		3.57	
03	ICC0001SIM	24519		2.22		67300		2.76		36393		3.57	
04	ICC0002SIM	34296		2.22		83888		2.76		41719		3.58	
05	ICV000.5SIM	27908		2.22		74411		2.76		39444		3.59	
06													
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20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B9964.D

Date Analyzed: 05/29/2015

Instrument ID: MSDB

Time Analyzed: 12:25

	1 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	59832	4.32	43976	6.10	28365	7.37
	UPPER LIMIT	119664	4.82	87952	6.60	56730	7.87
	LOWER LIMIT	29916	3.82	21988	5.60	14183	6.87
	LAB SAMPLE ID						
01	ICC000.1SIM	57298	4.32	40923	6.10	24851	7.39
02	ICC000.2SIM	55489	4.33	38942	6.10	23044	7.40
03	ICC0001SIM	57351	4.33	43240	6.13	26086	7.41
04	ICC0002SIM	65605	4.34	51891	6.14	30835	7.42
05	ICV000.5SIM	61726	4.36	45290	6.16	27742	7.45
06							
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20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0128.D

Date Analyzed: 06/05/2015

Instrument ID: MSDB

Time Analyzed: 14:05

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	67455		3.65		258404		4.41		165513		5.44	
	UPPER LIMIT	134910		4.15		516808		4.91		331026		5.94	
	LOWER LIMIT	33728		3.15		129202		3.91		82757		4.94	
	LAB SAMPLE ID												
01	CCV040BNA2	71300		3.65		274397		4.41		171880		5.44	
02	BLKA150604-05	74275		3.65		278648		4.41		174369		5.44	
03	LCSA150604-05	69380		3.65		264415		4.41		167523		5.44	
04	E15-04515-001MS	69795		3.65		228321		4.41		168868		5.44	
05	E15-04515-001MSD	65369		3.65		247282		4.41		156814		5.44	
06	E15-04515-001	58502		3.65		221486		4.41		138001		5.44	
07	E15-04514-001	68381		3.65		260255		4.41		161773		5.44	
08	E15-04557-001	69526		3.65		265212		4.41		164073		5.44	
09	E15-04557-002	78445		3.65		298502		4.41		186092		5.44	
10	E15-04605-001	64915		3.65		242977		4.41		150159		5.44	
11	E15-04605-002	69149		3.65		265041		4.41		167639		5.44	
12	E15-04560-001	73318		3.65		275675		4.41		171716		5.44	
13	E15-04608-001	71814		3.65		273082		4.41		169588		5.44	
14	E15-04608-002	72485		3.65		275002		4.41		173405		5.44	
15	E15-04694-001	72891		3.65		276147		4.41		175491		5.44	
16	E15-04695-001	76412		3.65		295591		4.41		189003		5.44	
17	E15-04679-001	75614		3.65		288832		4.41		180981		5.44	
18	E15-04684-001	65841		3.65		250936		4.41		158939		5.44	
19	E15-04703-001	68491		3.65		259083		4.41		167493		5.44	
20	E15-04683-001	73815		3.65		282937		4.41		181310		5.44	
21	E15-04681-001	72932		3.65		272347		4.41		170613		5.44	
22	E15-04681-002	77359		3.65		291802		4.41		183710		5.44	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0128.D

Date Analyzed: 06/05/2015

Instrument ID: MSDB

Time Analyzed: 14:05

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	282161		6.35		290988		7.93		214033		9.19	
	UPPER LIMIT	564322		6.85		581976		8.43		428066		9.69	
	LOWER LIMIT	141081		5.85		145494		7.43		107017		8.69	
	LAB SAMPLE ID												
01	CCV040BNA2	296291		6.35		309615		7.91		226034		9.17	
02	BLKA150604-05	302116		6.35		303423		7.93		171891		9.19	
03	LCSA150604-05	285606		6.35		303570		7.92		194626		9.18	
04	E15-04515-001MS	283479		6.35		300837		7.93		192161		9.20	
05	E15-04515-001MSD	267781		6.34		282414		7.93		179018		9.20	
06	E15-04515-001	238613		6.35		252673		7.92		159046		9.18	
07	E15-04514-001	276565		6.35		295101		7.89		181973		9.15	
08	E15-04557-001	282050		6.35		296397		7.91		182640		9.17	
09	E15-04557-002	319145		6.34		327188		7.91		202621		9.20	
10	E15-04605-001	255160		6.34		270159		7.89		164739		9.15	
11	E15-04605-002	287409		6.34		306854		7.89		185102		9.15	
12	E15-04560-001	303465		6.35		342083		7.88		210610		9.14	
13	E15-04608-001	302748		6.34		319607		7.90		195952		9.17	
14	E15-04608-002	301158		6.35		309064		7.87		190413		9.13	
15	E15-04694-001	308325		6.35		333474		7.88		206718		9.13	
16	E15-04695-001	329666		6.34		357065		7.89		223842		9.15	
17	E15-04679-001	315218		6.34		337108		7.88		210131		9.14	
18	E15-04684-001	276925		6.35		296058		7.88		188732		9.13	
19	E15-04703-001	281662		6.35		277960		7.87		154233		9.12	
20	E15-04683-001	304666		6.35		320825		7.88		192209		9.14	
21	E15-04681-001	302851		6.35		318828		7.87		206293		9.13	
22	E15-04681-002	320060		6.35		327211		7.87		206361		9.12	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0128.D

Date Analyzed: 06/05/2015

Instrument ID: MSDB

Time Analyzed: 14:05

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	67455	3.65	258404	4.41	165513	5.44
	UPPER LIMIT	134910	4.15	516808	4.91	331026	5.94
	LOWER LIMIT	33728	3.15	129202	3.91	82757	4.94
	LAB SAMPLE ID						
01	E15-04681-003	64965	3.65	245330	4.41	154291	5.44
02	E15-04681-004	71400	3.65	273733	4.41	174422	5.44
03	E15-04681-005	66221	3.65	252048	4.41	157993	5.44
04							
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22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0128.D

Date Analyzed: 06/05/2015

Instrument ID: MSDB

Time Analyzed: 14:05

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	282161		6.35		290988		7.93		214033		9.19	
	UPPER LIMIT	564322		6.85		581976		8.43		428066		9.69	
	LOWER LIMIT	141081		5.85		145494		7.43		107017		8.69	
	LAB SAMPLE ID												
01	E15-04681-003	267482		6.35		281734		7.87		180703		9.12	
02	E15-04681-004	301928		6.35		308644		7.87		193596		9.12	
03	E15-04681-005	278087		6.35		290442		7.88		184078		9.13	
04													
05													
06													
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21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0110.D

Date Analyzed: 06/05/2015

Instrument ID: MSDB

Time Analyzed: 09:24

	1 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	20473		2.22		52271		2.76		27673		3.58	
	UPPER LIMIT	40946		2.72		104542		3.26		55346		4.08	
	LOWER LIMIT	10237		1.72		26136		2.26		13837		3.08	
	LAB SAMPLE ID												
01	BLKA150604-05	15980		2.22		43546		2.76		26477		3.56	
02	E15-04515-001	14821		2.22		39893		2.76		24543		3.56	
03	E15-04514-001	17662		2.22		45354		2.76		27501		3.56	
04	E15-04557-001	17194		2.22		47115		2.76		27981		3.56	
05	E15-04557-002	16880		2.22		43032		2.76		25629		3.56	
06	E15-04605-001	16519		2.22		43655		2.76		26041		3.56	
07	E15-04605-002	14238		2.22		38618		2.76		22819		3.56	
08	E15-04560-001	15487		2.22		40630		2.76		24222		3.56	
09	E15-04608-001	16741		2.22		43116		2.76		25602		3.55	
10	E15-04608-002	15732		2.22		41401		2.76		24601		3.56	
11	E15-04694-001	16016		2.22		44137		2.76		26556		3.56	
12	E15-04695-001	16671		2.22		46256		2.76		35954		3.56	
13	E15-04679-001	16392		2.22		43813		2.76		27377		3.56	
14	E15-04684-001	14553		2.22		39902		2.76		23289		3.56	
15	E15-04703-001	14613		2.22		40503		2.76		26995		3.56	
16	E15-04683-001	18103		2.22		52787		2.76		53607		3.56	
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0110.D

Date Analyzed: 06/05/2015

Instrument ID: MSDB

Time Analyzed: 09:24

	1 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	44913		4.34		35270		6.11		25877		7.41	
	UPPER LIMIT	89826		4.84		70540		6.61		51754		7.91	
	LOWER LIMIT	22457		3.84		17635		5.61		12939		6.91	
	LAB SAMPLE ID												
01	BLKA150604-05	47970		4.30		37185		6.07		30250		7.36	
02	E15-04515-001	43255		4.30		32531		6.06		31100		7.36	
03	E15-04514-001	47493		4.30		35437		6.06		32853		7.36	
04	E15-04557-001	48051		4.31		35573		6.08		30170		7.37	
05	E15-04557-002	45595		4.31		33753		6.07		29968		7.36	
06	E15-04605-001	44349		4.30		32567		6.06		29023		7.35	
07	E15-04605-002	39778		4.30		30067		6.05		26100		7.35	
08	E15-04560-001	41729		4.29		34850		6.05		32272		7.34	
09	E15-04608-001	42592		4.28		33739		6.06		29627		7.33	
10	E15-04608-002	42892		4.29		33971		6.05		26785		7.35	
11	E15-04694-001	47028		4.31		36439		6.08		33360		7.38	
12	E15-04695-001	50289		4.30		39165		6.06		36260		7.35	
13	E15-04679-001	47633		4.31		38200		6.07		33824		7.37	
14	E15-04684-001	41992		4.29		33103		6.05		28849		7.34	
15	E15-04703-001	44290		4.30		37597		6.06		33359		7.35	
16	E15-04683-001	63620		4.30		49886		6.05		46555		7.34	
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0155.D

Date Analyzed: 06/08/2015

Instrument ID: MSDB

Time Analyzed: 07:30

	1 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	29839	2.22	78397	2.76	42177	3.57
	UPPER LIMIT	59678	2.72	156794	3.26	84354	4.07
	LOWER LIMIT	14920	1.72	39199	2.26	21089	3.07
	LAB SAMPLE ID						
01	E15-04681-001	22275	2.22	62390	2.76	43118	3.56
02	E15-04681-002	22743	2.22	61660	2.76	37839	3.56
03	E15-04681-003	21357	2.22	58922	2.76	36443	3.56
04	E15-04681-004	20243	2.22	55137	2.76	33957	3.56
05	E15-04681-005	19420	2.22	52783	2.76	32430	3.56
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22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B0155.D

Date Analyzed: 06/08/2015

Instrument ID: MSDB

Time Analyzed: 07:30

	1 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	69115		4.33		55932		6.10		37707		7.40	
	UPPER LIMIT	138230		4.83		111864		6.60		75414		7.90	
	LOWER LIMIT	34558		3.83		27966		5.60		18854		6.90	
	LAB SAMPLE ID												
01	E15-04681-001	93551		4.31		95601		6.08		69757		7.38	
02	E15-04681-002	65569		4.30		50103		6.05		41979		7.35	
03	E15-04681-003	63368		4.30		49499		6.08		41008		7.35	
04	E15-04681-004	59992		4.31		46968		6.08		39667		7.37	
05	E15-04681-005	58212		4.31		48890		6.09		41069		7.36	
06													
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22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMI-VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0149.D
Acq On : 5 Jun 2015 20:10
Operator : DANA
Sample : MW-11/11.30,E15-04681-001,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Jun 08 07:28:28 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.65	152	72932	40.00	UG	0.00
23) Naphthalene-d8	4.41	136	272347	40.00	UG	0.00
43) Acenaphthene-d10	5.44	164	170613	40.00	UG	0.00
66) Phenanthrene-d10	6.35	188	302851	40.00	UG	0.00
82) Chrysene-d12	7.87	240	318828m	40.00	UG	-0.08
92) Perylene-d12	9.13	264	206293	40.00	UG	-0.10
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.98	82	37214	16.81	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 33.62%			
47) 2-Fluorobiphenyl	5.03	172	112592	20.57	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 41.14%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.20	244	240231	30.57	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 61.14%			

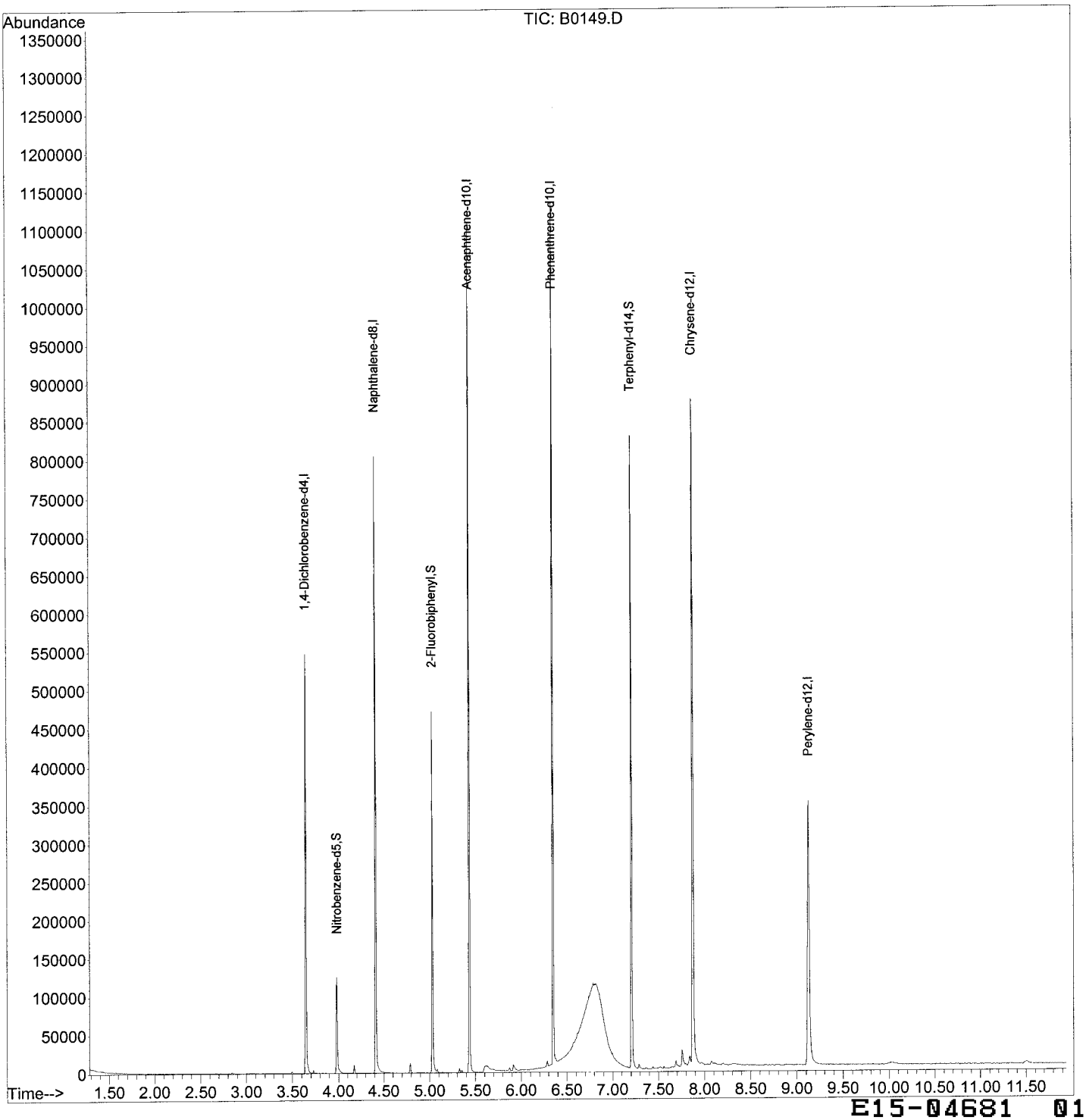
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0149.D
Acq On : 5 Jun 2015 20:10
Operator : DANA
Sample : MW-11/11.30,E15-04681-001,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Jun 08 07:28:28 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-08-15\
Data File : B0156.D
Acq On : 8 Jun 2015 7:45
Operator : DANA
Sample : MW-11/11.30,E15-04681-001,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 08 09:05:48 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.22	152	22275	1.00	UG	0.00
23) Naphthalene-d8	2.76	136	62390	1.00	UG	0.00
43) Acenaphthene-d10	3.56	164	43118	1.00	UG	0.00
66) Phenanthrene-d10	4.31	188	93551m	1.00	UG	0.00
82) Chrysene-d12	6.08	240	95601	1.00	UG	-0.03
92) Perylene-d12	7.38	264	69757m	1.00	UG	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

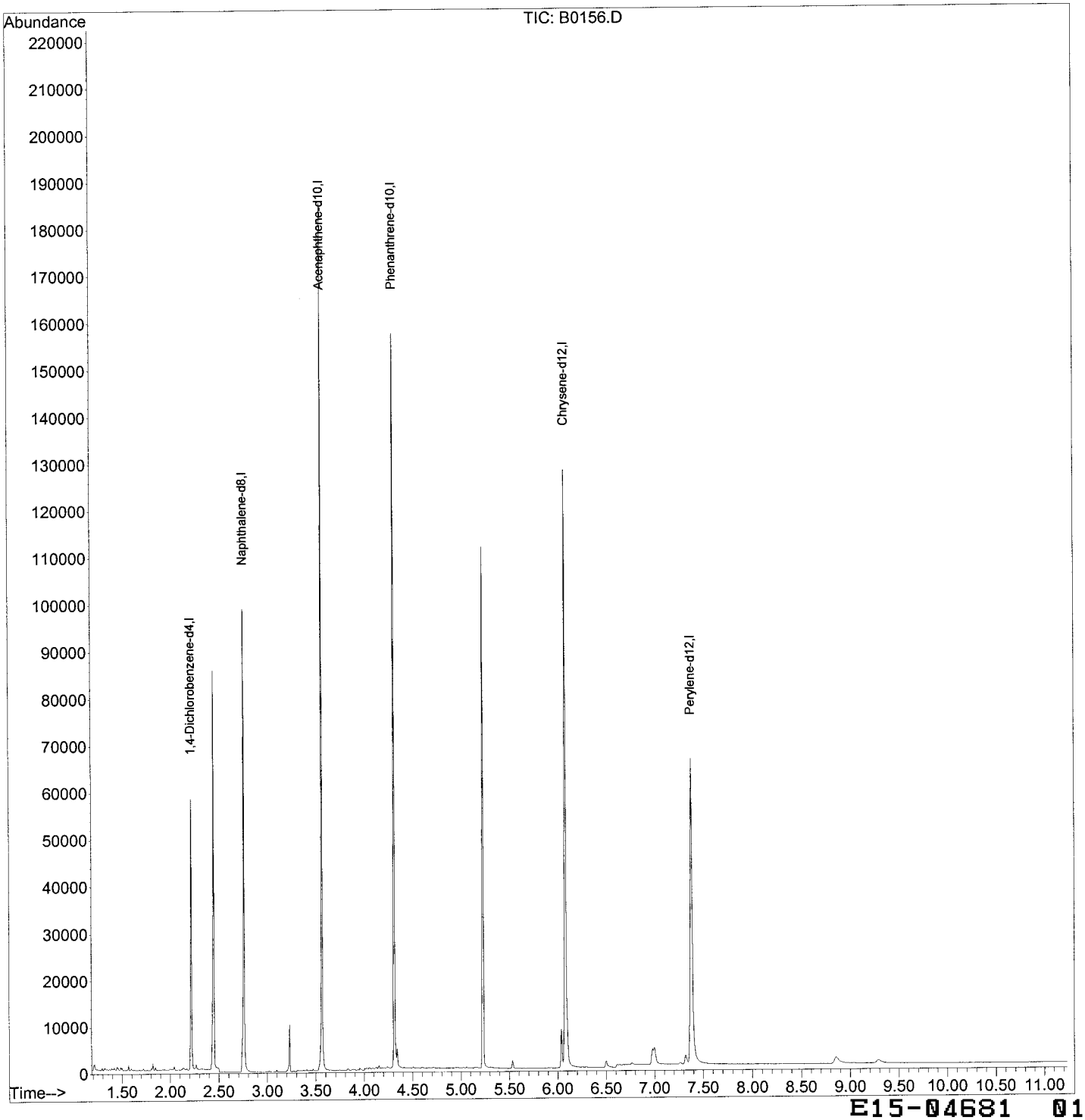
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-08-15\
Data File : B0156.D
Acq On : 8 Jun 2015 7:45
Operator : DANA
Sample : MW-11/11.30,E15-04681-001,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 08 09:05:48 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0150.D
Acq On : 5 Jun 2015 20:27
Operator : DANA
Sample : MW-20/11.65,E15-04681-002,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Jun 08 10:26:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.65	152	77359	40.00	UG	0.00
23) Naphthalene-d8	4.41	136	291802	40.00	UG	0.00
43) Acenaphthene-d10	5.44	164	183710	40.00	UG	0.00
66) Phenanthrene-d10	6.35	188	320060	40.00	UG	0.00
82) Chrysene-d12	7.87	240	327211	40.00	UG	-0.08
92) Perylene-d12	9.12	264	206361	40.00	UG	-0.10
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.98	82	67282	28.36	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 56.72%			
47) 2-Fluorobiphenyl	5.03	172	188619	32.01	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 64.02%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.20	244	276074	34.23	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 68.46%			

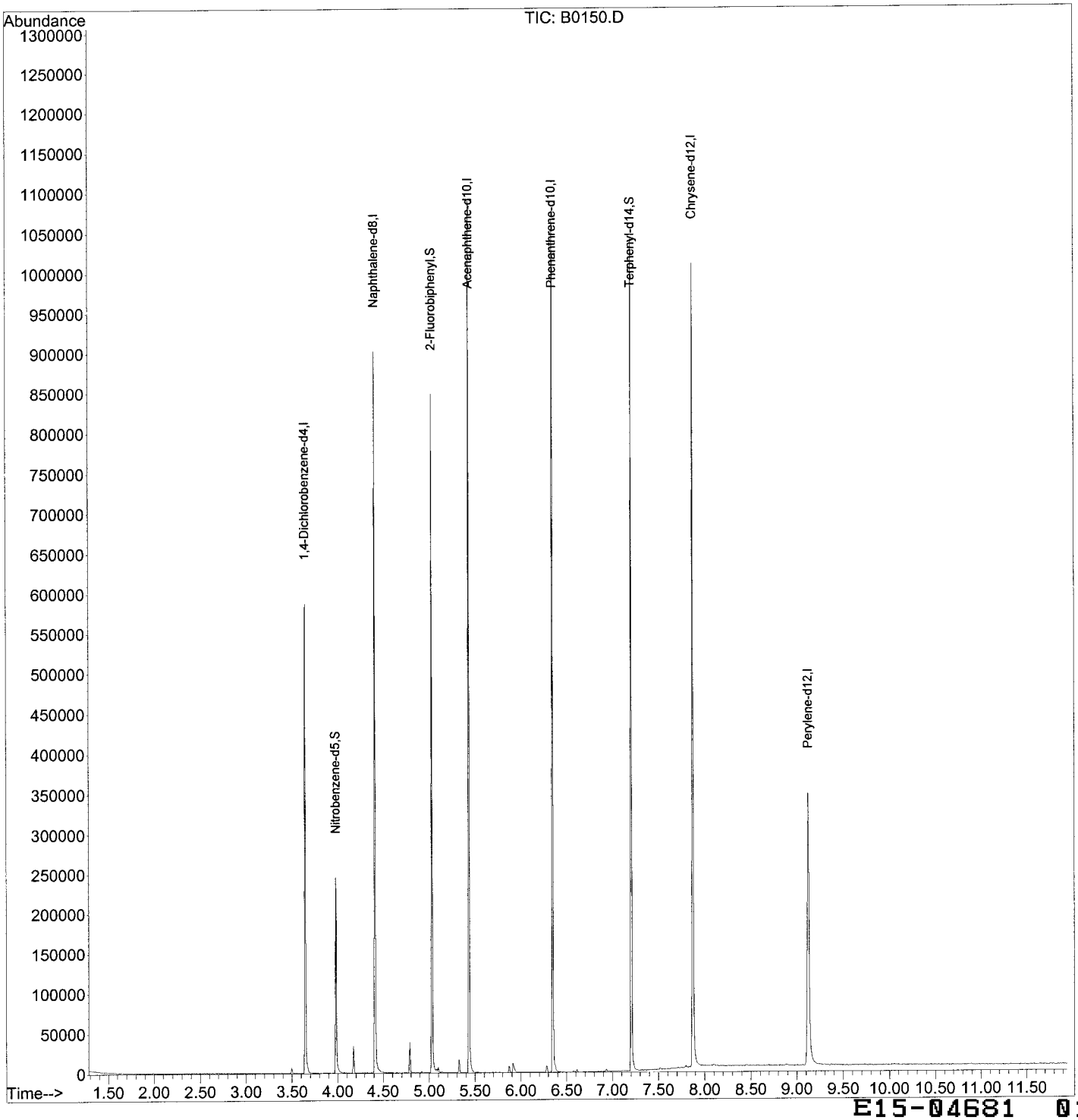
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0150.D
Acq On : 5 Jun 2015 20:27
Operator : DANA
Sample : MW-20/11.65,E15-04681-002,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Jun 08 10:26:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0157.D
Acq On : 8 Jun 2015 8:18
Operator : DANA
Sample : MW-20/11.65,E15-04681-002,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 08 09:06:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

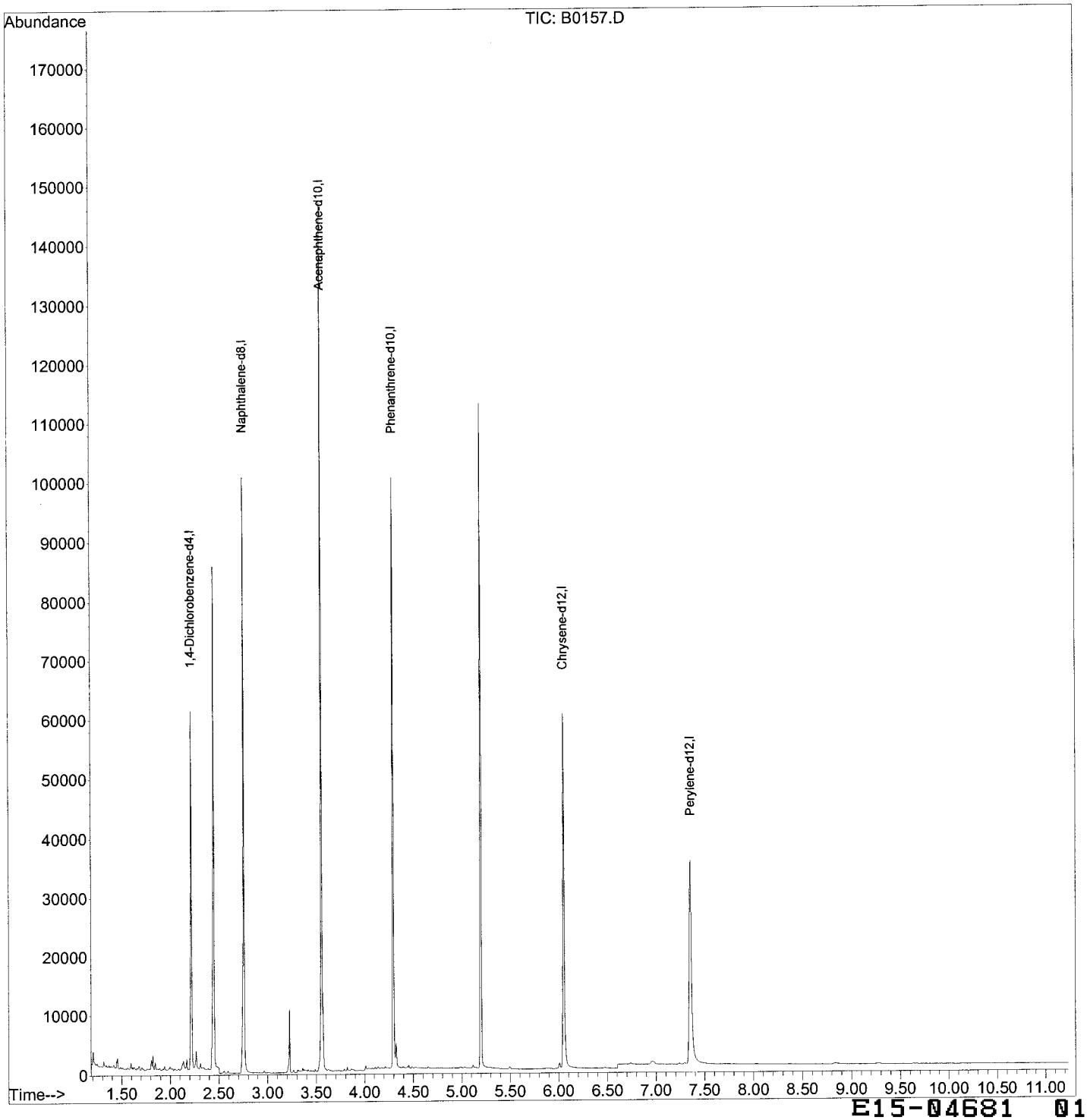
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.22	152	22743	1.00	UG	0.00
23) Naphthalene-d8	2.76	136	61660	1.00	UG	0.00
43) Acenaphthene-d10	3.56	164	37839m	1.00	UG	0.00
66) Phenanthrene-d10	4.30	188	65569	1.00	UG	-0.02
82) Chrysene-d12	6.05	240	50103	1.00	UG	-0.06
92) Perylene-d12	7.35	264	41979m	1.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0157.D
Acq On : 8 Jun 2015 8:18
Operator : DANA
Sample : MW-20/11.65,E15-04681-002,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 08 09:06:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0151.D
Acq On : 5 Jun 2015 20:45
Operator : DANA
Sample : MW-21/11.33,E15-04681-003,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Jun 08 07:29:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.65	152	64965	40.00	UG	0.00
23) Naphthalene-d8	4.41	136	245330	40.00	UG	0.00
43) Acenaphthene-d10	5.44	164	154291	40.00	UG	0.00
66) Phenanthrene-d10	6.35	188	267482	40.00	UG	0.00
82) Chrysene-d12	7.87	240	281734	40.00	UG	-0.08
92) Perylene-d12	9.12	264	180703	40.00	UG	-0.10
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.98	82	55235	27.69	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 55.38%			
47) 2-Fluorobiphenyl	5.03	172	157749	31.87	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 63.74%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.20	244	245970	35.42	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 70.84%			

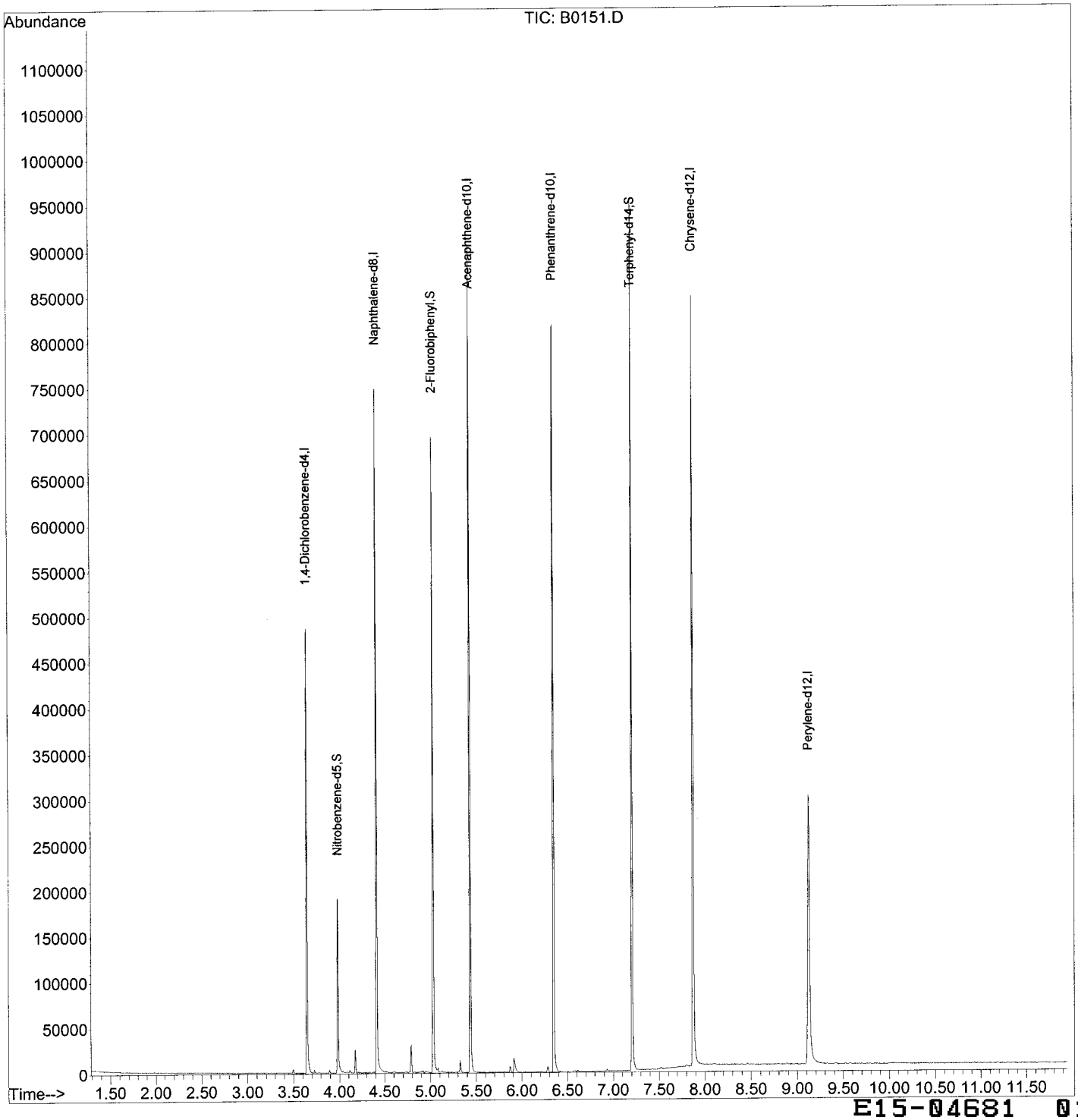
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0151.D
Acq On : 5 Jun 2015 20:45
Operator : DANA
Sample : MW-21/11.33,E15-04681-003,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Jun 08 07:29:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0158.D
Acq On : 8 Jun 2015 8:34
Operator : DANA
Sample : MW-21/11.33,E15-04681-003,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 08 09:07:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.22	152	21357	1.00	UG	0.00
23) Naphthalene-d8	2.76	136	58922	1.00	UG	0.00
43) Acenaphthene-d10	3.56	164	36443	1.00	UG	0.00
66) Phenanthrene-d10	4.30	188	63368	1.00	UG	-0.02
82) Chrysene-d12	6.08	240	49499m	1.00	UG	-0.03
92) Perylene-d12	7.35	264	41008	1.00	UG	-0.02

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

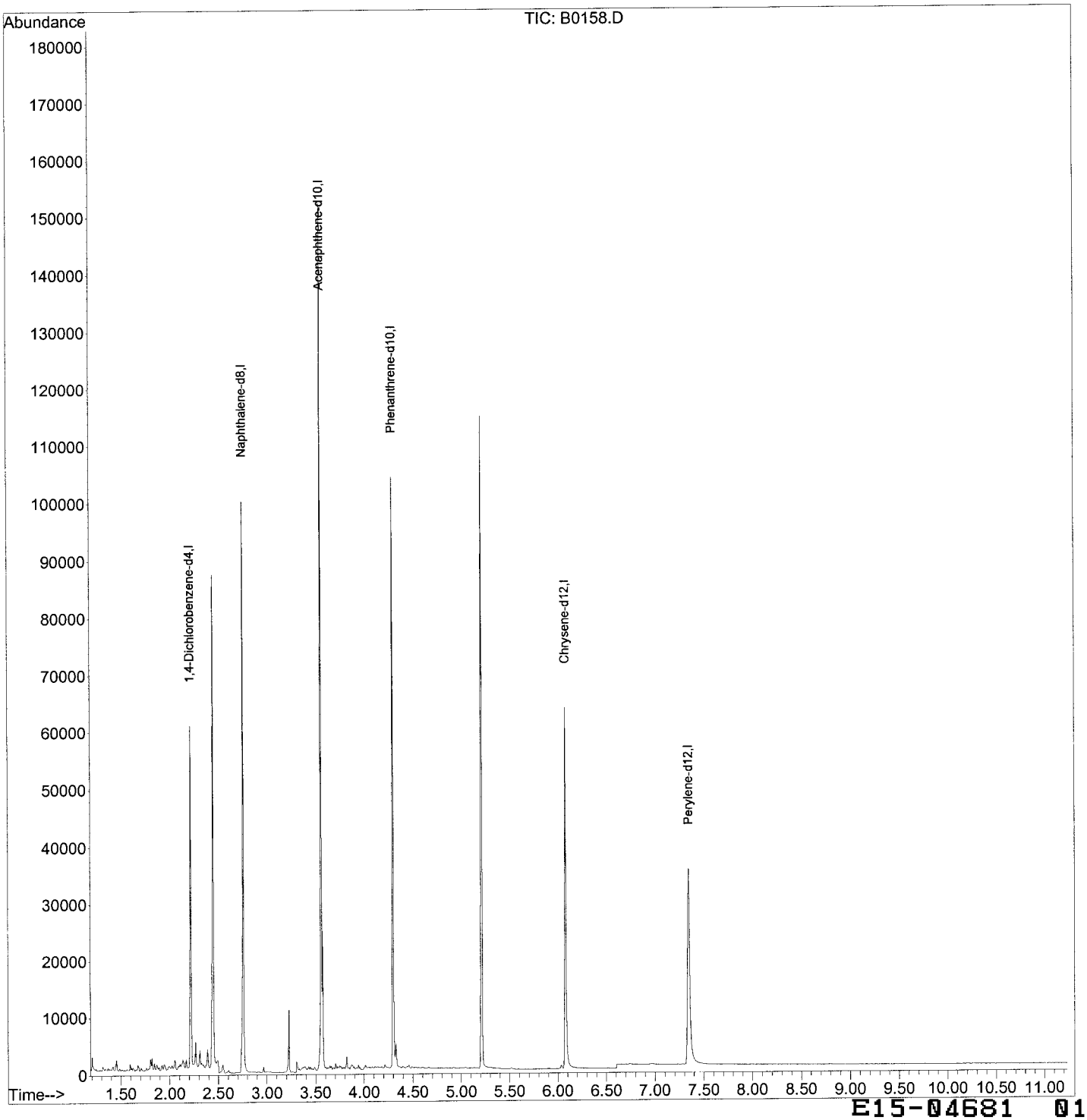
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0158.D
Acq On : 8 Jun 2015 8:34
Operator : DANA
Sample : MW-21/11.33,E15-04681-003,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 08 09:07:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0152.D
Acq On : 5 Jun 2015 21:02
Operator : DANA
Sample : MW-22/11.60,E15-04681-004,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Jun 08 07:31:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.65	152	71400	40.00	UG	0.00
23) Naphthalene-d8	4.41	136	273733	40.00	UG	0.00
43) Acenaphthene-d10	5.44	164	174422	40.00	UG	0.00
66) Phenanthrene-d10	6.35	188	301928	40.00	UG	0.00
82) Chrysene-d12	7.87	240	308644	40.00	UG	-0.09
92) Perylene-d12	9.12	264	193596	40.00	UG	-0.10
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.98	82	58940	26.48	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 52.96%			
47) 2-Fluorobiphenyl	5.03	172	173738	31.05	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 62.10%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.20	244	268762	35.33	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 70.66%			

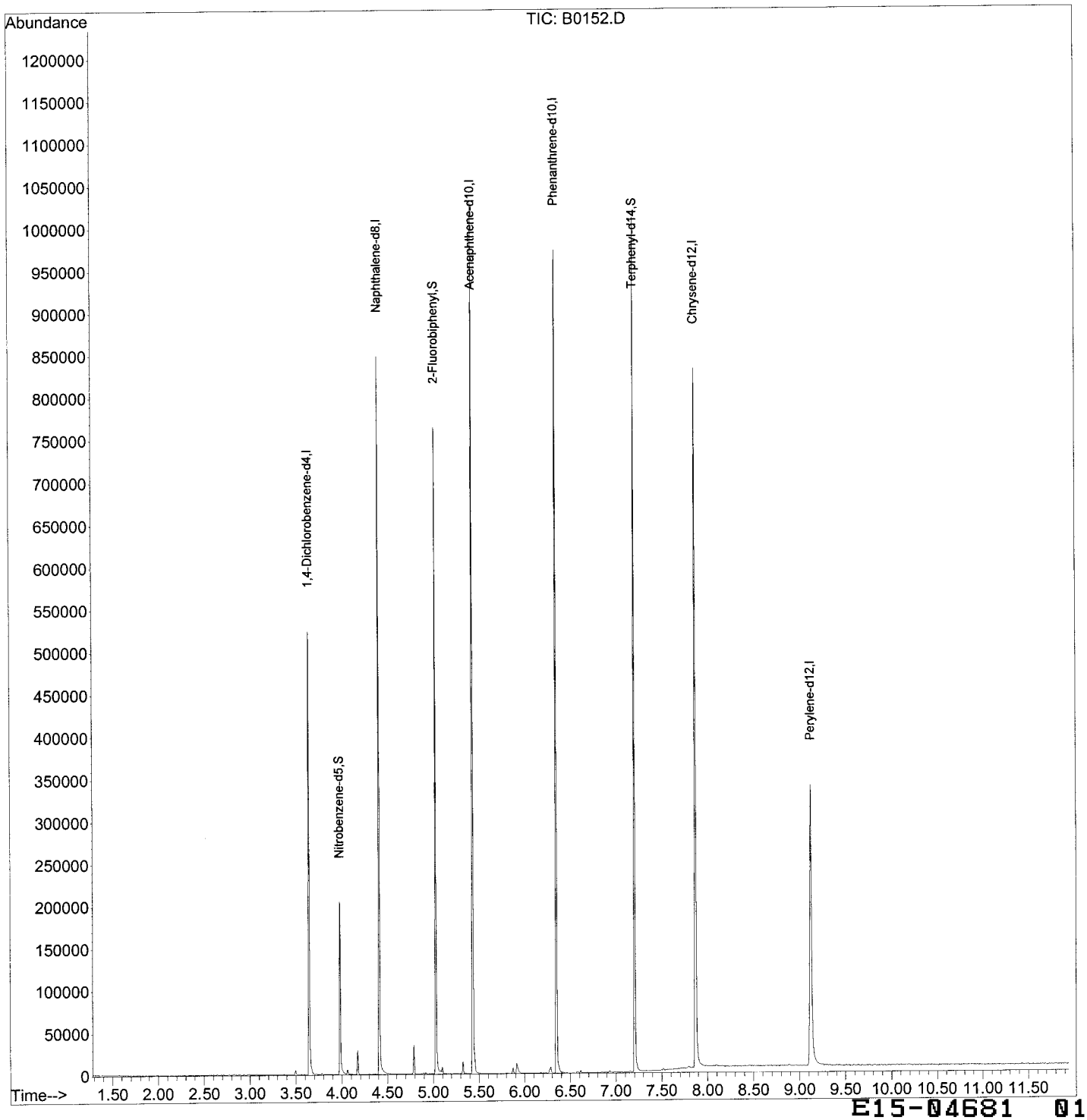
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0152.D
Acq On : 5 Jun 2015 21:02
Operator : DANA
Sample : MW-22/11.60,E15-04681-004,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Jun 08 07:31:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0159.D
Acq On : 8 Jun 2015 8:50
Operator : DANA
Sample : MW-22/11.60,E15-04681-004,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 08 09:08:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.22	152	20243	1.00	UG	0.00
23) Naphthalene-d8	2.76	136	55137	1.00	UG	0.00
43) Acenaphthene-d10	3.56	164	33957	1.00	UG	0.00
66) Phenanthrene-d10	4.31	188	59992m	1.00	UG	0.00
82) Chrysene-d12	6.08	240	46968	1.00	UG	-0.03
92) Perylene-d12	7.37	264	39667m	1.00	UG	0.00

System Monitoring Compounds						
4) 2-Fluorophenol		0.00	112	0	0.00 UG	
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
6) Phenol-d5		0.00	99	0	0.00 UG	
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
24) Nitrobenzene-d5		0.00	82	0	0.00 UG	
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
47) 2-Fluorobiphenyl		0.00	172	0	0.00 UG	
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
70) 2,4,6-Tribromophenol		0.00	330	0	0.00 UG	
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
84) Terphenyl-d14		0.00	244	0	0.00 UG	
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#

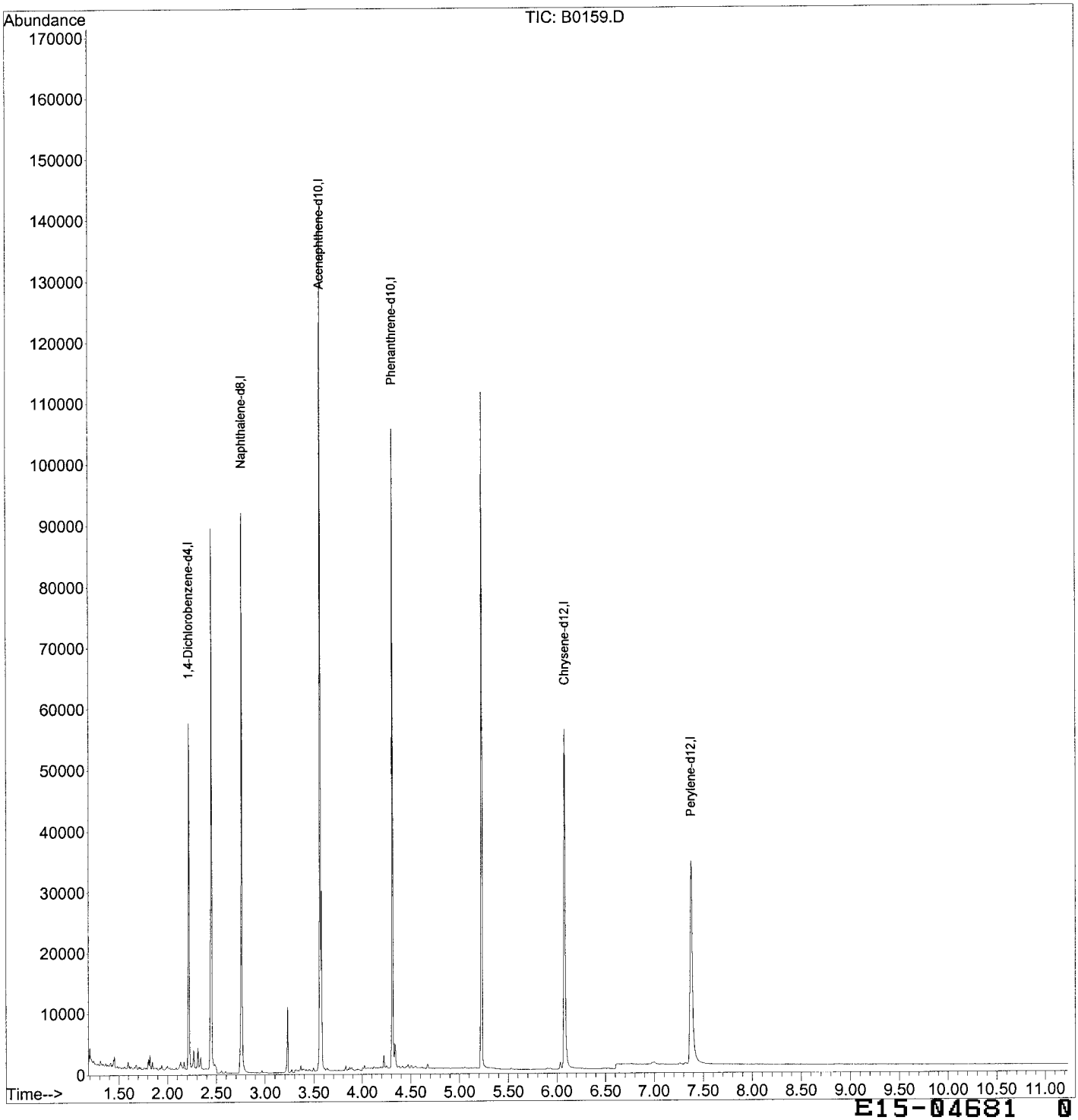
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0159.D
Acq On : 8 Jun 2015 8:50
Operator : DANA
Sample : MW-22/11.60,E15-04681-004,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 08 09:08:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration



E15-04681 0143

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0153.D
Acq On : 5 Jun 2015 21:19
Operator : DANA
Sample : FB,E15-04681-005,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Jun 08 07:31:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.65	152	66221	40.00	UG	0.00
23) Naphthalene-d8	4.41	136	252048	40.00	UG	0.00
43) Acenaphthene-d10	5.44	164	157993	40.00	UG	0.00
66) Phenanthrene-d10	6.35	188	278087	40.00	UG	0.00
82) Chrysene-d12	7.88	240	290442	40.00	UG	-0.07
92) Perylene-d12	9.13	264	184078	40.00	UG	-0.09
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.98	82	38447	18.76	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 37.52%			
47) 2-Fluorobiphenyl	5.03	172	115377	22.76	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 45.52%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.21	244	255851	35.74	UG	-0.04
Spiked Amount 50.000	Range 23 - 124		Recovery = 71.48%			

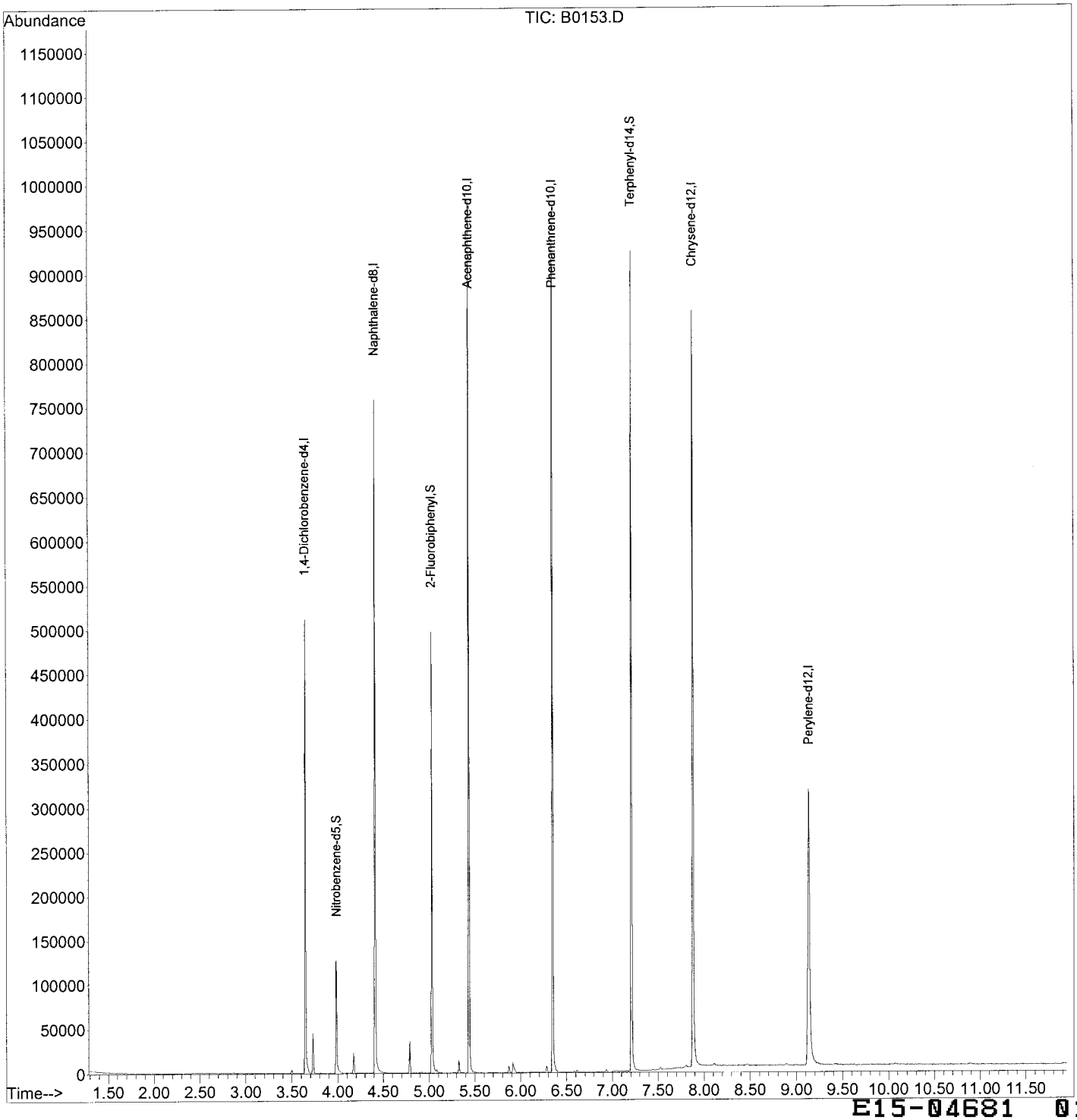
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-05-15\
Data File : B0153.D
Acq On : 5 Jun 2015 21:19
Operator : DANA
Sample : FB,E15-04681-005,A,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Jun 08 07:31:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0160.D
Acq On : 8 Jun 2015 9:06
Operator : DANA
Sample : FB,E15-04681-005,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 08 10:14:27 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.22	152	19420	1.00	UG	0.00
23) Naphthalene-d8	2.76	136	52783	1.00	UG	0.00
43) Acenaphthene-d10	3.56	164	32430	1.00	UG	0.00
66) Phenanthrene-d10	4.31	188	58212	1.00	UG	0.00
82) Chrysene-d12	6.09	240	48890m	1.00	UG	-0.01
92) Perylene-d12	7.36	264	41069	1.00	UG	-0.01

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

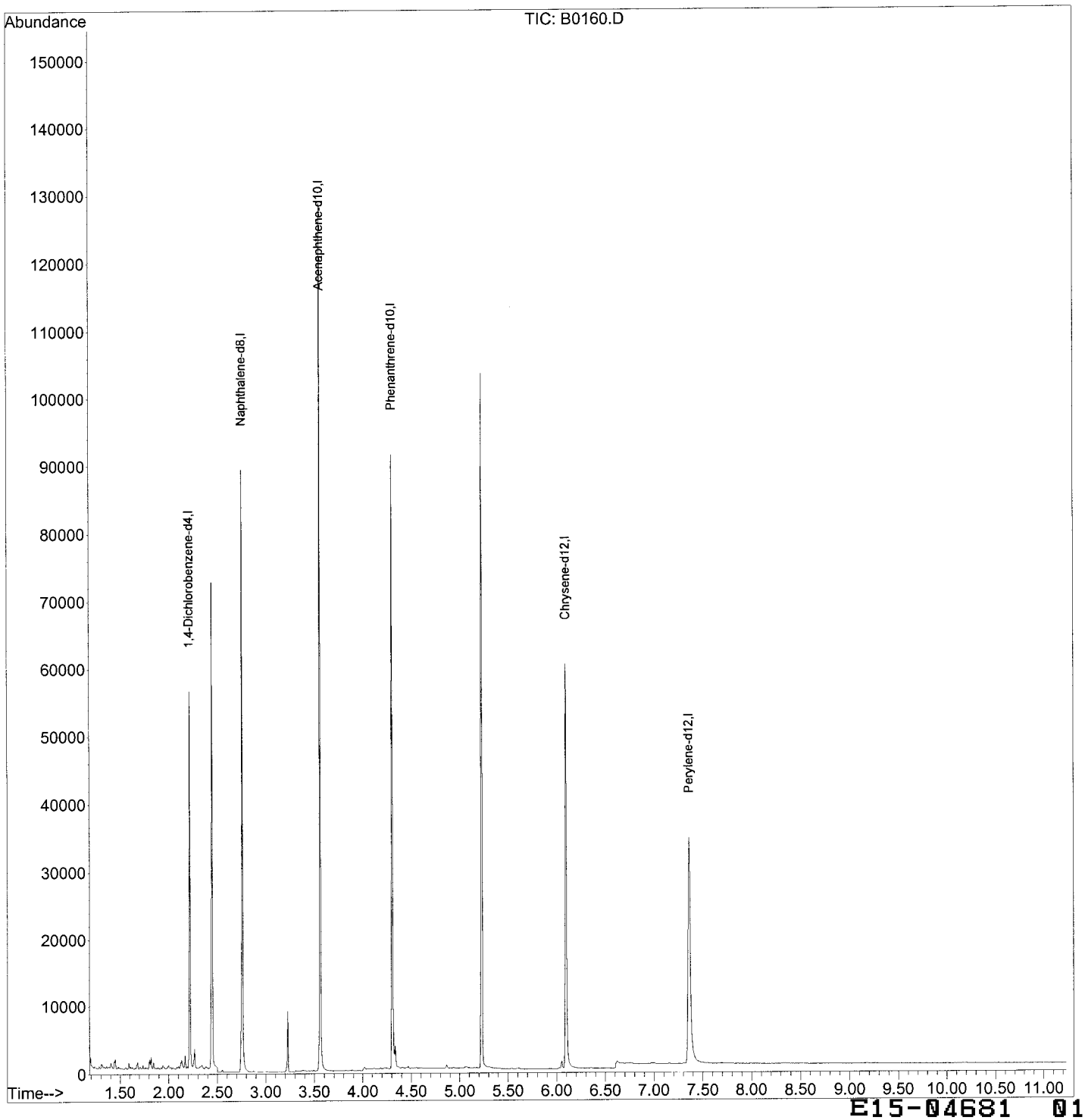
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\06-08-15\
Data File : B0160.D
Acq On : 8 Jun 2015 9:06
Operator : DANA
Sample : FB,E15-04681-005,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,06/04/15,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 08 10:14:27 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration



INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA150604-05
Client ID: .
Date Received: NA
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0130.D
SIM Data file: B0111.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		1.00	0.235
Pyridine	ND		1.00	0.286
Benzaldehyde	ND		1.00	0.276
Phenol	ND		1.00	0.204
Aniline	ND		1.00	0.283
Bis(2-chloroethyl) ether	ND		1.00	0.373
2-Chlorophenol	ND		1.00	0.211
1,3-Dichlorobenzene	ND		1.00	0.293
1,4-Dichlorobenzene	ND		1.00	0.299
Benzyl alcohol	ND		1.00	0.208
1,2-Dichlorobenzene	ND		1.00	0.258
2-Methylphenol	ND		1.00	0.294
Bis(2-chloroisopropyl) ether	ND		1.00	0.253
4-Methylphenol **	ND		1.00	0.376
N-Nitrosodi-n-propylamine	ND		1.00	0.223
Acetophenone	ND		1.00	0.244
3-Methylphenol	ND		1.00	0.376
Hexachloroethane	ND		1.00	0.364
Nitrobenzene	ND		1.00	0.239
Isophorone	ND		1.00	0.233
2-Nitrophenol	ND		1.00	0.319
2,4-Dimethylphenol	ND		1.00	0.285
Bis(2-chloroethoxy) methane	ND		1.00	0.232
Benzoic acid	ND		1.00	0.330
2,4-Dimethylaniline	ND		1.00	0.234
2,4-Dichlorophenol	ND		1.00	0.253
1,2,4-Trichlorobenzene	ND		1.00	0.245
Naphthalene	ND		1.00	0.341
4-Chloroaniline	ND		1.00	0.337
4-Aminotoluene	ND		1.00	0.266
Hexachlorobutadiene	ND		1.00	0.229
Caprolactam	ND		1.00	0.366
2-Aminotoluene	ND		1.00	0.266
4-Chloro-3-methylphenol	ND		1.00	0.334
2-Methylnaphthalene	ND		1.00	0.224
Hexachlorocyclopentadiene	ND		1.00	0.362
2,4,6-Trichlorophenol	ND		1.00	0.261
2,4,5-Trichlorophenol	ND		1.00	0.306
1,1'-Biphenyl	ND		1.00	0.210
2-Chloronaphthalene	ND		1.00	0.256
2-Nitroaniline	ND		1.00	0.288
Dimethyl phthalate	ND		1.00	0.266

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA150604-05
Client ID: .
Date Received: NA
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0130.D
SIM Data file: B0111.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		1.00	0.235
Acenaphthylene	ND		1.00	0.246
3-Nitroaniline	ND		1.00	0.281
Acenaphthene	ND		1.00	0.251
2,4-Dinitrophenol	ND		1.00	0.413
4-Nitrophenol	ND		1.00	0.371
2,4-Dinitrotoluene	ND		1.00	0.263
Dibenzofuran	ND		1.00	0.298
Diethyl phthalate	ND		1.00	0.264
Fluorene	ND		1.00	0.203
4-Chlorophenyl phenyl ether	ND		1.00	0.297
4-Nitroaniline	ND		1.00	0.318
1,2,4,5-Tetrachlorobenzene	ND		1.00	0.226
2,3,4,6-Tetrachlorophenol	ND		1.00	0.275
4,6-Dinitro-2-methylphenol	ND		10.0	0.220
N-Nitrosodiphenylamine	ND		1.00	0.260
1,2-Diphenylhydrazine	ND		1.00	0.250
4-Bromophenyl phenyl ether	ND		1.00	0.248
Hexachlorobenzene *	ND		0.020	0.020
Atrazine	ND		1.00	0.259
Pentachlorophenol *	ND		0.100	0.100
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Carbazole	ND		1.00	0.248
Di-n-butyl phthalate	ND		1.00	0.262
Fluoranthene	ND		1.00	0.206
Benzidine	ND		1.00	0.267
Pyrene	ND		1.00	0.256
3,3'-Dimethylbenzidine	ND		1.00	0.320
Butyl benzyl phthalate	ND		1.00	0.391
3,3'-Dichlorobenzidine	ND		1.00	0.391
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Bis(2-ethylhexyl) phthalate	ND		1.00	0.429
Di-n-octyl phthalate	ND		1.00	0.399
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA150604-05
Client ID: .
Date Received: NA
Date Extracted: 06/04/2015
Date Analyzed: 06/05/2015
Data file: B0130.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-05-15\
Data File : B0130.D
Acq On : 5 Jun 2015 14:40
Operator : DANA
Sample : .,BLKA150604-05,A,1000ml,100,1
Misc : 150604-05,06/04/15,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 05 14:52:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.65	152	74275	40.00	UG	0.00
23) Naphthalene-d8	4.41	136	278648	40.00	UG	0.00
43) Acenaphthene-d10	5.44	164	174369	40.00	UG	0.00
66) Phenanthrene-d10	6.35	188	302116	40.00	UG	0.00
82) Chrysene-d12	7.93	240	303423	40.00	UG	-0.03
92) Perylene-d12	9.19	264	171891	40.00	UG	-0.04
System Monitoring Compounds						
4) 2-Fluorophenol	2.82	112	96701	42.36	UG	0.00
Spiked Amount 100.000	Range 10 - 100		Recovery = 42.36%			
6) Phenol-d5	3.41	99	115288	43.16	UG	0.00
Spiked Amount 100.000	Range 10 - 102		Recovery = 43.16%			
24) Nitrobenzene-d5	3.98	82	48883	21.58	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 43.16%			
47) 2-Fluorobiphenyl	5.03	172	139494	24.94	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 49.88%			
70) 2,4,6-Tribromophenol	5.96	330	53837	33.75	UG	0.00
Spiked Amount 100.000	Range 22 - 115		Recovery = 33.75%			
84) Terphenyl-d14	7.23	244	179316	23.98	UG	-0.02
Spiked Amount 50.000	Range 23 - 124		Recovery = 47.96%			

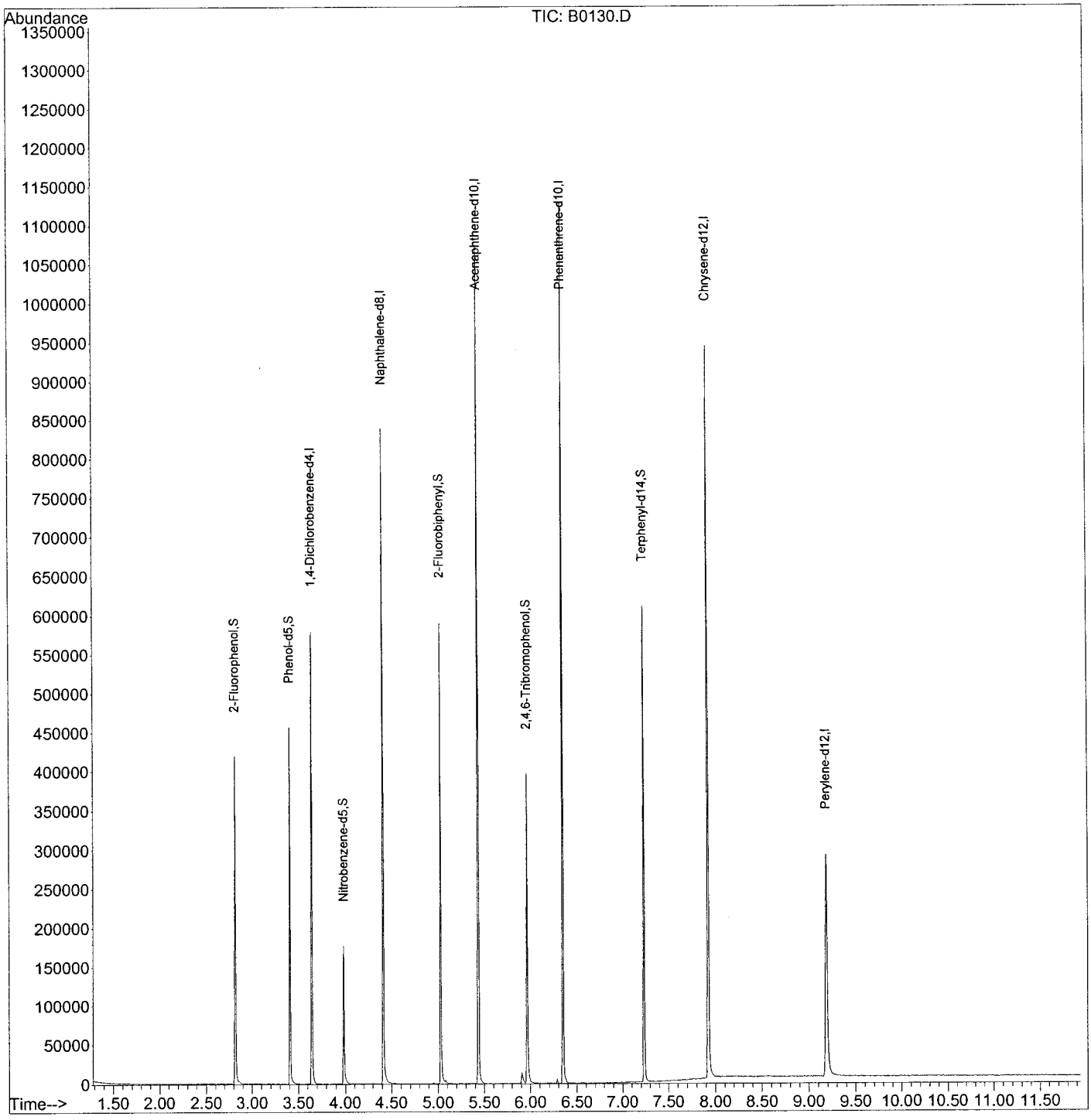
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-05-15\
Data File : B0130.D
Acq On : 5 Jun 2015 14:40
Operator : DANA
Sample : .,BLKA150604-05,A,1000ml,100,1
Misc : 150604-05,06/04/15,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jun 05 14:52:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Mon Jun 01 10:04:44 2015
Response via : Initial Calibration



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\06-05-15\
Data File : B0130.D
Acq On : 5 Jun 2015 14:40
Operator : DANA
Sample : .,BLKA150604-05,A,1000ml,100,1
Misc : 150604-05,06/04/15,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\BW0615.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

BW0615.M Fri Jun 05 14:52:49 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-05-15\
Data File : B0111.D
Acq On : 5 Jun 2015 9:40
Operator : DANA
Sample : .,BLKA150604-05,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 05 10:26:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.22	152	15980	1.00	UG	0.00
23) Naphthalene-d8	2.76	136	43546	1.00	UG	0.00
43) Acenaphthene-d10	3.56	164	26477	1.00	UG	0.00
66) Phenanthrene-d10	4.30	188	47970	1.00	UG	-0.01
82) Chrysene-d12	6.07	240	37185m	1.00	UG	-0.04
92) Perylene-d12	7.36	264	30250	1.00	UG	-0.01

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

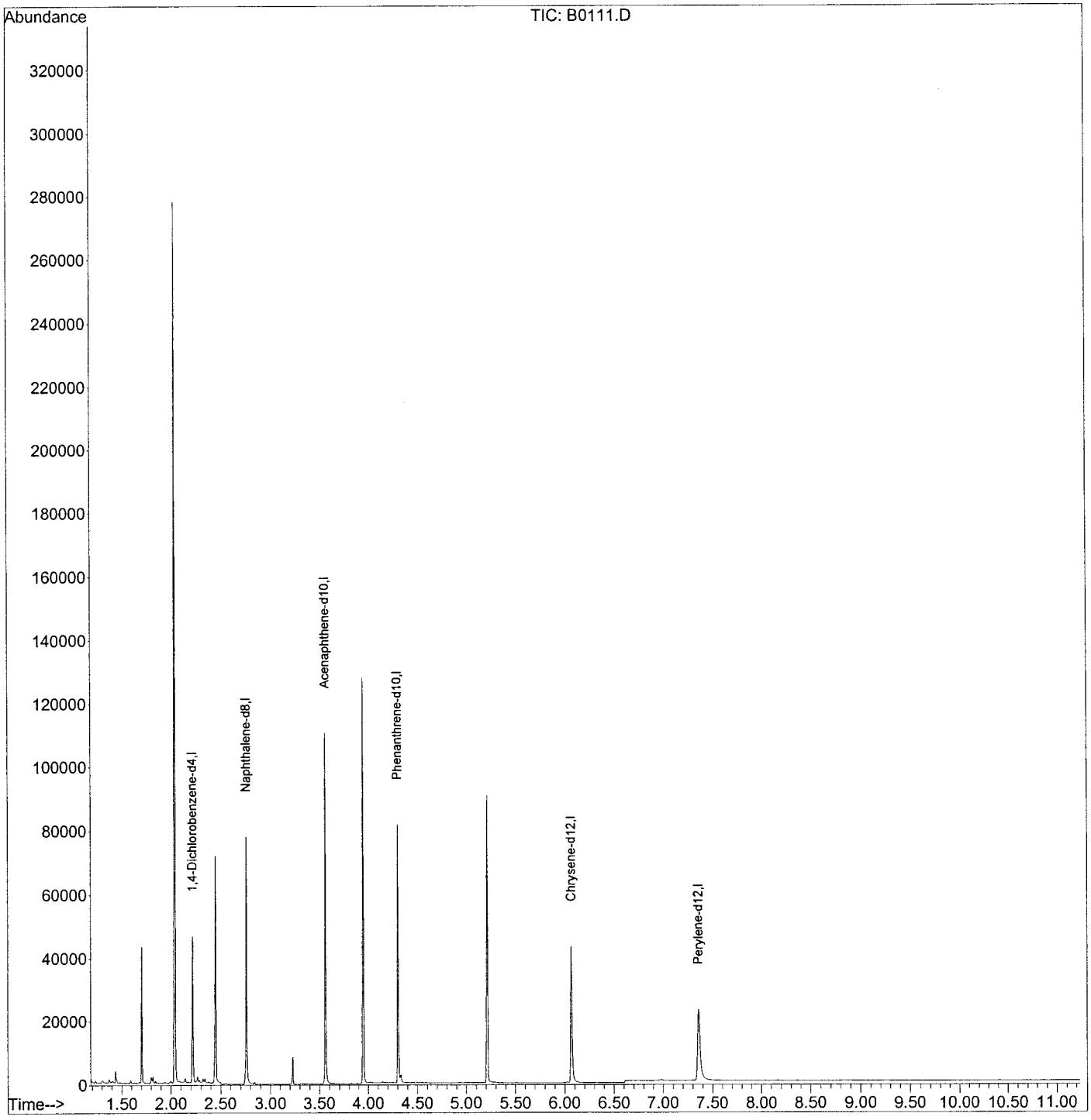
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\06-05-15\
Data File : B0111.D
Acq On : 5 Jun 2015 9:40
Operator : DANA
Sample : .,BLKA150604-05,Ia,1000ml,100,1
Misc : 150604-05,06/04/15,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 05 10:26:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM0615.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri May 29 15:45:53 2015
Response via : Initial Calibration



SAMPLE TRACKING

Integrated Analytical Laboratories LLC

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

Customer Information	Reporting Information
Company: GEI Consultants	REPORT TO: GEI Consultants
Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054	Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ 08054
Telephone #: 856-608-6666	Attn: Chris Dailey
Fax #: 856-608-6664	FAX # 856-608-6664
Project Manager: Chris Dailey	INVOICE TO: GEI Consultants
EMAIL Address: cdailey@geiconsultants.com	Address: 10000 Horizon Way, Suite 200 Mount Laurel, NJ
Project Name: Sea Isle City	Attn: Chris Dailey
Project Location (State): New Jersey	PO #
Bottle Order #:	Quote #
☐ "Report to"/"Invoice To" same as above	
Sampled by:	

COMPLETED BY IAL: ____ Field Sampling ____ Equipment Rental

****Rush TAT Charge:** 24 hr - 100%... 48 hr - 75%.... 72 hr - 50%.... 96 hr - 35%.... 5 day - 25%.... 6-9 day - 10%

Deliverables

NJ, CT, PA	NY
☐ Results Only	☐ ASP Category A
☒ Reduced	☐ ASP Category B*
☐ Regulatory/ Full*	

EDDs
- ☒ NJ SRP
- ☐ NYSDEC EQuIS
- ☐ lab approved custom EDD
- ☐ NO EDD REQ'D

Concentrations Expected: Low / Med / High

These samples have been previously analyzed by IAL: ☐ YES ☒ NO

Turn-Around Time (TAT)
- Standard (10 business days) Verbal
- Rush/date needed (only if pre-approved)**: _____
- Hard Copy: Std 3 week
- Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED
- ☐ NJ EPH-DRO - Category 1
- ☐ NJ EPH-C40 - Category 2
- ☐ NJ EPH-Fractionated - Cat 2
- ☐ DRO-8015

TAT for PHC (if other than 2 weeks):

Regulatory Requirement

New Jersey	New York
☒ GWQS	☐ AWQS (TOGS Table 1)
☐ IGW	☐ GWEL (TOGS Table 5)
☐ SRS	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	OTHER Reg. Req. (specify)

Sample Matrix

DW - Drinking Water	OI - Oil
WW - Waste Water	S - Soil
GW - Groundwater	SOL - Solid
SW - Surface Water	SL - Sludge
LIQ - Liquid (Specify)	W - Wipe
	B - Biphasic

SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	VOC+TT	BN+ SIMS							Sample Specific Notes:
MW-11	~~13:40~~	6/3	13:40	GW	4	1	X	X							
MW-20	~~12:00~~	6/3	12:00	GW	4	2	X	X							
MW-21	~~10:40~~	6/3	10:40	GW	4	3	X	X							
MW-22	~~15:15~~ 1504	6/3	15:15	GW	4	4	X	X							
FB		6/3		GW	4	5	X	X							
TB					2	6	X								

Known Hazard: YES / NO
Describe:

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other

Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore

Preservative (use code)
Container Type (use code)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Special Instructions/QC Requirements & Comments:

FOR LAB USE ONLY
SDG #: 4681
Cooler Temp: 3 °C

Carrier (check one :)
- ☐ IAL Courier
- ☐ Client Courier
- ☐ FedEx/UPS***

***Tracking #:

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
	6/4/13	10:30	IAL	6/4/13	1015
	6/4/13	1615		6/4/13	1615

IAL Rev 2/2014

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

PAGE: of

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-04681: SEA ISLE CITY

To: Chris Dailey
GEI Consultants, Inc.
Fax: 1(856) 608-6864
EMail: cdailey@geiconsultants.com;datagr(

Report To

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054
Attn: Chris Dailey

Bill To

GEI Consultants, Inc.
400 Unicorn Park Drive

Woburn, MA 01801
Attn: Accounts Payable

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Reduced		Jun 04, 2015 @ 16:15	NA	Jun 18, 2015	Jun 25, 2015 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. Equis GEI

**** QC Requirement (must meet):** NJ GWQS

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
04681-001	MW-11	11.30	06/03/15@13:40	Aqueous	ug/L (ppb)	
04681-002	MW-20	11.65	06/03/15@12:00	Aqueous	ug/L (ppb)	
04681-003	MW-21	11.33	06/03/15@10:40	Aqueous	ug/L (ppb)	
04681-004	MW-22	11.60	06/03/15@15:15	Aqueous	ug/L (ppb)	
04681-005	FB	NA	06/03/15	Aqueous	ug/L (ppb)	
04681-006	TB	NA	06/03/15	Aqueous	ug/L (ppb)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	TCL VO + 15	Analyze	8260C	STD/2 WKS	6/17/2015
	PP/PAH + SIMS	Cancel	8270D SIM	STD/2 WKS	6/10/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	6/10/2015
002	TCL VO + 15	Analyze	8260C	STD/2 WKS	6/17/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	6/10/2015
	PP/PAH + SIMS	Cancel	8270D SIM	STD/2 WKS	6/10/2015
003	TCL VO + 15	Analyze	8260C	STD/2 WKS	6/17/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	6/10/2015
	PP/PAH + SIMS	Cancel	8270D SIM	STD/2 WKS	6/10/2015
004	TCL VO + 15	Analyze	8260C	STD/2 WKS	6/17/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	6/10/2015
	PP/PAH + SIMS	Cancel	8270D SIM	STD/2 WKS	6/10/2015
005	TCL VO + 15	Analyze	8260C	STD/2 WKS	6/17/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	6/10/2015
	PP/PAH + SIMS	Cancel	8270D SIM	STD/2 WKS	6/10/2015
006	TCL VO + 15	Analyze	8260C	STD/2 WKS	6/17/2015

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-04681: SEA ISLE CITY

Project Notes:

NOTE 1 taken by Ellen on 06/04/2015 01:38
AS PER PREVIOUS CONVERSATION W/ CHRIS D., 8011 NOT REQUIRED FOR VO BUT SIMS IS NEEDED FOR PAH.

NOTE 2 taken by Ellen on 06/04/2015 01:38
ANY E QUALIFIED RESULTS NEED A COMBINED FORM 1.

REV 1 taken by evan on 06/09/2015 10:42
DUE 6/18

PER BRIAN MANNINO, PLEASE ADD SAMPLE DEPTHS AS FOLLOWS:

001: 11.30
002: 11.65
003: 11.33
004: 11.60

ALSO, PLEASE REPORT BNs AS TCL/PAH + SIMS ON SAMPLES 001-005 AS PER COC

273 Franklin Road
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INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 15** **04681** CLIENT: GEI Sea Isle City

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

Comments

COC: (COMPLETE) / INCOMPLETE

KEY

✓ = YES/NA

✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✓	no-Extra Bottles	
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✓	pH Check (exclude VOs)[1]	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✓	**Chain of Custody is Clear**	

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [ ] DATE 6/4/15

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ☐

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [ ] DATE 6/5/15

E1504681 0160

REV 03/2013

Laboratory Custody Chronicle

IAL Case No.

E15-04681

Client GEI Consultants, Inc.

Project SEA ISLE CITY

Received On 6/ 4/2015@16:15

Department: Volatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL VO + 15	04681-001	Aqueous	n/a	n/a	6/ 9/15	Sylvia
"	-002	"	n/a	n/a	6/ 9/15	Sylvia
"	-003	"	n/a	n/a	6/ 9/15	Sylvia
"	-004	"	n/a	n/a	6/ 9/15	Sylvia
"	-005	"	n/a	n/a	6/ 9/15	Sylvia
"	-006	"	n/a	n/a	6/ 9/15	Sylvia

Department: Semivolatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL/PAH + SIMS	-001	Aqueous	6/ 4/15	Kou-Liang	6/ 5/15	JC
"	-002	"	6/ 4/15	Kou-Liang	6/ 5/15	JC
"	-003	"	6/ 4/15	Kou-Liang	6/ 5/15	JC
"	-004	"	6/ 4/15	Kou-Liang	6/ 5/15	JC
"	-005	"	6/ 4/15	Kou-Liang	6/ 5/15	JC

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054

Project Name: **SIC**
IAL Case Number: **E15-08356**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

* Methodology is included in the IAL Project Information Page

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

This report was finalized on October 01, 2015

* Methodology is included in the IAL Project Information Page

Sample Summary

IAL Case No.

E15-08356

Client GEI Consultants, Inc.

Project SIC

Received On 9/16/2015@16:20

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
08356-001	MW-22	10.5/11	9/15/2015@13:00	Aqueous	4
08356-002	FB-091515	n/a	9/15/2015@14:00	Aqueous	4
08356-003	TB-091515	n/a	9/15/2015	Aqueous	2

E15-08356 0001

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INTEGRATED ANALYTICAL LABORATORIES, LLC.

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-08356

Integrated Analytical Laboratories, LLC. received three (3) samples** from GEI Consultants, Inc. (IAL SDG# **E15-08356**, Project: SIC) on September 16, 2015 for the analysis of :

(3) TCL VO + 15
(2) TCL/PAH + SIMS

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2°C

Volatiles By 8260C | **Batch: 150922A** | **Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria.

E15-08356
- All samples were analyzed within holding time.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-08356-001	1	NA
E15-08356-002	1	NA
E15-08356-003	1	NA

Semivolatiles By 8270D SIM | **Batch: 150921-01** | **Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standard recovery me QC criteria.
- Surrogate recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

E15-08356
- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-08356-001	1	NA
E15-08356-002	1	NA

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-08356

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

9/30/2015
Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
Client: GEI Consultants, Inc.
Project Location: SIC
IAL Project #: E15-08356
IAL Sample ID(s): E15-08356-001 ~ -003
Sampling Date(s): 9/15/2015

List of DKQP Method Used:
TCL VO by 8260C
TCL/PAH + SIMS by 8270D SIM

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP	X		
1A	Were the method specified handling, preservation, and holding time requirements met?	X		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)			X
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	X		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?		X	
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?		X	
5B	Were these reporting limits met?			X
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	X		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?		X	

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E15-08356

Lab ID:	08356-001			08356-002			08356-003		
Client ID:	MW-22			FB-091515			TB-091515		
Depth:	10.5/11								
Matrix:	Aqueous			Aqueous			Aqueous		
Sampled Date	9/15/15			9/15/15			9/15/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*		
TOTAL VO's:	ND			ND			ND		
TOTAL TIC's:	ND			ND			ND		
TOTAL VO's & TIC's:	ND			ND			ND		
Semivolatiles - PAH (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*		
Naphthalene	ND		0.341	ND		0.341	~		~
2-Methylnaphthalene	ND		0.224	ND		0.224	~		~
Acenaphthylene	ND		0.246	ND		0.246	~		~
Acenaphthene	ND		0.251	ND		0.251	~		~
Fluorene	ND		0.203	ND		0.203	~		~
Phenanthrene	ND		0.225	ND		0.225	~		~
Anthracene	ND		0.258	ND		0.258	~		~
Fluoranthene	ND		0.206	ND		0.206	~		~
Pyrene	ND		0.256	ND		0.256	~		~
Benzo[a]anthracene	ND		0.100	ND		0.100	~		~
Chrysene	ND		0.320	ND		0.320	~		~
Benzo[b]fluoranthene	ND		0.100	ND		0.100	~		~
Benzo[k]fluoranthene	ND		0.100	ND		0.100	~		~
Benzo[a]pyrene	ND		0.100	ND		0.100	~		~
Indeno[1,2,3-cd]pyrene	ND		0.100	ND		0.100	~		~
Dibenz[a,h]anthracene	ND		0.100	ND		0.100	~		~
Benzo[g,h,i]perylene	ND		0.325	ND		0.325	~		~

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-08356-001
Client ID: MW-22/10.5-1
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Data file: G6973.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

E15-08356 0010

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-08356-001
Client ID: MW-22/10.5-1
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Data file: G6973.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-08356 0011

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-08356-001
Client ID: MW-22/10.5-1
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Date File: G6973.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-08356-002
Client ID: FB-091515
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Data file: G6971.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-08356-002
Client ID: FB-091515
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Data file: G6971.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-08356 0014

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-08356-002
Client ID: FB-091515
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Date File: G6971.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-08356-003
Client ID: TB-091515
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Data file: G6972.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

E15-08356 0016

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-08356-003
Client ID: TB-091515
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Data file: G6972.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-08356 0017

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-08356-003
Client ID: TB-091515
Date Received: 09/16/2015
Date Analyzed: 09/22/2015
Date File: G6972.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-08356-001
Client ID: MW-22/10
Date Received: 09/16/2015
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
Data file: B3066.D
SIM Data file: B3039.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-08356-002
Client ID: FB-09151
Date Received: 09/16/2015
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
Data file: B3067.D
SIM Data file: B3040.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS

VOLATILE ORGANICS QC SUMMARY

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 09/22/2015

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA150922a	AQUEOUS	G6970.D	121	102	104
E15-08356-002	AQUEOUS	G6971.D	129	100	105
E15-08356-003	AQUEOUS	G6972.D	126	103	104
E15-08356-001	AQUEOUS	G6973.D	129	102	104
E15-08304-003	AQUEOUS	G6974.D	122	101	105
E15-08305-003	AQUEOUS	G6975.D	129	103	106
E15-08337-1DL	AQUEOUS	G6976.D	125	100	105
E15-08336-5DL	AQUEOUS	G6977.D	130	101	104
E15-08336-6DL	AQUEOUS	G6978.D	127	102	104
E15-08336-7DL	AQUEOUS	G6979.D	129	100	106
E15-08336-008	AQUEOUS	G6980.D	124	101	105
E15-08336-9DL	AQUEOUS	G6981.D	129	102	104
E15-08459-010	AQUEOUS	G6982.D	124	101	108
E15-08471-018	AQUEOUS	G6983.D	126	100	107
08471-020	AQUEOUS	G6984.D	125	103	105
E15-08465-002	AQUEOUS	G6985.D	123	101	106
E15-08465-001	AQUEOUS	G6986.D	123	103	106
E15-08455-001	AQUEOUS	G6987.D	123	100	105
LCSA150922a	AQUEOUS	G6988.D	115	104	104
8356-001MS	AQUEOUS	G6989.D	113	103	103
8356-001MSD	AQUEOUS	G6990.D	111	104	105

	Concentration	DKQPs	Leachate Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	59-138	43-133
SMC2 = Toluene-d8	50 ppb	70-130	40-133	39-137
SMC3 = Bromofluorobenzene	50 ppb	70-130	42-152	45-145

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

INTEGRATED ANALYTICAL LABORATORIES

8260

LCS ACCURACY REPORT

Lab ID: LCSA150922a
Date Received: NA
Date Analyzed: 09/22/2015
LCS Data file: G6988.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	LCS Conc.	%Rec.	#
Dichlorodifluoromethane	50.0	0.0	46.2	92	
Chloromethane	50.0	0.0	53.1	106	
Vinyl chloride	50.0	0.0	54.4	109	
Bromomethane	50.0	0.0	52.6	105	
Chloroethane	50.0	0.0	54.3	109	
Trichlorofluoromethane	50.0	0.0	56.5	113	
Acrolein	150	0.0	141.0	94	
1,1-Dichloroethene	50.0	0.0	54.1	108	
Acetone	50.0	0.0	52.3	105	
Carbon disulfide	50.0	0.0	51.7	103	
Vinyl acetate	50.0	0.0	49.9	100	
Methylene chloride	50.0	0.0	48.6	97	
Acrylonitrile	150.0	0.0	166.5	111	
tert-Butyl alcohol (TBA)	100.0	0.0	105.5	106	
trans-1,2-Dichloroethene	50.0	0.0	50.3	101	
Methyl tert-butyl ether (MTBE)	50.0	0.0	52.2	104	
1,1-Dichloroethane	50.0	0.0	51.4	103	
Diisopropyl ether (DIPE)	50.0	0.0	49.5	99	
cis-1,2-Dichloroethene	50.0	0.0	51.5	103	
2,2-Dichloropropane	50.0	0.0	40.2	80	
2-Butanone (MEK)	50.0	0.0	55.0	110	
Bromochloromethane	50.0	0.0	53.2	106	
Chloroform	50.0	0.0	57.0	114	
1,1,1-Trichloroethane	50.0	0.0	58.6	117	
Carbon tetrachloride	50.0	0.0	58.7	117	
1,1-Dichloropropene	50.0	0.0	53.1	106	
1,2-Dichloroethane (EDC)	50.0	0.0	61.6	123	
Benzene	50.0	0.0	51.7	103	
Trichloroethene	50.0	0.0	55.7	111	
1,2-Dichloropropane	50.0	0.0	50.7	101	
Dibromomethane	50.0	0.0	56.3	113	
1,4-Dioxane	1500	0.0	1572	105	
Bromodichloromethane	50.0	0.0	60.9	122	
2-Chloroethyl vinyl ether	50.0	0.0	57.5	115	
cis-1,3-Dichloropropene	50.0	0.0	52.0	104	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	55.0	110	
Toluene	50.0	0.0	54.7	109	
trans-1,3-Dichloropropene	50.0	0.0	55.4	111	
1,1,2-Trichloroethane	50.0	0.0	54.4	109	
Tetrachloroethene	50.0	0.0	54.4	109	
1,3-Dichloropropane	50.0	0.0	55.1	110	

E15-08356 0024

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150922a
Date Received: NA
Date Analyzed: 09/22/2015
LCS Data file: G6988.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#
2-Hexanone	50.0	0.0	53.2	106	
Dibromochloromethane	50.0	0.0	62.6	125	
1,2-Dibromoethane (EDB)	50.0	0.0	56.5	113	
Chlorobenzene	50.0	0.0	52.2	104	
1,1,1,2-Tetrachloroethane	50.0	0.0	57.1	114	
Ethylbenzene	50.0	0.0	54.1	108	
m,p-Xylene	100.0	0.0	106.5	107	
o-Xylene	50.0	0.0	54.2	108	
Styrene	50.0	0.0	55.3	111	
Bromoform	50.0	0.0	61.0	122	
Isopropylbenzene	50.0	0.0	54.8	110	
1,1,2,2-Tetrachloroethane	50.0	0.0	52.1	104	
Bromobenzene	50.0	0.0	54.4	109	
1,2,3-Trichloropropane	50.0	0.0	54.4	109	
n-Propylbenzene	50.0	0.0	53.8	108	
2-Chlorotoluene	50.0	0.0	56.6	113	
1,3,5-Trimethylbenzene	50.0	0.0	56.4	113	
4-Chlorotoluene	50.0	0.0	56.6	113	
tert-Butylbenzene	50.0	0.0	54.7	109	
1,2,4-Trimethylbenzene	50.0	0.0	55.6	111	
sec-Butylbenzene	50.0	0.0	53.1	106	
1,3-Dichlorobenzene	50.0	0.0	54.4	109	
4-Isopropyltoluene	50.0	0.0	54.1	108	
1,4-Dichlorobenzene	50.0	0.0	54.2	108	
n-Butylbenzene	50.0	0.0	53.8	108	
1,2-Dichlorobenzene	50.0	0.0	55.8	112	
1,2-Dibromo-3-chloropropane	50.0	0.0	64.2	128	
1,2,4-Trichlorobenzene	50.0	0.0	49.2	98	
Hexachlorobutadiene	50.0	0.0	50.3	101	
Naphthalene	50.0	0.0	58.0	116	
1,2,3-Trichlorobenzene	50.0	0.0	54.1	108	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	51.9	104	
Methyl acetate	50.0	0.0	51.4	103	
Cyclohexane	50.0	0.0	45.2	90	
Methylcyclohexane	50.0	0.0	43.6	87	

	Leachate Aqueous/Meoh	Soil/Sediment
LCS Recovery Limits	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150922a
Date Received: NA
Date Analyzed: 09/22/2015
LCS Data file: G6988.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

MS/MSD SPIKE REPORT

Lab ID: E15-08356-001
Client ID: MW-22/10.5-1
Date Received: NA
Date Analyzed: 09/22/2015
MS Data file: G6989.D
MSD Data file: G6990.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
Dichlorodifluoromethane	50.0	0.0	45.4	91		50.3	101		10	
Chloromethane	50.0	0.0	56.0	112		62.6	125		11	
Vinyl chloride	50.0	0.0	56.1	112		62.8	126		11	
Bromomethane	50.0	0.0	57.6	115		60.0	120		4	
Chloroethane	50.0	0.0	56.9	114		57.9	116		2	
Trichlorofluoromethane	50.0	0.0	51.5	103		56.3	113		9	
Acrolein	150	0.0	166	111		152	101		9	
1,1-Dichloroethene	50.0	0.0	56.3	113		56.1	112		0	
Acetone	50.0	0.0	41.9	84		45.7	91		9	
Carbon disulfide	50.0	0.0	55.0	110		60.8	122		10	
Vinyl acetate	50.0	0.0	51.4	103		58.0	116		12	
Methylene chloride	50.0	0.0	51.8	104		56.9	114		9	
Acrylonitrile	150	0.0	141	94		154	103		9	
tert-Butyl alcohol (TBA)	100	0.0	111.2	111		127.7	128		14	
trans-1,2-Dichloroethene	50.0	0.0	53.1	106		58.8	118		10	
Methyl tert-butyl ether (MTBE)	50.0	0.0	55.2	110		61.7	123		11	
1,1-Dichloroethane	50.0	0.0	53.9	108		59.8	120		10	
Diisopropyl ether (DIPE)	50.0	0.0	51.8	104		58.3	117		12	
cis-1,2-Dichloroethene	50.0	0.0	54.9	110		60.9	122		10	
2,2-Dichloropropane	50.0	0.0	41.6	83		44.1	88		6	
2-Butanone (MEK)	50.0	0.0	53.9	108		62.7	125		15	
Bromochloromethane	50.0	0.0	55.5	111		59.3	119		7	
Chloroform	50.0	0.0	59.9	120		56.1	112		7	
1,1,1-Trichloroethane	50.0	0.0	61.9	124		56.5	113		9	
Carbon tetrachloride	50.0	0.0	64.2	128		54.4	109		17	
1,1-Dichloropropene	50.0	0.0	55.0	110		61.2	122		11	
1,2-Dichloroethane (EDC)	50.0	0.0	64.0	128		59.2	118		8	
Benzene	50.0	0.0	54.4	109		61.2	122		12	
Trichloroethene	50.0	0.0	58.4	117		59.5	119		2	
1,2-Dichloropropane	50.0	0.0	53.1	106		59.9	120		12	
Dibromomethane	50.0	0.0	58.3	117		55.6	111		5	
1,4-Dioxane	1,500	0.0	1427	95		1572	105		10	
Bromodichloromethane	50.0	0.0	63.2	126		62.4	125		1	
2-Chloroethyl vinyl ether	50.0	0.0	0.0	0	*$	0.0	0	*$	NC	*$
cis-1,3-Dichloropropene	50.0	0.0	54.7	109		61.4	123		12	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	54.0	108		63.1	126		16	
Toluene	50.0	0.0	57.1	114		65.2	130		13	
trans-1,3-Dichloropropene	50.0	0.0	57.2	114		65.1	130		13	
1,1,2-Trichloroethane	50.0	0.0	55.7	111		64.6	129		15	
Tetrachloroethene	50.0	0.0	56.1	112		64.7	129		14	
1,3-Dichloropropane	50.0	0.0	56.5	113		65.1	130		14	

E15-08356 0027

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: E15-08356-001
Client ID: MW-22/10.5-1
Date Received: NA
Date Analyzed: 09/22/2015
MS Data file: G6989.D
MSD Data file: G6990.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
2-Hexanone	50.0	0.0	50.8	102		60.7	121		18	
Dibromochloromethane	50.0	0.0	65.0	130		60.6	121		7	
1,2-Dibromoethane (EDB)	50.0	0.0	58.0	116		57.9	116		0	
Chlorobenzene	50.0	0.0	55.1	110		62.5	125		13	
1,1,1,2-Tetrachloroethane	50.0	0.0	60.3	121		60.5	121		0	
Ethylbenzene	50.0	0.0	56.3	113		64.7	129		14	
m,p-Xylene	100	0.0	110.9	111		127.2	127		14	
o-Xylene	50.0	0.0	56.2	112		64.2	128		13	
Styrene	50.0	0.0	57.1	114		58.7	117		3	
Bromoform	50.0	0.0	63.1	126		61.2	122		3	
Isopropylbenzene	50.0	0.0	57.4	115		65.0	130		12	
1,1,2,2-Tetrachloroethane	50.0	0.0	52.6	105		60.5	121		14	
Bromobenzene	50.0	0.0	55.7	111		64.0	128		14	
1,2,3-Trichloropropane	50.0	0.0	54.6	109		62.9	126		14	
n-Propylbenzene	50.0	0.0	56.1	112		64.2	128		13	
2-Chlorotoluene	50.0	0.0	59.1	118		59.6	119		1	
1,3,5-Trimethylbenzene	50.0	0.0	59.0	118		56.6	113		4	
4-Chlorotoluene	50.0	0.0	59.1	118		52.3	105		12	
tert-Butylbenzene	50.0	0.0	57.0	114		65.2	130		13	
1,2,4-Trimethylbenzene	50.0	0.0	58.0	116		53.5	107		8	
sec-Butylbenzene	50.0	0.0	55.6	111		63.2	126		13	
1,3-Dichlorobenzene	50.0	0.0	56.9	114		64.4	129		12	
4-Isopropyltoluene	50.0	0.0	56.6	113		64.5	129		13	
1,4-Dichlorobenzene	50.0	0.0	56.2	112		64.7	129		14	
n-Butylbenzene	50.0	0.0	56.2	112		63.8	128		13	
1,2-Dichlorobenzene	50.0	0.0	57.7	115		59.5	119		3	
1,2-Dibromo-3-chloropropane	50.0	0.0	63.0	126		54.4	109		15	
1,2,4-Trichlorobenzene	50.0	0.0	51.6	103		58.1	116		12	
Hexachlorobutadiene	50.0	0.0	51.3	103		58.4	117		13	
Naphthalene	50.0	0.0	56.7	113		50.6	101		11	
1,2,3-Trichlorobenzene	50.0	0.0	56.5	113		63.4	127		12	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	53.3	107		58.8	118		10	
Methyl acetate	50.0	0.0	51.2	102		58.7	117		14	
Cyclohexane	50.0	0.0	45.7	91		51.9	104		13	
Methylcyclohexane	50.0	0.0	44.9	90		51.5	103		14	

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

E15-08356 0028

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: E15-08356-001
Client ID: MW-22/10.5-1
Date Received: NA
Date Analyzed: 09/22/2015
MS Data file: G6989.D
MSD Data file: G6990.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#

2-Chloroethyl vinyl ether has zero spike recovery in the MS/MSD. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

E15-08356 0029

VOLATILE METHOD BLANK SUMMARY

Lab File ID: G6970.D Instrument ID: MSD_G

Date Analyzed: 09/22/2015 Time Analyzed: 12:46

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
FB-091515	E15-08356-002	09/22/2015	13:14
TB-091515	E15-08356-003	09/22/2015	13:43
MW-22/10.5-1	E15-08356-001	09/22/2015	14:11
MW-8	E15-08304-003	09/22/2015	14:39
MW-11	E15-08305-003	09/22/2015	15:07
MW-1A	E15-08337-1DL	09/22/2015	15:35
MW-5/12	E15-08336-5DL	09/22/2015	16:04
MW-6/2	E15-08336-6DL	09/22/2015	16:32
MW-1/12	E15-08336-7DL	09/22/2015	17:00
MW-4/12	E15-08336-008	09/22/2015	17:28
MW-7/12	E15-08336-9DL	09/22/2015	17:57
SB-6TW	E15-08459-010	09/22/2015	18:25
FB-SOIL	E15-08471-018	09/22/2015	18:53
TB	08471-020	09/22/2015	19:22
TB	E15-08465-002	09/22/2015	19:50
MW-1	E15-08465-001	09/22/2015	20:18
SUMP/7.77	E15-08455-001	09/22/2015	20:47
LCSA150922a	LCSA150922a	09/22/2015	21:15
8356-001MS	8356-001MS	09/22/2015	21:43
8356-001MSD	8356-001MSD	09/22/2015	22:12

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G6473.D

BFB Injection Date: 09/08/2015

Inst ID: MSD_G

BFB Injection Time: 11:56

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	17.5			
75	30.0 - 60.0% of mass 95	45.6			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.7			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	69.6			
175	5.0 - 9.0% of mass 174	5.3	(	7.6	)1
176	95.0 - 101.0% of mass 174	66.7	(	95.9	)1
177	5.0 - 9.0% of mass 176	4.4	(	6.6	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC100	G6478.D	09/08/2015	14:27
ICC001	ICC001	G6474.D	09/08/2015	12:25
ICC002	ICC002	G6475.D	09/08/2015	12:53
ICC005	ICC005	G6476.D	09/08/2015	13:21
ICC020	ICC020	G6477.D	09/08/2015	13:58
ICC150	ICC150	G6479.D	09/08/2015	14:55
ICC200	ICC200	G6480.D	09/08/2015	15:23
ICV100	ICV100	G6482.D	09/08/2015	16:20
BLKA150908a	BLKA150908a	G6484.D	09/08/2015	17:17
FB	E15-07951-006	G6485.D	09/08/2015	17:45
TB	E15-07951-007	G6486.D	09/08/2015	18:13
MW-7S	E15-07951-001	G6487.D	09/08/2015	18:41
MW-7D	E15-07951-002	G6488.D	09/08/2015	19:09
MW-14BRK	E15-07951-003	G6489.D	09/08/2015	19:37
MW-10D	E15-07951-004	G6490.D	09/08/2015	20:05
MW-4S	E15-07951-005	G6491.D	09/08/2015	20:34
MW-6	E15-07918-001	G6492.D	09/08/2015	21:02
MW-7	E15-07918-002	G6493.D	09/08/2015	21:31
MW-8	E15-07918-003	G6494.D	09/08/2015	21:59
LCSA150908a	LCSA150908a	G6495.D	09/08/2015	22:27

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G6473.D

Inst ID: MSD_G

BFB Injection Date : 09/08/201

BFB Injection Time: 11:56

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	17.5			
75	30.0 - 60.0% of mass 95	45.6			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.7			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	69.6			
175	5.0 - 9.0% of mass 174	5.3	(	7.6	)1
176	95.0 - 101.0% of mass 174	66.7	(	95.9	)1
177	5.0 - 9.0% of mass 176	4.4	(	6.6	)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
7951-003MS	7651-003MS	G6496.D	09/08/2015	22:55
7651-003MSD	7651-003MSD	G6497.D	09/08/2015	23:23

E15-08356 0032

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G6967.D

BFB Injection Date: 09/22/2015

Inst ID: MSD_G

BFB Injection Time: 10:47

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	19.1			
75	30.0 - 60.0% of mass 95	49.0			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.5			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	67.3			
175	5.0 - 9.0% of mass 174	5.1	(	7.6	)1
176	95.0 - 101.0% of mass 174	64.9	(	96.4	)1
177	5.0 - 9.0% of mass 176	4.3	(	6.7	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV100	G6968.D	09/22/2015	11:45
BLKA150922a	BLKA150922a	G6970.D	09/22/2015	12:46
FB-091515	E15-08356-002	G6971.D	09/22/2015	13:14
TB-091515	E15-08356-003	G6972.D	09/22/2015	13:43
MW-22/10.5-1	E15-08356-001	G6973.D	09/22/2015	14:11
MW-8	E15-08304-003	G6974.D	09/22/2015	14:39
MW-11	E15-08305-003	G6975.D	09/22/2015	15:07
MW-1A	E15-08337-1DL	G6976.D	09/22/2015	15:35
MW-5/12	E15-08336-5DL	G6977.D	09/22/2015	16:04
MW-6/2	E15-08336-6DL	G6978.D	09/22/2015	16:32
MW-1/12	E15-08336-7DL	G6979.D	09/22/2015	17:00
MW-4/12	E15-08336-008	G6980.D	09/22/2015	17:28
MW-7/12	E15-08336-9DL	G6981.D	09/22/2015	17:57
SB-6TW	E15-08459-010	G6982.D	09/22/2015	18:25
FB-SOIL	E15-08471-018	G6983.D	09/22/2015	18:53
TB	08471-020	G6984.D	09/22/2015	19:22
TB	E15-08465-002	G6985.D	09/22/2015	19:50
MW-1	E15-08465-001	G6986.D	09/22/2015	20:18
SUMP/7.77	E15-08455-001	G6987.D	09/22/2015	20:47
LCSA150922a	LCSA150922a	G6988.D	09/22/2015	21:15

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G6967.D BFB Injection Date : 09/22/201

Inst ID: MSD_G BFB Injection Time: 10:47

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	19.1			
75	30.0 - 60.0% of mass 95	49.0			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.5			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	67.3			
175	5.0 - 9.0% of mass 174	5.1	(	7.6	)1
176	95.0 - 101.0% of mass 174	64.9	(	96.4	)1
177	5.0 - 9.0% of mass 176	4.3	(	6.7	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
8356-001MS	8356-001MS	G6989.D	09/22/2015	21:43
8356-001MSD	8356-001MSD	G6990.D	09/22/2015	22:12

Response Factor Report MSD_G

09/08/15
9/8/15

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8090815.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Tue Sep 08 16:19:47 2015
Response Via : Initial Calibration

Calibration Files
1 =G6474.D 2 =G6475.D 5 =G6476.D
20 =G6477.D 100 =G6478.D 150 =G6479.D 200 =G6480.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD								
2)	T	Dichlorodifluorom	0.349	0.409	0.416	0.431	0.411	0.443	0.422	0.412	7.28
3)	P	Chloromethane	0.318	0.326	0.341	0.291	0.316	0.318	0.326	0.320	4.78
4)	C	Vinyl chloride	0.287	0.326	0.352	0.332	0.343	0.353	0.349	0.334	6.93
5)	T	Bromomethane	0.193	0.189	0.211	0.186	0.185	0.179	0.178	0.189	5.91
6)	T	Chloroethane	0.219	0.219	0.219	0.197	0.193	0.191	0.187	0.203	7.19
7)	T	Trichlorofluorome	0.338	0.384	0.405	0.399	0.394	0.415	0.395	0.390	6.32
8)	T	Acrolein	0.008	0.010	0.009	0.008	0.008	0.008	0.008	0.008	8.64
9)	MC	1,1-Dichloroethen	0.278	0.283	0.285	0.274	0.270	0.279	0.270	0.277	2.12
10)	T	Acetone			0.236	0.202	0.197	0.192	0.184	0.202	9.76
11)	T	Carbon disulfide	0.608	0.668	0.699	0.670	0.675	0.701	0.693	0.673	4.74
12)	T	Vinyl acetate	1.641	1.785	1.779	2.077	2.144	2.193	2.129	1.964	11.30
13)	T	Methylene chlorid		0.543	0.563	0.530	0.509	0.499	0.490	0.522	5.33
14)	T	Acrylonitrile	0.200	0.206	0.221	0.233	0.243	0.251	0.245	0.228	8.70
15)	T	tert-Butyl alcoho		0.073	0.060	0.059	0.062	0.061	0.062	0.063	8.30
16)	T	trans-1,2-Dichlor	0.427	0.488	0.520	0.505	0.498	0.502	0.494	0.491	6.10
17)	T	Methyl tert-butyl	1.347	1.578	1.703	1.598	1.706	1.658	1.697	1.613	7.92
18)	P	1,1-Dichloroethan	0.825	0.895	0.986	0.954	0.969	0.989	0.985	0.943	6.52
19)	T	Diisopropyl ether	1.634	1.780	1.951	1.901	1.938	1.911	1.900	1.859	6.12
20)	T	cis-1,2-Dichloroe	0.500	0.564	0.593	0.577	0.577	0.575	0.566	0.565	5.32
21)	T	2,2-Dichloropropa	0.412	0.455	0.510	0.489	0.497	0.526	0.511	0.486	8.13
22)	T	2-Butanone (MEK)	0.363	0.415	0.387	0.376	0.395	0.389	0.362	0.384	4.88
23)	T	Bromochloromethan	0.235	0.263	0.284	0.271	0.272	0.274	0.271	0.267	5.81
24)	T	Tetrahydrofuran								0.000	-1.00
25)	C	Chloroform	0.783	0.855	0.922	0.894	0.907	0.915	0.914	0.884	5.65
26)	T	1,1,1-Trichloroet	0.586	0.664	0.732	0.720	0.744	0.763	0.763	0.710	9.05
27)	T	Carbon tetrachlor	0.451	0.476	0.529	0.560	0.581	0.605	0.588	0.541	10.85
28)	T	1,1-Dichloroprope	0.625	0.688	0.706	0.692	0.679	0.702	0.682	0.682	3.95
29)	T	1,2-Dichloroethan	0.651	0.723	0.763	0.742	0.737	0.725	0.704	0.721	4.93
30)	S	1,2-Dichloroethan	0.586	0.587	0.609	0.586	0.604	0.614	0.624	0.601	2.61
31)	I	1,4-Difluorobenzene	ISTD								
32)	M	Benzene	1.197	1.332	1.366	1.356	1.306	1.265	1.205	1.290	5.37
33)	M	Trichloroethene	0.306	0.330	0.347	0.328	0.322	0.322	0.308	0.323	4.37
34)	C	1,2-Dichloropropa	0.322	0.342	0.352	0.358	0.343	0.328	0.310	0.337	5.12
35)	T	Dibromomethane	0.182	0.208	0.207	0.204	0.203	0.198	0.189	0.199	4.80
36)	T	1,4-Dioxane	0.003	0.003	0.003	0.002	0.003	0.002	0.003	0.003	11.26
37)	T	Bromodichlorometh	0.326	0.391	0.399	0.411	0.434	0.430	0.414	0.401	9.10
38)	T	2-Chloroethyl vin	0.101	0.126	0.121	0.155	0.190	0.190	0.177	0.151	23.72
39)	T	cis-1,3-Dichlorop	0.427	0.502	0.513	0.560	0.571	0.566	0.540	0.525	9.69
40)	T	4-Methyl-2-pentan	0.361	0.421	0.411	0.385	0.409	0.402	0.370	0.394	5.68
41)	S	Toluene-d8	1.170	1.169	1.160	1.178	1.184	1.183	1.173	1.174	0.72
42)	MC	Toluene	0.725	0.832	0.831	0.844	0.821	0.806	0.760	0.803	5.45
43)	T	trans-1,3-Dichlor	0.363	0.467	0.455	0.513	0.530	0.525	0.494	0.478	12.16
44)	T	1,1,2-Trichloroet	0.223	0.266	0.262	0.256	0.256	0.248	0.232	0.249	6.41
45)	T	Tetrachloroethene	0.271	0.311	0.300	0.289	0.262	0.256	0.236	0.275	9.60
46)	T	1,3-Dichloropropa	0.469	0.555	0.547	0.546	0.523	0.497	0.456	0.513	7.75
47)	T	2-Hexanone	0.318	0.348	0.322	0.323	0.346	0.341	0.309	0.330	4.67
48)	T	Dibromochlorometh	0.217	0.266	0.263	0.299	0.325	0.323	0.304	0.285	13.60
49)	T	1,2-Dibromoethane	0.254	0.308	0.301	0.302	0.305	0.299	0.278	0.293	6.63
50)	I	Chlorobenzene-d5	ISTD								
51)	MP	Chlorobenzene	0.858	1.026	1.022	1.003	0.960	0.939	0.907	0.959	6.56
52)	T	1,1,1,2-Tetrachlo	0.256	0.313	0.311	0.319	0.316	0.310	0.307	0.305	7.44
53)	C	Ethylbenzene	1.427	1.660	1.642	1.634	1.595	1.579	1.520	1.580	5.18

E15-08356 0035

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8090815.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Tue Sep 08 16:19:47 2015
Response Via : Initial Calibration

Calibration Files
1 =G6474.D 2 =G6475.D 5 =G6476.D
20 =G6477.D 100 =G6478.D 150 =G6479.D 200 =G6480.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
54)	T	m,p-Xylene	0.587	0.671	0.654	0.634	0.580	0.552	0.518	0.599	9.34
55)	T	o-Xylene		0.681	0.673	0.653	0.589	0.560	0.529	0.614	10.36
56)	T	Styrene	0.866	1.104	1.124	1.107	1.025	0.971	0.918	1.016	9.99
57)	P	Bromoform	0.129	0.153	0.160	0.182	0.214	0.216	0.208	0.180	18.81
58)	T	Isopropylbenzene	1.359	1.581	1.559	1.534	1.457	1.439	1.394	1.475	5.76
59)	S	Bromofluorobenzen	0.548	0.547	0.555	0.552	0.554	0.554	0.561	0.553	0.85
60)	P	1,1,2,2-Tetrachlo	0.425	0.485	0.463	0.440	0.452	0.437	0.413	0.445	5.40
61)	T	Bromobenzene	0.374	0.422	0.409	0.391	0.371	0.360	0.343	0.381	7.23
62)	T	1,2,3-Trichloropr	0.436	0.508	0.465	0.426	0.422	0.413	0.391	0.437	8.75
63)	T	n-Propylbenzene	1.661	1.928	1.858	1.804	1.738	1.737	1.678	1.772	5.46
64)	T	2-Chlorotoluene	1.049	1.247	1.217	1.157	1.122	1.107	1.075	1.139	6.37
65)	T	1,3,5-Trimethylbe	1.158	1.366	1.313	1.268	1.173	1.132	1.078	1.213	8.64
66)	T	4-Chlorotoluene	1.049	1.247	1.217	1.157	1.122	1.107	1.075	1.139	6.37
67)	T	tert-Butylbenzene	0.981	1.097	1.092	1.065	1.012	0.986	0.961	1.028	5.47
68)	T	1,2,4-Trimethylbe	1.211	1.369	1.349	1.265	1.213	1.197	1.158	1.252	6.37
69)	T	sec-Butylbenzene	1.368	1.518	1.476	1.439	1.361	1.355	1.317	1.405	5.24
70)	T	1,3-Dichlorobenze	0.687	0.786	0.762	0.707	0.674	0.655	0.636	0.701	7.89
71)	T	4-Isopropyltoluen	1.111	1.243	1.220	1.172	1.105	1.094	1.061	1.144	6.01
72)	T	1,4-Dichlorobenze	0.668	0.790	0.740	0.703	0.667	0.654	0.632	0.693	7.95
73)	T	n-Butylbenzene	0.989	1.105	1.078	1.028	0.950	0.932	0.887	0.995	7.97
74)	T	1,2-Dichlorobenze	0.684	0.776	0.750	0.691	0.626	0.594	0.569	0.670	11.59
75)	T	1,2-Dibromo-3-chl	0.078	0.084	0.080	0.075	0.086	0.087	0.084	0.082	5.45
76)	T	1,2,4-Trichlorobe	0.656	0.549	0.479	0.402	0.377	0.364	0.356	0.455	24.94
77)	T	Hexachlorobutadie	0.146	0.146	0.138	0.128	0.117	0.115	0.112	0.129	11.46
78)	T	Naphthalene	1.233	1.235	1.183	1.062	1.084	1.067	1.033	1.128	7.63
79)	T	1,2,3-Trichlorobe	0.571	0.477	0.399	0.327	0.312	0.298	0.290	0.382	27.95
80)	T	1,1,2-Trichloro-1	0.160	0.159	0.147	0.157	0.143	0.153	0.142	0.152	4.95
81)	T	Methyl acetate	0.320	0.348	0.348	0.328	0.331	0.323	0.308	0.329	4.38
82)	T	Cyclohexane		0.559	0.557	0.574	0.544	0.572	0.545	0.558	2.28
83)	T	Methylcyclohexane	0.472	0.497	0.475	0.496	0.443	0.460	0.426	0.467	5.63
84)		Pentane								0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

E15-08356 0036

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\09-07-15\
Data File : G6482.D
Acq On : 8 Sep 2015 16:20
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 09 09:11:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	85	0.00
2	T	Dichlorodifluoromethane	0.412	0.391	5.1	81	0.00
3	P	Chloromethane	0.320	0.311	2.8	84	0.00
4	C	Vinyl chloride	0.334	0.327	2.1	81	0.00
5	T	Bromomethane	0.189	0.189	0.0	87	0.00
6	T	Chloroethane	0.203	0.189	6.9	83	0.00
7	T	Trichlorofluoromethane	0.390	0.364	6.7	78	0.00
8	T	Acrolein	0.008	0.008	0.0	91	0.00
9	MC	1,1-Dichloroethene	0.277	0.257	7.2	81	0.00
10	T	Acetone	0.202	0.176	12.9	76	0.00
11	T	Carbon disulfide	0.673	0.653	3.0	82	0.00
12	T	Vinyl acetate	1.964	2.215	-12.8	88	0.00
13	T	Methylene chloride	0.522	0.546	-4.6	91	0.00
14	T	Acrylonitrile	0.228	0.257	-12.7	90	0.00
15	T	tert-Butyl alcohol (TBA)	0.063	0.052	17.5	70	0.00
16	T	trans-1,2-Dichloroethene	0.491	0.513	-4.5	88	0.00
17	T	Methyl tert-butyl ether (MT	1.613	1.860	-15.3	93	0.00
18	P	1,1-Dichloroethane	0.943	1.016	-7.7	89	0.00
19	T	Diisopropyl ether (DIPE)	1.859	2.073	-11.5	91	0.00
20	T	cis-1,2-Dichloroethene	0.565	0.617	-9.2	91	0.00
21	T	2,2-Dichloropropane	0.486	0.483	0.6	83	0.00
22	T	2-Butanone (MEK)	0.384	0.399	-3.9	86	0.00
23	T	Bromochloromethane	0.267	0.300	-12.4	94	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	83	0.00
25	C	Chloroform	0.884	0.959	-8.5	90	0.00
26	T	1,1,1-Trichloroethane	0.710	0.747	-5.2	85	0.00
27	T	Carbon tetrachloride	0.541	0.573	-5.9	84	0.00
28	T	1,1-Dichloropropene	0.682	0.675	1.0	85	0.00
29	T	1,2-Dichloroethane (EDC)	0.721	0.797	-10.5	92	0.00
30	S	1,2-Dichloroethane-d4	0.601	0.613	-2.0	86	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	86	0.00
32	M	Benzene	1.290	1.336	-3.6	88	0.00
33	M	Trichloroethene	0.323	0.325	-0.6	87	0.00
34	C	1,2-Dichloropropane	0.337	0.357	-5.9	90	0.00
35	T	Dibromomethane	0.199	0.219	-10.1	93	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	88	0.00
37	T	Bromodichloromethane	0.401	0.453	-13.0	90	0.00
38	T	2-Chloroethyl vinyl ether	0.151	0.159	-5.3	72	0.00
39	T	cis-1,3-Dichloropropene	0.525	0.594	-13.1	90	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.394	0.419	-6.3	89	0.00
41	S	Toluene-d8	1.174	1.172	0.2	86	0.00
42	MC	Toluene	0.803	0.831	-3.5	87	0.00
43	T	trans-1,3-Dichloropropene	0.478	0.546	-14.2	89	0.00
44	T	1,1,2-Trichloroethane	0.249	0.271	-8.8	92	0.00
45	T	Tetrachloroethene	0.275	0.261	5.1	86	0.00
46	T	1,3-Dichloropropane	0.513	0.555	-8.2	92	0.00
47	T	2-Hexanone	0.330	0.347	-5.2	87	0.00

E15-08356 0037

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\09-07-15\
Data File : G6482.D
Acq On : 8 Sep 2015 16:20
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 09 09:11:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	T	Dibromochloromethane	0.285	0.325	-14.0	86	0.00
49	T	1,2-Dibromoethane (EDB)	0.293	0.323	-10.2	92	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	86	0.00
51	MP	Chlorobenzene	0.959	1.005	-4.8	90	0.00
52	T	1,1,1,2-Tetrachloroethane	0.307	0.344	-12.1	91	0.00
53	C	Ethylbenzene	1.580	1.624	-2.8	87	0.00
54	T	m,p-Xylene	0.599	0.599	0.0	88	0.00
55	T	o-Xylene	0.614	0.624	-1.6	91	0.00
56	T	Styrene	1.016	1.078	-6.1	90	0.00
57	P	Bromoform	0.180	0.200	-11.1	80	0.00
58	T	Isopropylbenzene	1.475	1.491	-1.1	88	0.00
59	S	Bromofluorobenzene	0.553	0.548	0.9	85	0.00
60	P	1,1,2,2-Tetrachloroethane	0.445	0.486	-9.2	92	0.00
61	T	Bromobenzene	0.381	0.397	-4.2	92	0.00
62	T	1,2,3-Trichloropropane	0.437	0.453	-3.7	92	0.00
63	T	n-Propylbenzene	1.772	1.767	0.3	87	0.00
64	T	2-Chlorotoluene	1.139	1.166	-2.4	89	0.00
65	T	1,3,5-Trimethylbenzene	1.213	1.226	-1.1	90	0.00
66	T	4-Chlorotoluene	1.139	1.166	-2.4	89	0.00
67	T	tert-Butylbenzene	1.028	1.034	-0.6	88	0.00
68	T	1,2,4-Trimethylbenzene	1.252	1.278	-2.1	90	0.00
69	T	sec-Butylbenzene	1.405	1.393	0.9	88	0.00
70	T	1,3-Dichlorobenzene	0.701	0.716	-2.1	91	0.00
71	T	4-Isopropyltoluene	1.144	1.143	0.1	89	0.00
72	T	1,4-Dichlorobenzene	0.693	0.713	-2.9	92	0.00
73	T	n-Butylbenzene	0.995	0.966	2.9	87	0.00
74	T	1,2-Dichlorobenzene	0.670	0.686	-2.4	94	0.00
75	T	1,2-Dibromo-3-chloropropane	0.082	0.094	-14.6	93	0.00
76	T	1,2,4-Trichlorobenzene	0.455	0.426	6.4	97	0.00
77	T	Hexachlorobutadiene	0.129	0.120	7.0	88	0.00
78	T	Naphthalene	1.128	1.229	-9.0	97	0.00
79	T	1,2,3-Trichlorobenzene	0.382	0.358	6.3	98	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.152	0.134	11.8	80	0.00
81	T	Methyl acetate	0.329	0.350	-6.4	91	0.00
82	T	Cyclohexane	0.558	0.524	6.1	83	0.00
83	T	Methylcyclohexane	0.467	0.433	7.3	84	0.00
84		Pentane	0.000	0.000	0.0	24#	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

E15-08356 0038

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6968.D
Acq On : 22 Sep 2015 11:45
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 22 16:15:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	76	0.00
2	T	Dichlorodifluoromethane	0.412	0.425	-3.2	78	0.00
3	P	Chloromethane	0.320	0.336	-5.0	80	0.01
4	C	Vinyl chloride	0.334	0.360	-7.8	79	0.02
5	T	Bromomethane	0.189	0.209	-10.6	86	0.02
6	T	Chloroethane	0.203	0.217	-6.9	85	0.02
7	T	Trichlorofluoromethane	0.390	0.408	-4.6	78	0.07
8	T	Acrolein	0.008	0.003	62.5#	28#	0.00
9	MC	1,1-Dichloroethene	0.277	0.301	-8.7	84	0.00
10	T	Acetone	0.202	0.201	0.5	77	0.00
11	T	Carbon disulfide	0.673	0.721	-7.1	81	0.00
12	T	Vinyl acetate	1.964	2.140	-9.0	76	0.00
13	T	Methylene chloride	0.522	0.468	10.3	70	0.00
14	T	Acrylonitrile	0.228	0.253	-11.0	79	0.00
15	T	tert-Butyl alcohol (TBA)	0.063	0.064	-1.6	78	0.00
16	T	trans-1,2-Dichloroethene	0.491	0.473	3.7	72	0.00
17	T	Methyl tert-butyl ether (MT	1.613	1.633	-1.2	72	0.00
18	P	1,1-Dichloroethane	0.943	0.932	1.2	73	0.00
19	T	Diisopropyl ether (DIPE)	1.859	1.757	5.5	69	0.00
20	T	cis-1,2-Dichloroethene	0.565	0.546	3.4	72	0.00
21	T	2,2-Dichloropropane	0.486	0.545	-12.1	83	0.00
22	T	2-Butanone (MEK)	0.384	0.429	-11.7	82	0.00
23	T	Bromochloromethane	0.267	0.268	-0.4	75	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	74	0.00
25	C	Chloroform	0.884	0.975	-10.3	81	0.00
26	T	1,1,1-Trichloroethane	0.710	0.765	-7.7	78	0.00
27	T	Carbon tetrachloride	0.541	0.582	-7.6	76	0.00
28	T	1,1-Dichloropropene	0.682	0.704	-3.2	79	0.00
29	T	1,2-Dichloroethane (EDC)	0.721	0.821	-13.9	84	0.00
30	S	1,2-Dichloroethane-d4	0.601	0.637	-6.0	80	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	76	0.00
32	M	Benzene	1.290	1.208	6.4	70	0.00
33	M	Trichloroethene	0.323	0.328	-1.5	78	0.00
34	C	1,2-Dichloropropane	0.337	0.308	8.6	68	0.00
35	T	Dibromomethane	0.199	0.208	-4.5	78	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	69	0.00
37	T	Bromodichloromethane	0.401	0.463	-15.5	81	0.00
38	T	2-Chloroethyl vinyl ether	0.151	0.170	-12.6	68	0.00
39	T	cis-1,3-Dichloropropene	0.525	0.551	-5.0	74	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.394	0.398	-1.0	74	0.00
41	S	Toluene-d8	1.174	1.228	-4.6	79	0.00
42	MC	Toluene	0.803	0.813	-1.2	75	0.00
43	T	trans-1,3-Dichloropropene	0.478	0.544	-13.8	78	0.00
44	T	1,1,2-Trichloroethane	0.249	0.245	1.6	73	0.00
45	T	Tetrachloroethene	0.275	0.277	-0.7	80	0.00
46	T	1,3-Dichloropropane	0.513	0.512	0.2	74	0.00
47	T	2-Hexanone	0.330	0.358	-8.5	79	0.00
48	T	Dibromochloromethane	0.285	E15-08356	0039	73	0.00
49	T	1,2-Dibromoethane (EDB)	0.293	0.306	-4.4	76	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6968.D
Acq On : 22 Sep 2015 11:45
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 22 16:15:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50	I	Chlorobenzene-d5	1.000	1.000	0.0	80	0.00
51	MP	Chlorobenzene	0.959	0.930	3.0	77	0.00
52	T	1,1,1,2-Tetrachloroethane	0.307	0.332	-8.1	82	0.00
53	C	Ethylbenzene	1.580	1.611	-2.0	81	0.00
54	T	m,p-Xylene	0.599	0.580	3.2	80	0.00
55	T	o-Xylene	0.614	0.601	2.1	81	0.00
56	T	Styrene	1.016	1.025	-0.9	80	0.00
57	P	Bromoform	0.180	0.180	0.0	67	0.00
58	T	Isopropylbenzene	1.475	1.535	-4.1	84	0.00
59	S	Bromofluorobenzene	0.553	0.599	-8.3	86	0.00
60	P	1,1,2,2-Tetrachloroethane	0.445	0.444	0.2	78	0.00
61	T	Bromobenzene	0.381	0.377	1.0	81	0.00
62	T	1,2,3-Trichloropropane	0.437	0.433	0.9	82	0.00
63	T	n-Propylbenzene	1.772	1.834	-3.5	84	0.00
64	T	2-Chlorotoluene	1.139	1.221	-7.2	87	0.00
65	T	1,3,5-Trimethylbenzene	1.213	1.284	-5.9	87	0.00
66	T	4-Chlorotoluene	1.139	1.221	-7.2	87	0.00
67	T	tert-Butylbenzene	1.028	1.086	-5.6	86	0.00
68	T	1,2,4-Trimethylbenzene	1.252	1.326	-5.9	87	0.00
69	T	sec-Butylbenzene	1.405	1.444	-2.8	85	0.00
70	T	1,3-Dichlorobenzene	0.701	0.707	-0.9	84	0.00
71	T	4-Isopropyltoluene	1.144	1.195	-4.5	86	0.00
72	T	1,4-Dichlorobenzene	0.693	0.699	-0.9	84	0.00
73	T	n-Butylbenzene	0.995	1.043	-4.8	88	0.00
74	T	1,2-Dichlorobenzene	0.670	0.664	0.9	85	0.00
75	T	1,2-Dibromo-3-chloropropane	0.082	0.096	-17.1	89	0.00
76	T	1,2,4-Trichlorobenzene	0.455	0.402	11.6	85	0.00
77	T	Hexachlorobutadiene	0.129	0.122	5.4	83	0.00
78	T	Naphthalene	1.128	1.265	-12.1	93	0.00
79	T	1,2,3-Trichlorobenzene	0.382	0.357	6.5	91	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.152	0.165	-8.6	92	0.02
81	T	Methyl acetate	0.329	0.295	10.3	71	0.00
82	T	Cyclohexane	0.558	0.493	11.6	72	0.00
83	T	Methylcyclohexane	0.467	0.410	12.2	74	0.00
84		Pentane	0.000	0.000	0.0	6#	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

E15-08356 0040

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G6478.D

Date Analyzed: 09/08/2015

Instrument ID: MSD_G

Time Analyzed: 14:27

	50UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	621320		6.21		1022705		7.03		914002		10.37	
	UPPER LIMIT	1242640		6.71		2045410		7.53		1828004		10.87	
	LOWER LIMIT	310660		5.71		511352.5		6.53		457001		9.87	
	LAB SAMPLE ID												
01	ICC001	664107		6.21		1061414		7.03		933184		10.37	
02	ICC002	685006		6.21		1093092		7.03		961918		10.37	
03	ICC005	637225		6.21		1032872		7.03		904148		10.37	
04	ICC020	639047		6.21		1030315		7.03		915545		10.37	
05	ICC150	615945		6.21		1035275		7.03		921718		10.37	
06	ICC200	608589		6.21		1047050		7.03		913995		10.37	
07	ICV100	528412		6.21		883920		7.03		783000		10.37	
08	BLKA150908a	673885		6.21		1066109		7.03		948472		10.37	
09	E15-07951-006	512505		6.21		833391		7.03		743248		10.37	
10	E15-07951-007	621330		6.21		998177		7.03		885900		10.37	
11	E15-07951-001	515290		6.21		824426		7.03		724602		10.37	
12	E15-07951-002	578333		6.21		941214		7.03		832544		10.37	
13	E15-07951-003	519582		6.21		838247		7.03		748820		10.37	
14	E15-07951-004	616465		6.21		988833		7.03		869679		10.37	
15	E15-07951-005	505160		6.21		816231		7.03		722189		10.37	
16	E15-07918-001	533131		6.21		856321		7.03		771245		10.37	
17	E15-07918-002	551545		6.21		887078		7.03		790320		10.37	
18	E15-07918-003	589509		6.21		939054		7.03		811844		10.37	
19	LCSA150908a	610906		6.21		984578		7.03		876927		10.37	
20	7651-003MS	478722		6.21		788770		7.03		710281		10.37	
21	7651-003MSD	593677		6.21		960410		7.03		857099		10.37	
22													

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G6968.D

Date Analyzed: 09/22/2015

Instrument ID: MSD_G

Time Analyzed: 11:45

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	470045	6.21	778712	7.03	730115	10.37
	UPPER LIMIT	940090	6.71	1557424	7.53	1460230	10.87
	LOWER LIMIT	235022.5	5.71	389356	6.53	365057.5	9.87
	LAB SAMPLE ID						
01	BLKA150922a	475527	6.21	770426	7.03	717722	10.37
02	E15-08356-002	413017	6.21	673458	7.03	614691	10.37
03	E15-08356-003	361331	6.21	591539	7.03	559663	10.37
04	E15-08356-001	427950	6.21	702816	7.03	665566	10.37
05	E15-08304-003	391550	6.21	632291	7.03	596497	10.37
06	E15-08305-003	398326	6.21	648361	7.03	622071	10.37
07	E15-08337-1DL	444370	6.21	705978	7.03	647471	10.37
08	E15-08336-5DL	421533	6.21	687782	7.03	637875	10.37
09	E15-08336-6DL	425502	6.21	692958	7.03	652270	10.37
10	E15-08336-7DL	417555	6.21	671958	7.03	614236	10.37
11	E15-08336-008	412451	6.21	669117	7.03	615211	10.37
12	E15-08336-9DL	401911	6.21	647814	7.03	601823	10.37
13	E15-08459-010	397215	6.21	651234	7.03	602565	10.37
14	E15-08471-018	406498	6.21	646481	7.03	594005	10.37
15	08471-020	385556	6.21	622199	7.03	586597	10.37
16	E15-08465-002	402487	6.21	651147	7.03	597989	10.37
17	E15-08465-001	404525	6.21	658414	7.03	624231	10.37
18	E15-08455-001	465129	6.21	743369	7.03	678852	10.37
19	LCSA150922a	490070	6.21	783787	7.03	739062	10.37
20	8356-001MS	478851	6.21	772152	7.03	720714	10.37
21	8356-001MSD	446985	6.21	720921	7.03	672969	10.37
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6973.D
Acq On : 22 Sep 2015 14:11
Operator : Sylvia
Sample : MW-22/10.5-1,E15-08356-001,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 22 16:19:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

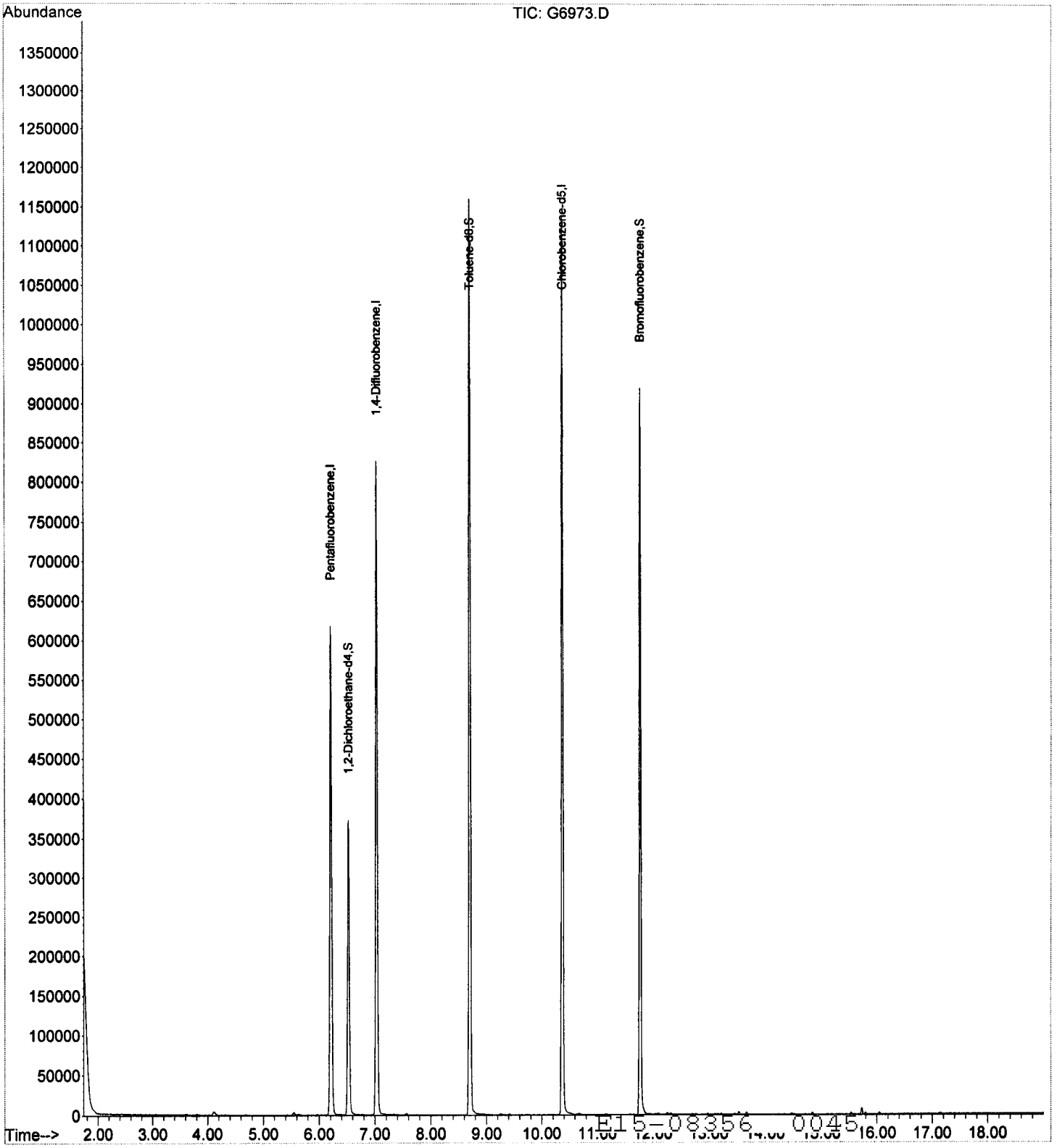
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	427950	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	702816	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	665566	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	331024	64.31	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 128.62%			
41) Toluene-d8	8.70	98	844632	51.19	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.38%			
59) Bromofluorobenzene	11.77	95	384106	52.20	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 104.40%			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6973.D
Acq On : 22 Sep 2015 14:11
Operator : Sylvia
Sample : MW-22/10.5-1,E15-08356-001,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 22 16:19:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6973.D
Acq On : 22 Sep 2015 14:11
Operator : Sylvia
Sample : MW-22/10.5-1,E15-08356-001,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8090815.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	845	856	878	rBV	617819	1358314	59.30%	13.509%
2	6.526	904	917	945	rBV	372252	843864	36.84%	8.393%
3	7.028	1000	1013	1048	rBV	825694	1708393	74.58%	16.991%
4	8.702	1320	1333	1378	rBV	1160364	2290589	100.00%	22.782%
5	10.370	1640	1652	1694	rBV	1138549	2141983	93.51%	21.304%
6	11.772	1902	1920	1946	rBV	919453	1711433	74.72%	17.021%

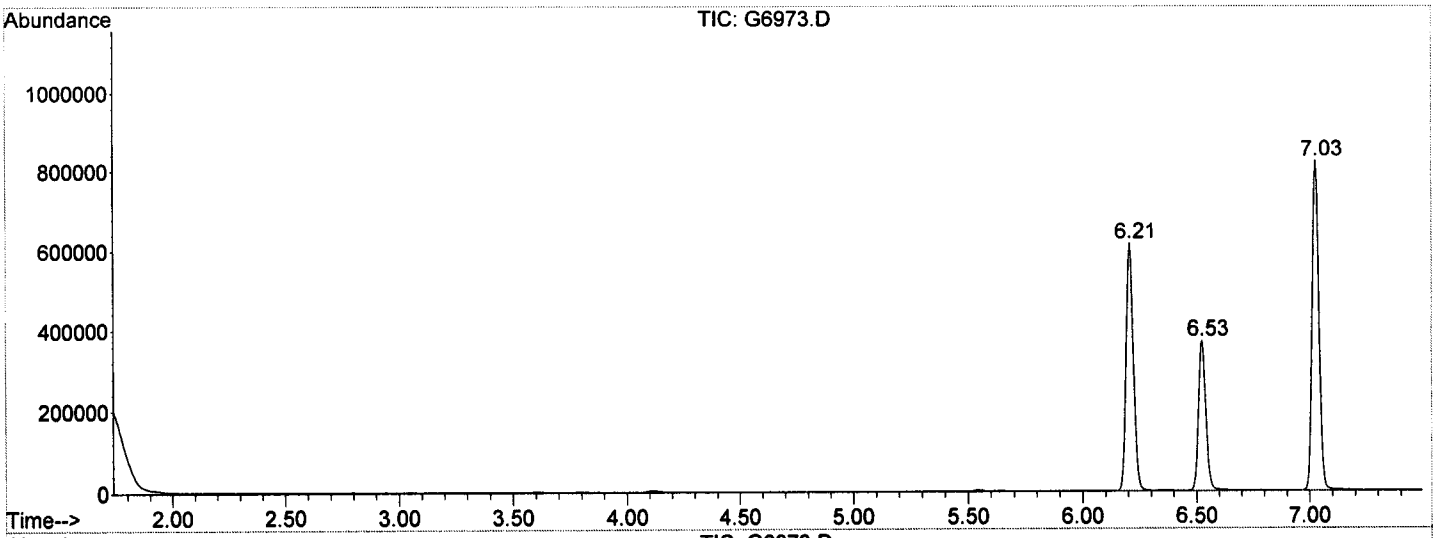
Sum of corrected areas: 10054576

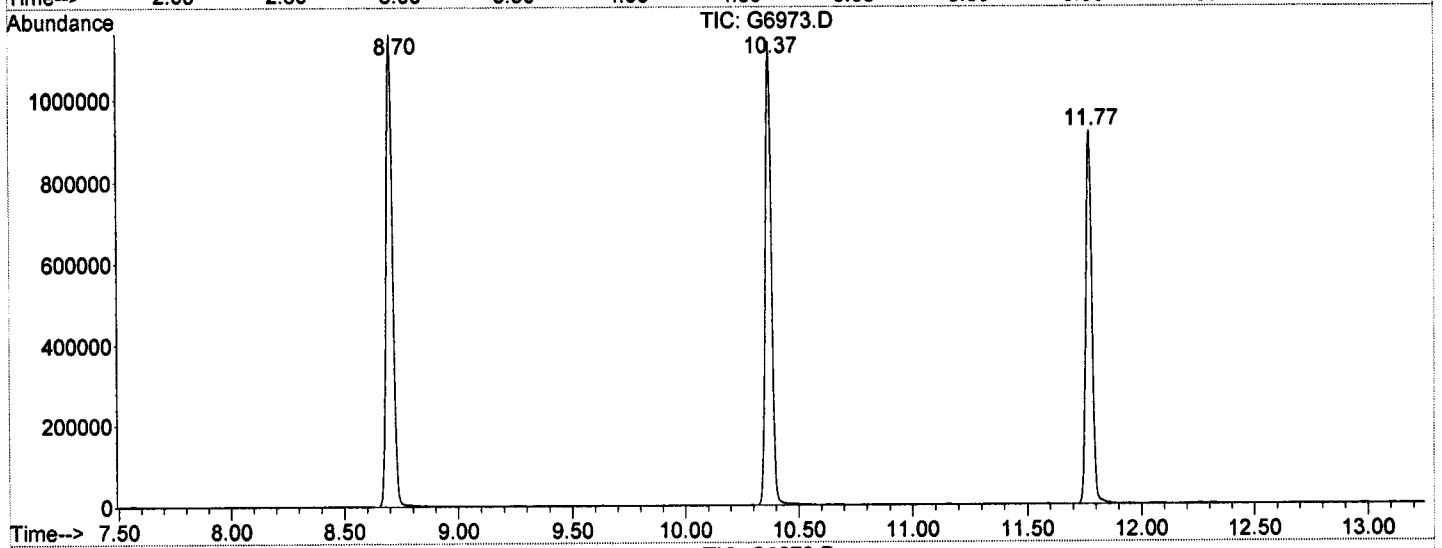
LSC Report - Integrated Chromatogram

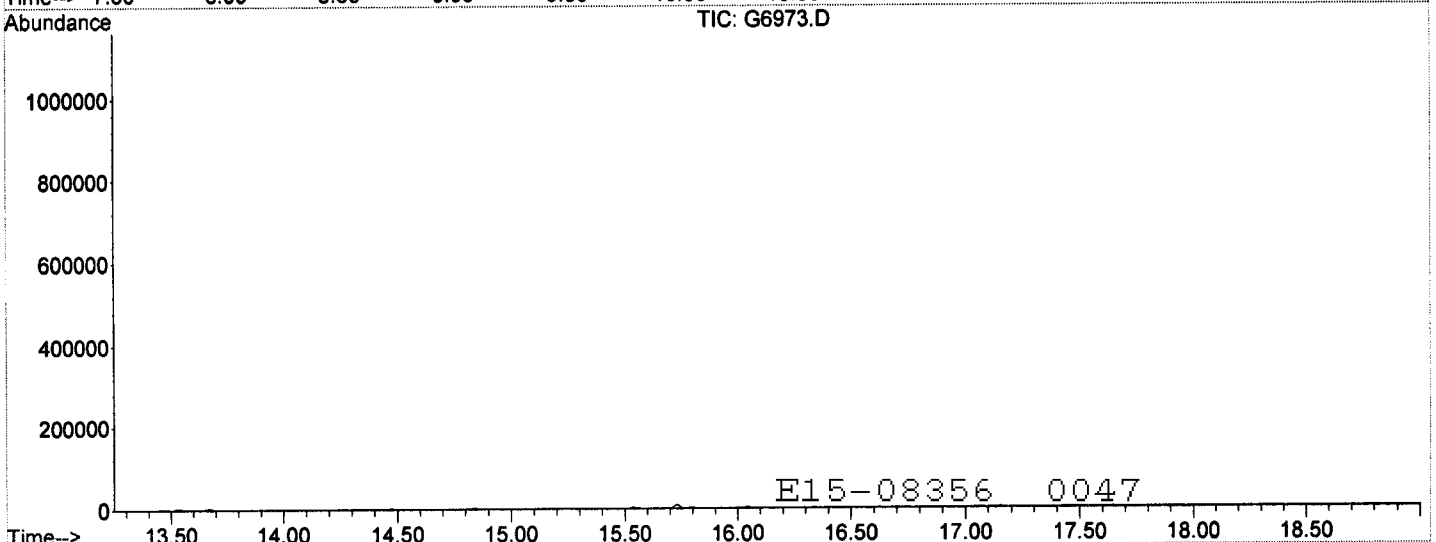
Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6973.D
Acq On : 22 Sep 2015 14:11
Operator : Sylvia
Sample : MW-22/10.5-1,E15-08356-001,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-08356 0047

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6971.D
Acq On : 22 Sep 2015 13:14
Operator : Sylvia
Sample : FB-091515,E15-08356-002,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 22 16:17:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	413017	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	673458	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	614691	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	319677	64.36	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 128.72%			
41) Toluene-d8	8.70	98	793014	50.16	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.32%			
59) Bromofluorobenzene	11.77	95	356588	52.47	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 104.94%			

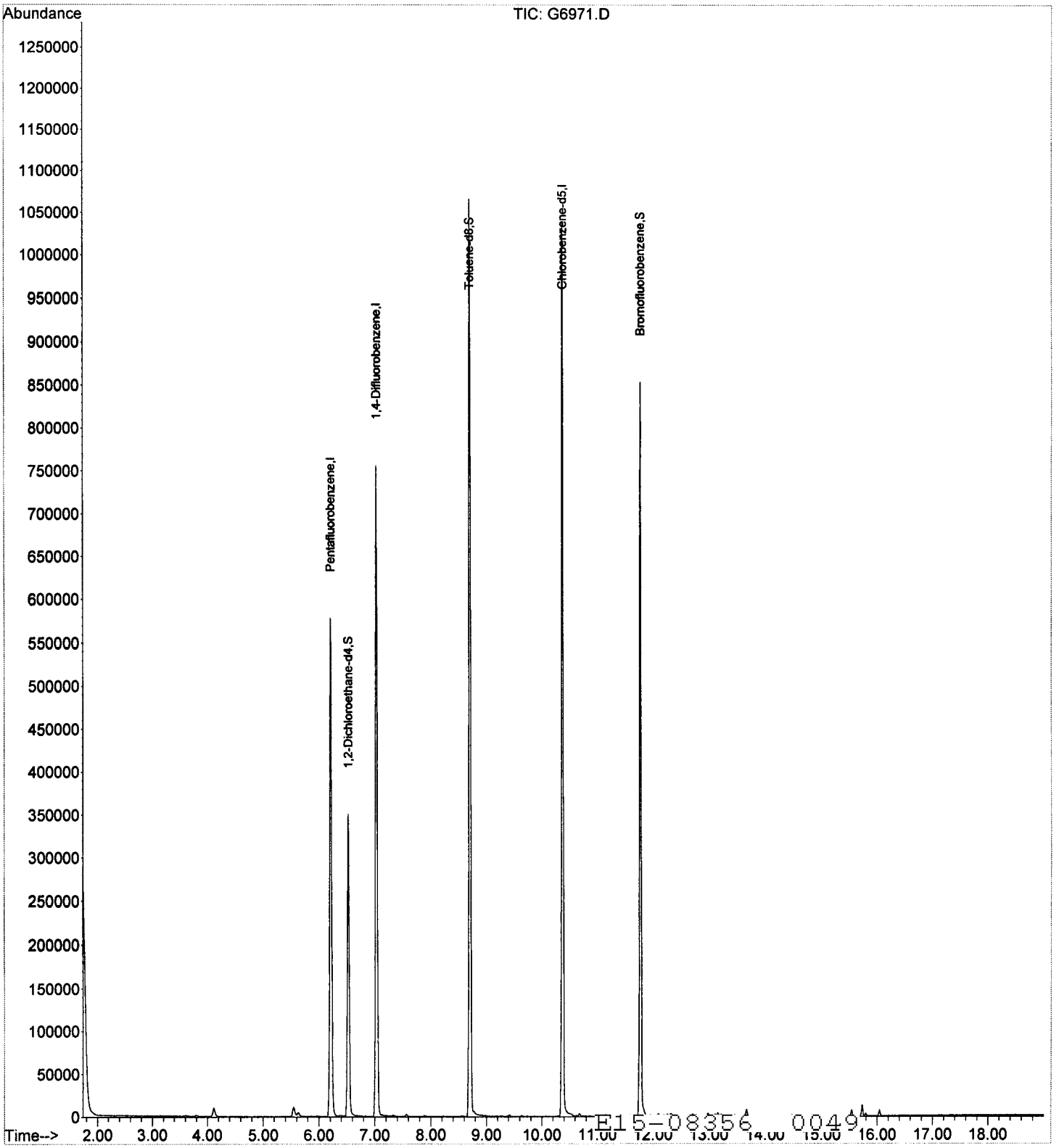
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

E15-08356 0048

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6971.D
Acq On : 22 Sep 2015 13:14
Operator : Sylvia
Sample : FB-091515,E15-08356-002,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Sep 22 16:17:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration



E15-08356 0049

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6971.D
Acq On : 22 Sep 2015 13:14
Operator : Sylvia
Sample : FB-091515,E15-08356-002,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8090815.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.115	445	456	480	rVB3	10185	30603	1.43%	0.322%
2	5.548	718	730	738	rBV3	11190	31415	1.47%	0.330%
3	6.207	840	856	882	rBV	577852	1301669	60.73%	13.676%
4	6.526	904	917	943	rBV	349844	816293	38.09%	8.577%
5	7.028	999	1013	1050	rBV	755615	1618800	75.53%	17.008%
6	8.696	1319	1332	1367	rBV	1066475	2143294	100.00%	22.519%
7	10.370	1640	1652	1697	rBV	1037833	1986932	92.70%	20.876%
8	11.772	1907	1920	1942	rBV	852994	1588739	74.13%	16.692%

Sum of corrected areas: 9517745

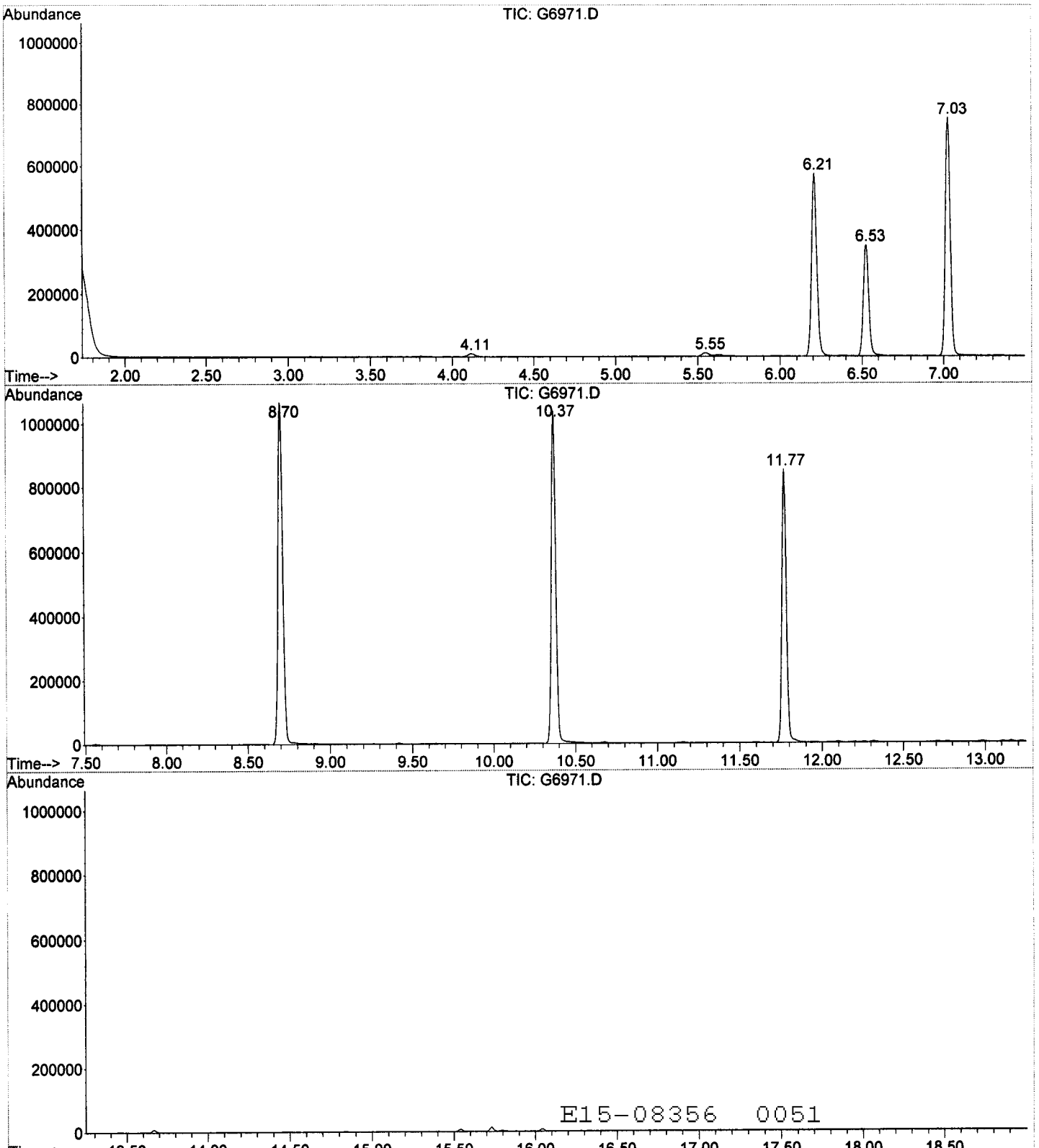
E15-08356 0050

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6971.D
Acq On : 22 Sep 2015 13:14
Operator : Sylvia
Sample : FB-091515,E15-08356-002,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\09-22-15\
Data File : G6972.D
Acq On : 22 Sep 2015 13:43
Operator : Sylvia
Sample : TB-091515,E15-08356-003,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 23 09:52:27 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	361331	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	591539	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	559663	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	273465m	62.93	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 125.86%			
41) Toluene-d8	8.70	98	713632	51.38	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.76%			
59) Bromofluorobenzene	11.77	95	320432	51.78	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 103.56%			
Target Compounds						Qvalue

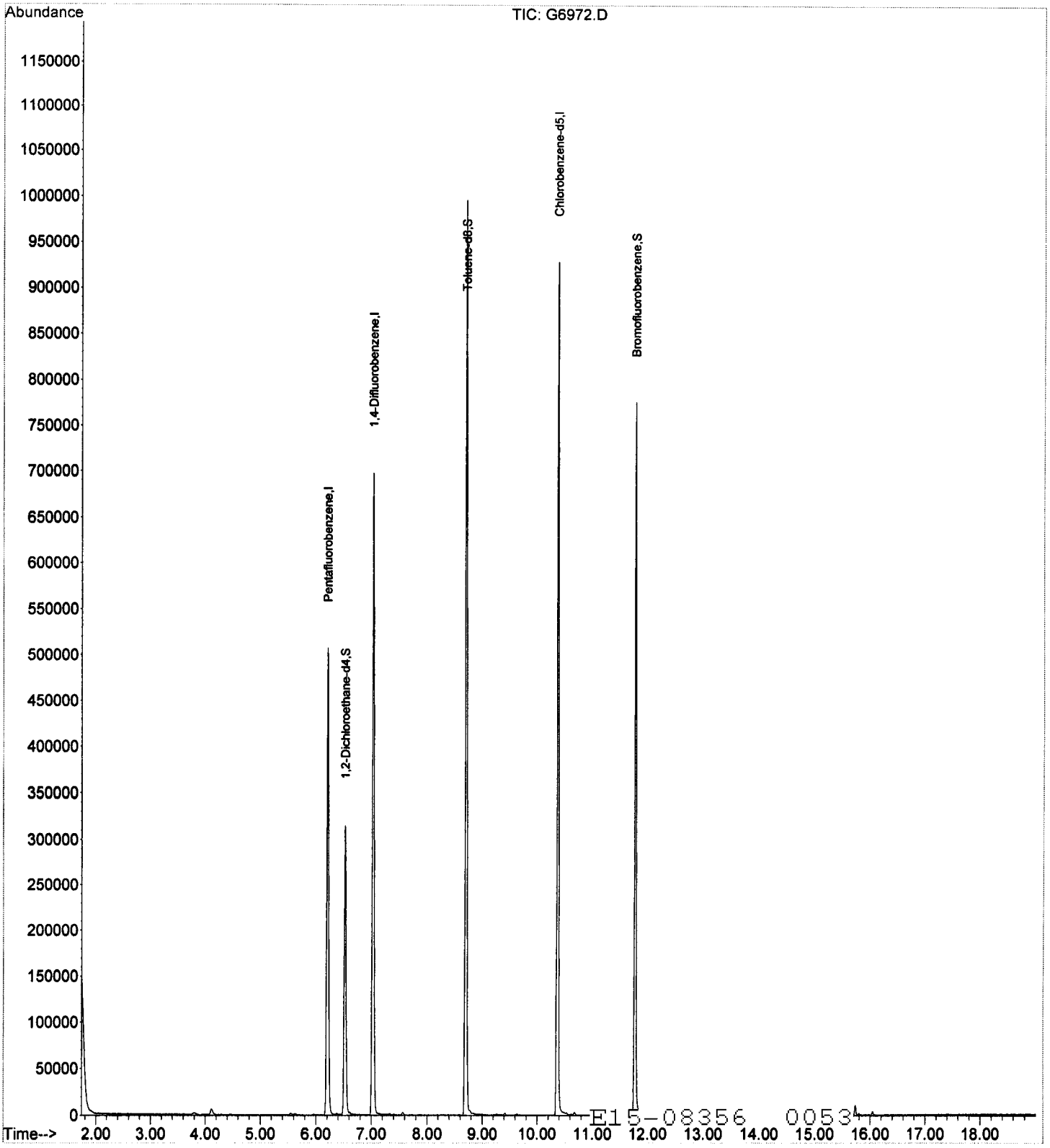
(#) = qualifier out of range (m) = manual integration (+) = signals summed

E15-08356 0052

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\09-22-15\
Data File : G6972.D
Acq On : 22 Sep 2015 13:43
Operator : Sylvia
Sample : TB-091515,E15-08356-003,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 23 09:52:27 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6972.D
Acq On : 22 Sep 2015 13:43
Operator : Sylvia
Sample : TB-091515,E15-08356-003,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8090815.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	843	856	884	rBV	507272	1138592	58.84%	13.477%
2	6.526	905	917	940	rBV	313897	723870	37.41%	8.568%
3	7.028	999	1013	1032	rBV	697379	1440557	74.45%	17.052%
4	8.702	1320	1333	1370	rBV	996315	1935045	100.00%	22.905%
5	10.370	1640	1652	1672	rBV	928928	1783759	92.18%	21.114%
6	11.772	1908	1920	1945	rBV	775220	1426312	73.71%	16.883%

Sum of corrected areas: 8448135

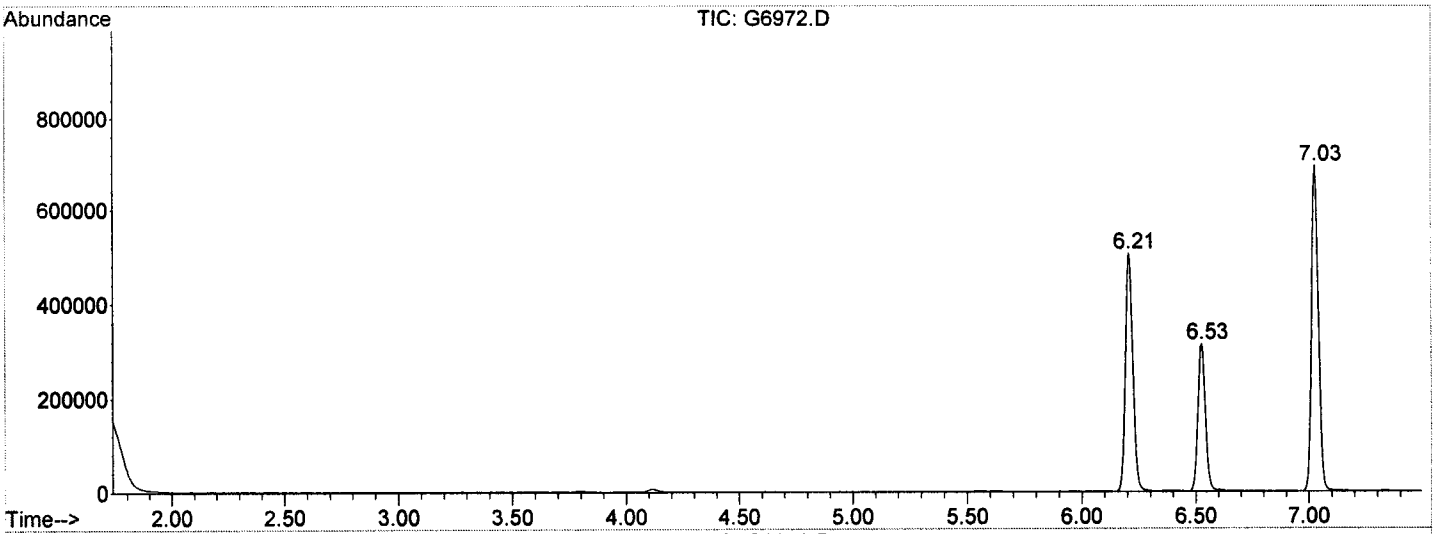
E15-08356 0054

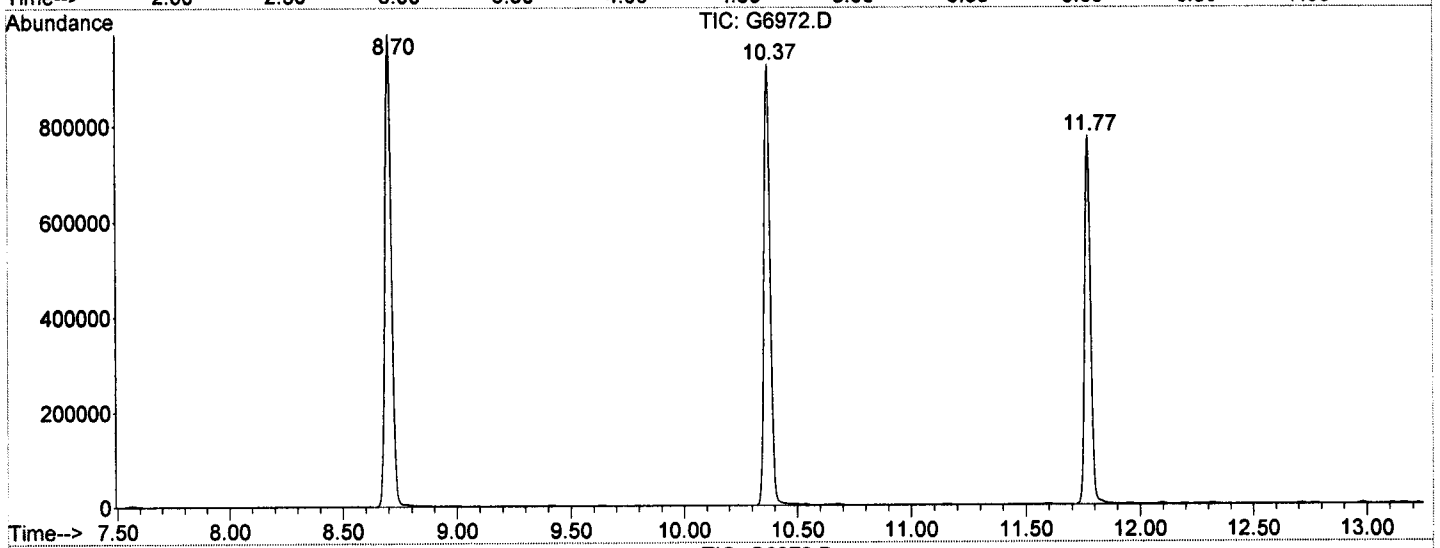
LSC Report - Integrated Chromatogram

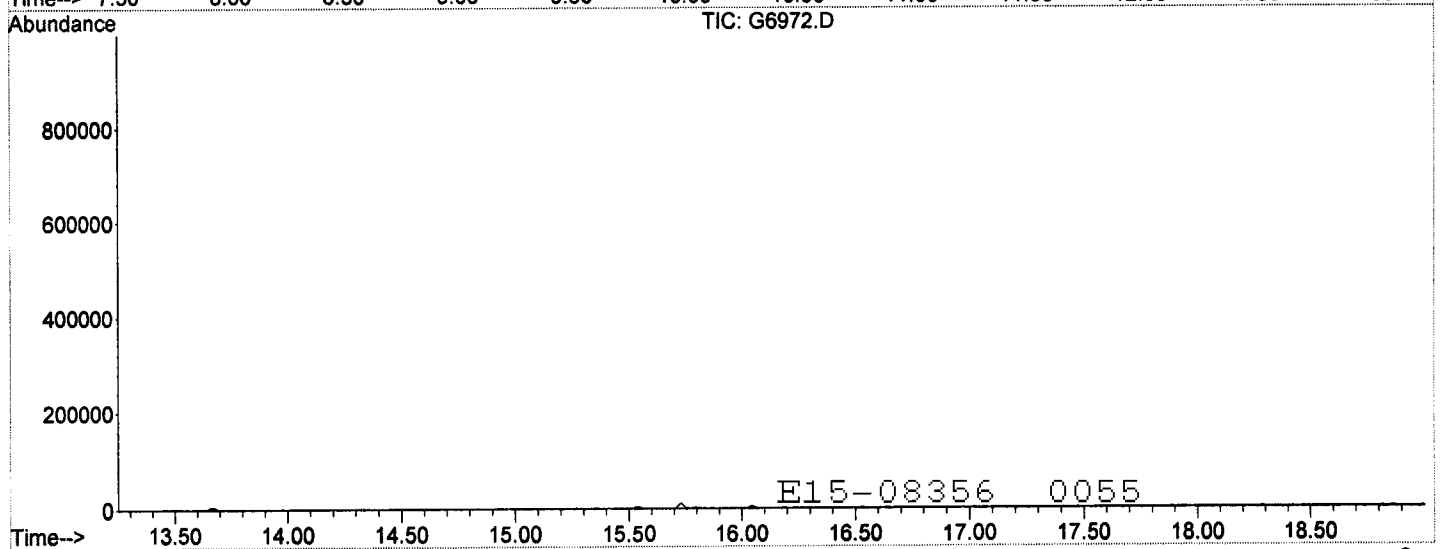
Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6972.D
Acq On : 22 Sep 2015 13:43
Operator : Sylvia
Sample : TB-091515,E15-08356-003,A,5mL,100
Misc : GEI/SIC,09/15/15,09/16/15,1
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150922a
Client ID: BLKA150922a
Date Received: NA
Date Analyzed: 09/22/2015
Data file: G6970.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
tert-Butyl alcohol (TBA)	ND		4.00	1.87
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA150922a
Client ID: BLKA150922a
Date Received: NA
Date Analyzed: 09/22/2015
Data file: G6970.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (53): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA150922a
Client ID: BLKA150922a
Date Received: NA
Date Analyzed: 09/22/2015
Data file: G6970.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6970.D
Acq On : 22 Sep 2015 12:46
Operator : Sylvia
Sample : BLKA150922a,BLKA150922a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 22 16:16:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration

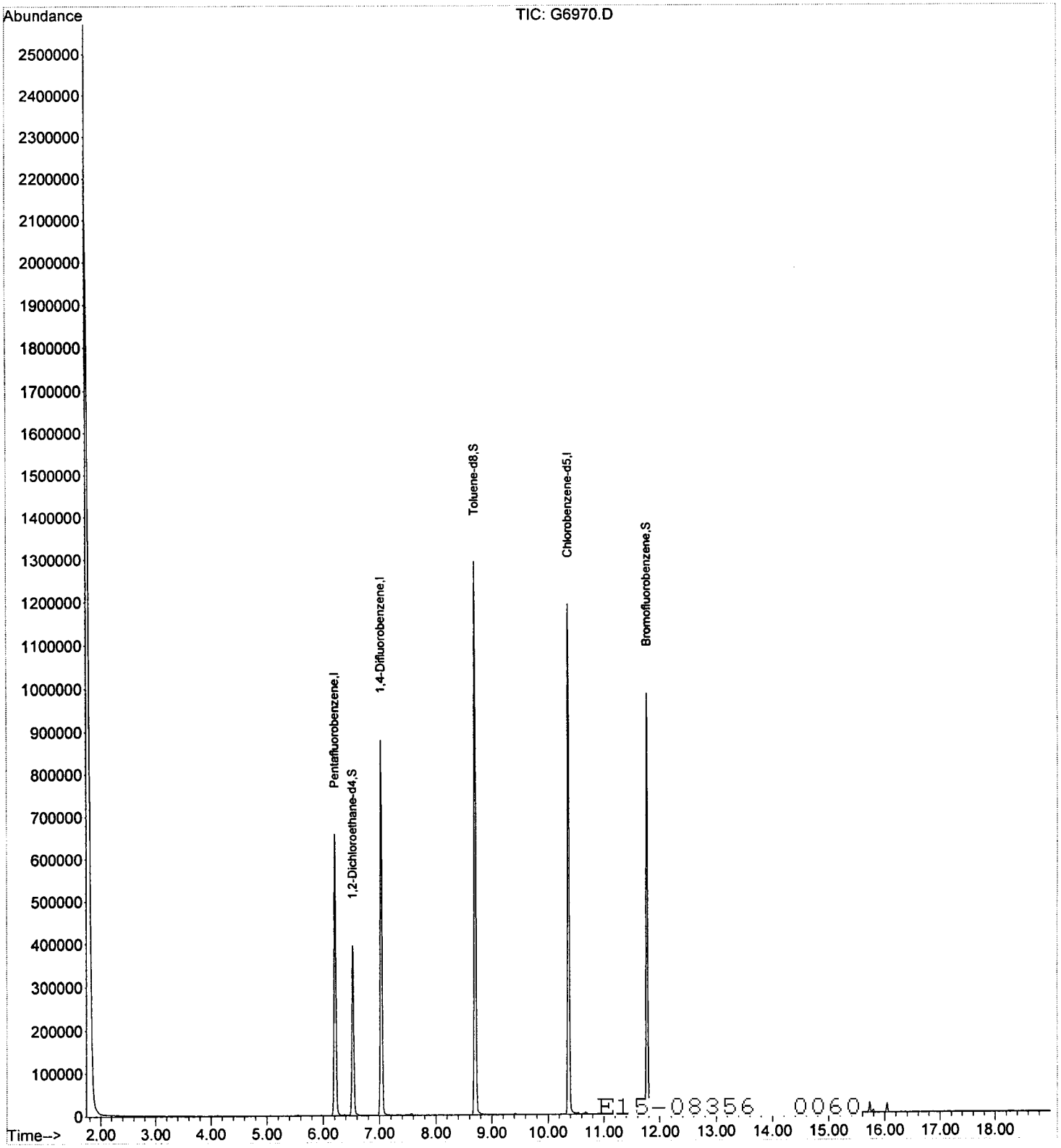
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.21	168	475527	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.03	114	770426	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	717722	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	345415m	60.40	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 120.80%			
41) Toluene-d8	8.70	98	925387	51.16	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.32%			
59) Bromofluorobenzene	11.77	95	411714	51.88	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 103.76%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6970.D
Acq On : 22 Sep 2015 12:46
Operator : Sylvia
Sample : BLKA150922a,BLKA150922a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 22 16:16:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Tue Sep 08 16:19:47 2015
Response via : Initial Calibration



E15-08356 0060

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6970.D
Acq On : 22 Sep 2015 12:46
Operator : Sylvia
Sample : BLKA150922a,BLKA150922a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8090815.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.207	843	856	878	rBV	658952	1490285	60.16%	13.612%
2	6.526	903	917	942	rBV	395257	891422	35.98%	8.142%
3	7.028	1002	1013	1046	rBV	878998	1837926	74.19%	16.787%
4	8.702	1321	1333	1358	rBV	1293309	2477205	100.00%	22.626%
5	10.370	1640	1652	1680	rBV	1192134	2283550	92.18%	20.857%
6	11.772	1909	1920	1947	rBV	984372	1817654	73.38%	16.602%
7	13.665	2274	2282	2296	rBV2	22491	43634	1.76%	0.399%
8	15.538	2632	2640	2652	rVB2	21006	35159	1.42%	0.321%
9	15.731	2667	2677	2683	rBV2	23208	37046	1.50%	0.338%
10	16.045	2728	2737	2748	rBV	22013	34500	1.39%	0.315%

Sum of corrected areas: 10948381

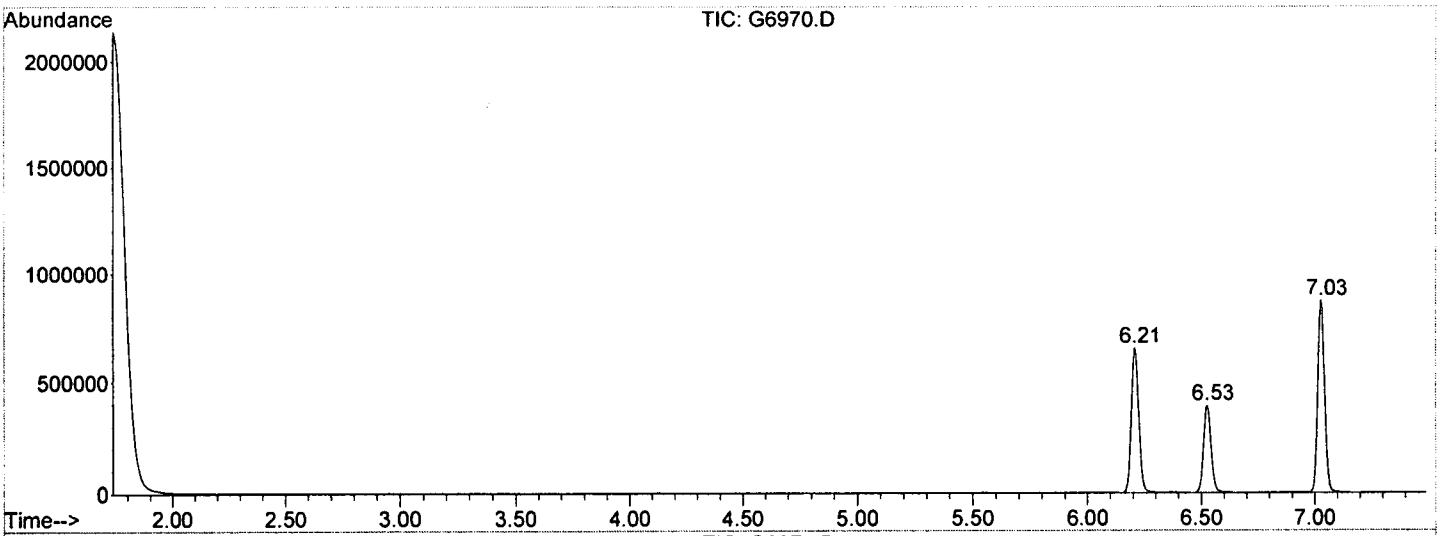
E15-08356 0061

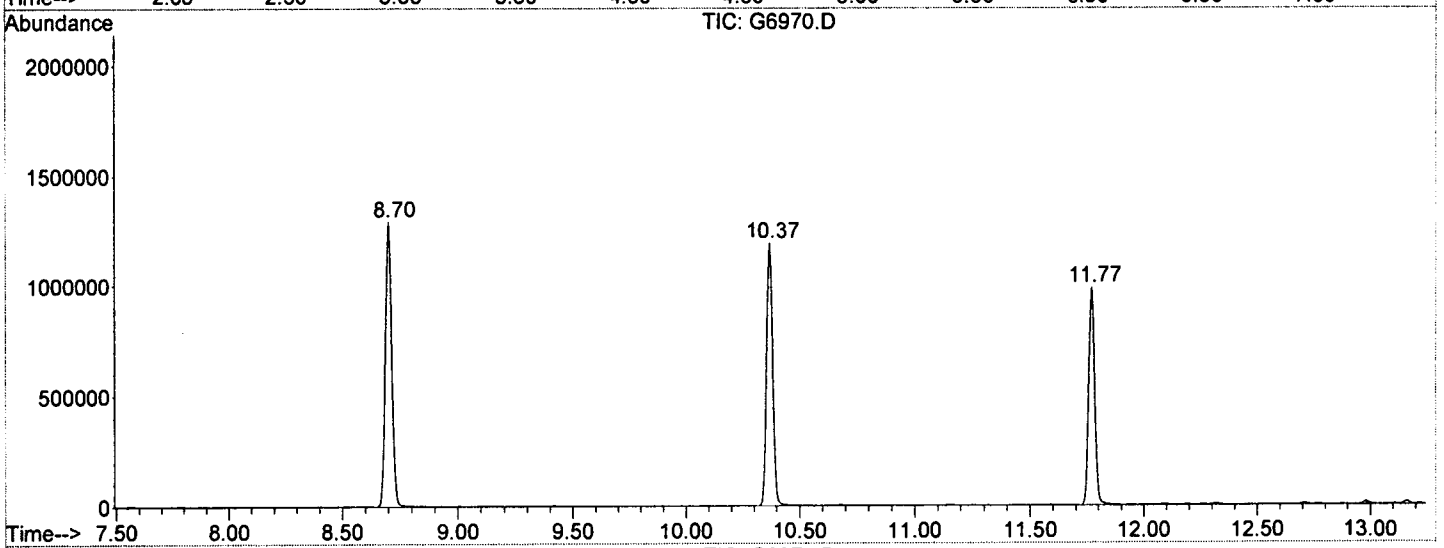
LSC Report - Integrated Chromatogram

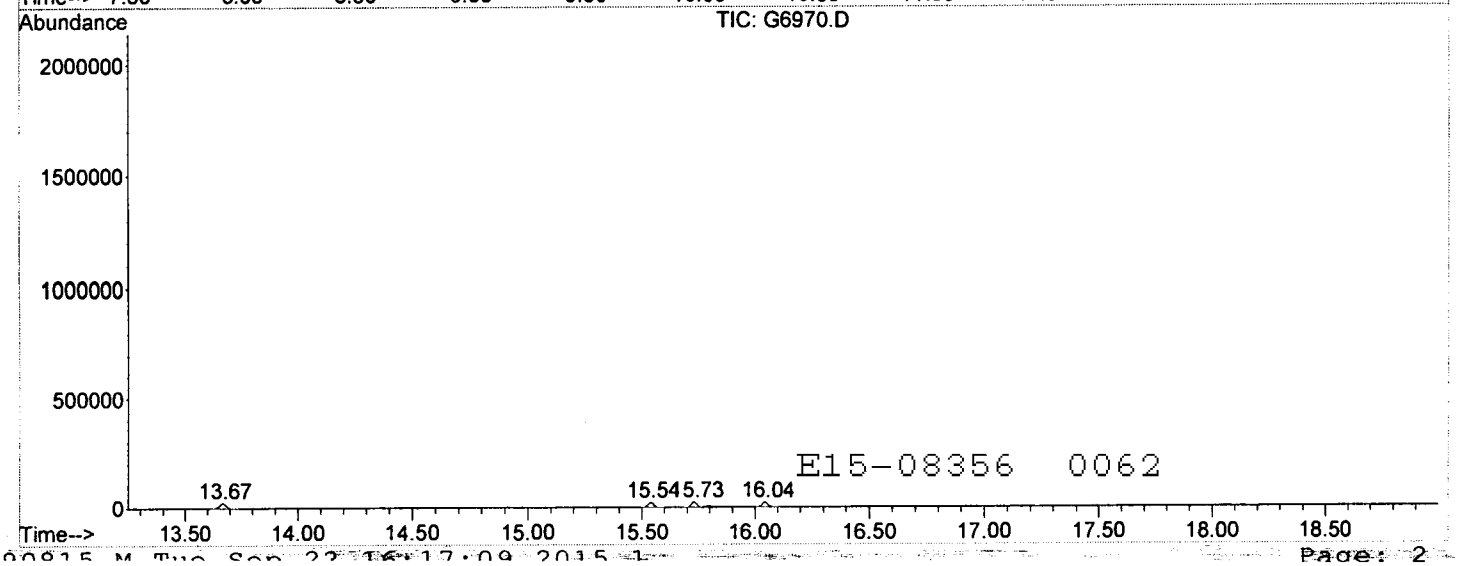
Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : G6970.D
Acq On : 22 Sep 2015 12:46
Operator : Sylvia
Sample : BLKA150922a,BLKA150922a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8090815.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







E15-08356 0062

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS QC SUMMARY

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 09/22/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2	AQUEOUS	B3058.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKA150921-01	AQUEOUS	B3059.D	40		29		57		66		52		107	
LCSA150921-01	AQUEOUS	B3060.D	35		30		47		51		65		97	
E15-08382-001MS	AQUEOUS	B3061.D	44		34		66		77		88		108	
E15-08382-001MSD	AQUEOUS	B3062.D	45		35		67		76		77		98	
E15-08277-014	AQUEOUS	B3063.D	N/A		N/A		51		61		N/A		89	
E15-08382-001	AQUEOUS	B3064.D	N/A		N/A		71		88		N/A		100	
E15-08308-001	AQUEOUS	B3065.D	N/A		N/A		68		64		N/A		62	
E15-08356-001	AQUEOUS	B3066.D	N/A		N/A		67		69		N/A		79	
E15-08356-002	AQUEOUS	B3067.D	N/A		N/A		52		64		N/A		101	
E15-08331-001	AQUEOUS	B3068.D	N/A		N/A		60		69		N/A		104	
E15-08332-001	AQUEOUS	B3069.D	N/A		N/A		66		79		N/A		103	
E15-08466-001	AQUEOUS	B3070.D	N/A		N/A		65		76		N/A		100	
E15-08433-001	AQUEOUS	B3071.D	N/A		N/A		53		55		N/A		71	
E15-08433-002	AQUEOUS	B3072.D	N/A		N/A		81		98		N/A		120	
E15-08433-003	AQUEOUS	B3073.D	N/A		N/A		44		40		N/A		42	
E15-08433-005	AQUEOUS	B3074.D	N/A		N/A		62		58		N/A		55	
E15-08433-006	AQUEOUS	B3075.D	N/A		N/A		42		36		N/A		39	
E15-08433-007	AQUEOUS	B3076.D	N/A		N/A		62		63		N/A		71	
E15-08433-008	AQUEOUS	B3077.D	N/A		N/A		54		60		N/A		66	
E15-08433-009	AQUEOUS	B3078.D	N/A		N/A		48		57		N/A		80	
E15-08449-001	AQUEOUS	B3079.D	N/A		N/A		66		79		N/A		100	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10-100	28-108
S2 (PHL) = Phenol-d5	15-110	30-130	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	22-115	35-126
S6 (TPH) = Terphenyl-d14	30-130	30-130	23-124	32-135

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 09/22/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
E15-08455-001	AQUEOUS	B3080.D	N/A		N/A		49		54		N/A		86	
E15-08456-001	AQUEOUS	B3081.D	N/A		N/A		61		47		N/A		49	
E15-08365-009	AQUEOUS	B3082.D	N/A		N/A		71		85		N/A		107	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10-100	28-108
S2 (PHL) = Phenol-d5	15-110	30-130	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	22-115	35-126
S6 (TPH) = Terphenyl-d14	30-130	30-130	23-124	32-135

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150921-01
Date Received: NA
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
Data file: B3060.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	DKQP
N-Nitrosodimethylamine	30.0	13.2	44	$	40-140	70-130
Pyridine	30.0	8.0	27		20-120	20-160
Benzaldehyde	30.0	5.9	20		10-110	20-160
Phenol	30.0	10.9	36		30-140	20-160
Aniline	30.0	14.3	48	$	40-140	70-130
Bis(2-chloroethyl) ether	30.0	13.8	46	$	40-140	70-130
2-Chlorophenol	30.0	11.8	39		30-140	20-160
1,3-Dichlorobenzene	30.0	13.3	44	$	40-140	70-130
1,4-Dichlorobenzene	30.0	12.4	41	$	40-140	70-130
Benzyl alcohol	30.0	13.9	46	$	40-140	70-130
1,2-Dichlorobenzene	30.0	13.4	45	$	40-140	70-130
2-Methylphenol	30.0	11.9	40		30-140	20-160
Bis(2-chloroisopropyl) ether	30.0	14.6	49	$	40-140	70-130
4-Methylphenol	30.0	12.8	43	$	30-140	70-130
N-Nitrosodi-n-propylamine	30.0	14.1	47	$	40-140	70-130
Acetophenone	30.0	14.2	47	$	40-140	70-130
3-Methylphenol	30.0	12.8	43		30-140	20-160
Hexachloroethane	30.0	12.2	41	$	40-140	70-130
Nitrobenzene	30.0	13.8	46	$	40-140	70-130
Isophorone	30.0	13.9	46	$	40-140	70-130
2-Nitrophenol	30.0	13.1	44		30-140	20-160
2,4-Dimethylphenol	30.0	13.3	44		30-140	20-160
Bis(2-chloroethoxy) methane	30.0	14.1	47	$	40-140	70-130
Benzoic acid	30.0	14.6	49		30-140	20-160
2,4-Dimethylaniline	30.0	18.9	63	$	40-140	70-130
2,4-Dichlorophenol	30.0	13.4	45		30-140	20-160
1,2,4-Trichlorobenzene	30.0	13.7	46	$	40-140	70-130
Naphthalene	30.0	13.3	44	$	40-140	70-130
4-Chloroaniline	30.0	13.4	45	$	40-140	70-130
Hexachlorobutadiene	30.0	13.5	45	$	40-140	70-130
Caprolactam	30.0	14.8	49	$	40-140	70-130
4-Chloro-3-methylphenol	30.0	14.4	48		30-140	20-160
2-Methylnaphthalene	30.0	14.2	47	$	40-140	70-130
Hexachlorocyclopentadiene	30.0	10.6	35		5-105	20-160
2,4,6-Trichlorophenol	30.0	13.9	46		30-140	20-160
2,4,5-Trichlorophenol	30.0	14.9	50		30-140	20-160
1,1'-Biphenyl	30.0	14.8	49	$	40-140	70-130
2-Chloronaphthalene	30.0	14.4	48	$	40-140	70-130
2-Nitroaniline	30.0	16.3	54	$	40-140	70-130
Dimethyl phthalate	30.0	17.4	58	$	40-140	70-130
2,6-Dinitrotoluene	30.0	17.7	59	$	40-140	70-130
Acenaphthylene	30.0	14.9	50	$	40-140	70-130
3-Nitroaniline	30.0	19.6	65	$	40-140	70-130
Acenaphthene	30.0	15.3	51		40-140	20-160
2,4-Dinitrophenol	30.0	14.2	47		5-105	20-160

E15-08356 0067

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA150921-01
Date Received: NA
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
Data file: B3060.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	30.0	15.0	50		30-140	20-160
2,4-Dinitrotoluene	30.0	23.7	79		40-140	70-130
Dibenzofuran	30.0	15.1	50	$	40-140	70-130
Diethyl phthalate	30.0	21.8	73		40-140	70-130
Fluorene	30.0	16.5	55	$	40-140	70-130
4-Chlorophenyl phenyl ether	30.0	17.2	57	$	40-140	70-130
4-Nitroaniline	30.0	21.9	73		40-140	70-130
1,2,4,5-Tetrachlorobenzene	30.0	14.7	49	$	40-140	70-130
2,3,4,6-Tetrachlorophenol	30.0	32.9	110		40-140	70-130
4,6-Dinitro-2-methylphenol	30.0	17.8	59		10-110	20-160
N-Nitrosodiphenylamine	30.0	22.6	75		40-140	70-130
1,2-Diphenylhydrazine	30.0	15.6	52	$	40-140	70-130
4-Bromophenyl phenyl ether	30.0	19.0	63	$	40-140	70-130
Hexachlorobenzene	30.0	20.1	67	$	40-140	70-130
Atrazine	30.0	29.9	100		20-120	20-160
Pentachlorophenol	30.0	18.6	62		30-140	20-160
Phenanthrene	30.0	20.8	69	$	40-140	70-130
Anthracene	30.0	21.6	72		40-140	70-130
Carbazole	30.0	25.3	84		40-140	70-130
Di-n-butyl phthalate	30.0	26.4	88		40-140	70-130
Fluoranthene	30.0	24.1	80		40-140	70-130
Benzidine	30.0	3.4	11	$	5-105	20-160
Pyrene	30.0	27.0	90		40-140	70-130
3,3'-Dimethylbenzidine	30.0	8.2	27		5-105	20-160
Butyl benzyl phthalate	30.0	27.8	93		40-140	70-130
3,3'-Dichlorobenzidine	30.0	24.9	83		40-140	70-130
Benzo[a]anthracene	30.0	24.8	83		40-140	70-130
Chrysene	30.0	19.4	65	$	40-140	70-130
Bis(2-ethylhexyl) phthalate	30.0	27.2	91		40-140	70-130
Di-n-octyl phthalate	30.0	23.0	77		40-140	70-130
Benzo[b]fluoranthene	30.0	19.5	65	$	40-140	70-130
Benzo[k]fluoranthene	30.0	22.7	76		40-140	70-130
Benzo[a]pyrene	30.0	20.4	68	$	40-140	70-130
Indeno[1,2,3-cd]pyrene	30.0	21.0	70		40-140	70-130
Dibenz[a,h]anthracene	30.0	21.0	70		40-140	70-130
Benzo[g,h,i]perylene	30.0	21.8	73		40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E15-08356 0068

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-08382-001
Date Received: 09/17/2015
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
MS Data file: B3061.D
MSD Data file: B3062.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD limits IAL	DKQP
N-Nitrosodimethylamine	40.0	0.0	16.2	41	$	16.8	42	$	4		40-140/20	70-130/20
Pyridine	40.0	0.0	11.1	28		13.3	33		18		20-120/20	20-160/20
Benzaldehyde	40.0	0.0	11.9	30		12.5	31		5		10-110/20	20-160/20
Phenol	40.0	0.0	12.9	32		11.9	30		8		30-140/20	20-160/20
Aniline	40.0	0.0	24.0	60	$	25.0	63	$	4		40-140/20	70-130/20
Bis(2-chloroethyl) ether	40.0	0.0	24.6	62	$	26.3	66	$	7		40-140/20	70-130/20
2-Chlorophenol	40.0	0.0	20.5	51		21.2	53		3		30-140/20	20-160/20
1,3-Dichlorobenzene	40.0	0.0	24.0	60	$	25.1	63	$	4		40-140/20	70-130/20
1,4-Dichlorobenzene	40.0	0.0	21.9	55	$	23.5	59	$	7		40-140/20	70-130/20
Benzyl alcohol	40.0	0.0	23.5	59	$	24.6	62	$	5		40-140/20	70-130/20
1,2-Dichlorobenzene	40.0	0.0	23.6	59	$	25.5	64	$	8		40-140/20	70-130/20
2-Methylphenol	40.0	0.0	20.8	52		21.3	53		2		30-140/20	20-160/20
Bis(2-chloroisopropyl) ether	40.0	0.0	27.1	68	$	28.3	71		4		40-140/20	70-130/20
4-Methylphenol	40.0	0.0	21.4	54	$	21.9	55	$	2		30-140/20	70-130/20
N-Nitrosodi-n-propylamine	40.0	0.0	27.1	68	$	27.3	68	$	1		40-140/20	70-130/20
Acetophenone	40.0	0.0	26.3	66	$	26.6	67	$	1		40-140/20	70-130/20
3-Methylphenol	40.0	0.0	21.4	54		21.9	55		2		30-140/20	20-160/20
Hexachloroethane	40.0	0.0	22.2	56	$	24.4	61	$	9		40-140/20	70-130/20
Nitrobenzene	40.0	0.0	24.8	62	$	25.2	63	$	2		40-140/20	70-130/20
Isophorone	40.0	0.0	26.9	67	$	26.5	66	$	1		40-140/20	70-130/20
2-Nitrophenol	40.0	0.0	23.5	59		23.2	58		1		30-140/20	20-160/20
2,4-Dimethylphenol	40.0	0.0	22.0	55		21.9	55		0		30-140/20	20-160/20
Bis(2-chloroethoxy) methane	40.0	0.0	27.3	68	$	27.2	68	$	0		40-140/20	70-130/20
Benzoic acid	40.0	0.0	14.5	36		16.3	41		12		30-140/20	20-160/20
2,4-Dimethylaniline	40.0	0.0	37.4	94		35.7	89		5		40-140/20	70-130/20
2,4-Dichlorophenol	40.0	0.0	24.5	61		24.0	60		2		30-140/20	20-160/20
1,2,4-Trichlorobenzene	40.0	0.0	25.4	64	$	26.1	65	$	3		40-140/20	70-130/20
Naphthalene	40.0	0.0	24.3	61	$	24.3	61	$	0		40-140/20	70-130/20
4-Chloroaniline	40.0	0.0	25.8	65	$	25.0	63	$	3		40-140/20	70-130/20
Hexachlorobutadiene	40.0	0.0	25.4	64	$	25.3	63	$	0		40-140/20	70-130/20
Caprolactam	40.0	0.0	16.3	41	$	16.8	42	$	3		40-140/20	70-130/20
4-Chloro-3-methylphenol	40.0	0.0	27.1	68		25.1	63		8		30-140/20	20-160/20
2-Methylnaphthalene	40.0	0.0	27.1	68	$	26.2	66	$	3		40-140/20	70-130/20
Hexachlorocyclopentadiene	40.0	0.0	24.5	61		29.2	73		18		5-105/20	20-160/20
2,4,6-Trichlorophenol	40.0	0.0	26.3	66		25.2	63		4		30-140/20	20-160/20
2,4,5-Trichlorophenol	40.0	0.0	29.6	74		27.6	69		7		30-140/20	20-160/20
1,1'-Biphenyl	40.0	0.0	29.5	74		29.3	73		1		40-140/20	70-130/20
2-Chloronaphthalene	40.0	0.0	28.2	71		27.9	70		1		40-140/20	70-130/20
2-Nitroaniline	40.0	0.0	31.8	80		30.5	76		4		40-140/20	70-130/20
Dimethyl phthalate	40.0	0.0	31.1	78		29.0	73		7		40-140/20	70-130/20
2,6-Dinitrotoluene	40.0	0.0	32.7	82		32.1	80		2		40-140/20	70-130/20
Acenaphthylene	40.0	0.0	30.0	75		28.8	72		4		40-140/20	70-130/20
3-Nitroaniline	40.0	0.0	31.1	78		29.2	73		6		40-140/20	70-130/20
Acenaphthene	40.0	0.0	30.9	77		30.2	76		2		40-140/20	20-160/20
2,4-Dinitrophenol	40.0	0.0	29.7	74		35.6	89		18		5-105/20	20-160/20

E15-08356 0069

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-08382-001
Date Received: 09/17/2015
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
MS Data file: B3061.D
MSD Data file: B3062.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD IAL Limits	Rec/RPD DKQP Limits
4-Nitrophenol	40.0	0.0	17.1	43		16.8	42		2		30-140/20	20-160/20
2,4-Dinitrotoluene	40.0	0.0	35.0	88		33.8	85		3		40-140/20	70-130/20
Dibenzofuran	40.0	0.0	30.1	75		28.7	72		5		40-140/20	70-130/20
Diethyl phthalate	40.0	0.0	33.6	84		31.2	78		7		40-140/20	70-130/20
Fluorene	40.0	0.0	31.8	80		29.2	73		9		40-140/20	70-130/20
4-Chlorophenyl phenyl ether	40.0	0.0	33.0	83		30.7	77		7		40-140/20	70-130/20
4-Nitroaniline	40.0	0.0	31.3	78		26.2	66	$	18		40-140/20	70-130/20
1,2,4,5-Tetrachlorobenzene	40.0	0.0	16.2	41	$	16.5	41	$	2		40-140/20	70-130/20
2,3,4,6-Tetrachlorophenol	40.0	0.0	53.5	134	$	46.7	117		14		40-140/20	70-130/20
4,6-Dinitro-2-methylphenol	40.0	0.0	29.3	73		29.1	73		1		10-110/20	20-160/20
N-Nitrosodiphenylamine	40.0	0.0	35.8	90		32.2	81		11		40-140/20	70-130/20
1,2-Diphenylhydrazine	40.0	0.0	30.2	76		27.5	69	$	9		40-140/20	70-130/20
4-Bromophenyl phenyl ether	40.0	0.0	34.8	87		31.1	78		11		40-140/20	70-130/20
Hexachlorobenzene	40.0	0.0	32.9	82		29.9	75		10		40-140/20	70-130/20
Atrazine	40.0	0.0	42.9	107		38.7	97		10		20-120/20	20-160/20
Pentachlorophenol	40.0	0.0	28.6	72		26.2	66		9		30-140/20	20-160/20
Phenanthrene	40.0	0.0	32.3	81		29.7	74		8		40-140/20	70-130/20
Anthracene	40.0	0.0	34.1	85		31.4	79		8		40-140/20	70-130/20
Carbazole	40.0	0.0	35.8	90		32.6	82		9		40-140/20	70-130/20
Di-n-butyl phthalate	40.0	0.0	38.0	95		34.1	85		11		40-140/20	70-130/20
Fluoranthene	40.0	0.0	34.6	87		30.9	77		11		40-140/20	70-130/20
Benzidine	40.0	0.0	5.5	14	$	5.0	13	$	10		5-105/20	20-160/20
Pyrene	40.0	0.0	39.1	98		35.4	89		10		40-140/20	70-130/20
3,3'-Dimethylbenzidine	40.0	0.0	7.4	19	$	6.3	16	$	16		5-105/20	20-160/20
Butyl benzyl phthalate	40.0	0.0	40.9	102		36.2	91		12		40-140/20	70-130/20
3,3'-Dichlorobenzidine	40.0	0.0	36.2	91		31.4	79		14		40-140/20	70-130/20
Benzo[a]anthracene	40.0	0.0	35.8	90		31.9	80		12		40-140/20	70-130/20
Chrysene	40.0	0.0	28.4	71		24.9	62	$	13		40-140/20	70-130/20
Bis(2-ethylhexyl) phthalate	40.0	0.0	40.5	101		36.1	90		11		40-140/20	70-130/20
Di-n-octyl phthalate	40.0	0.0	32.1	80		28.3	71		13		40-140/20	70-130/20
Benzo[b]fluoranthene	40.0	0.0	25.7	64	$	23.2	58	$	10		40-140/20	70-130/20
Benzo[k]fluoranthene	40.0	0.0	30.6	77		29.6	74		3		40-140/20	70-130/20
Benzo[a]pyrene	40.0	0.0	29.7	74		26.3	66	$	12		40-140/20	70-130/20
Indeno[1,2,3-cd]pyrene	40.0	0.0	31.6	79		27.9	70		12		40-140/20	70-130/20
Dibenz[a,h]anthracene	40.0	0.0	32.1	80		28.1	70		13		40-140/20	70-130/20
Benzo[g,h,i]perylene	40.0	0.0	33.1	83		28.9	72		14		40-140/20	70-130/20

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E15-08356 0070

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B3059.D Instrument ID: MSDB

Date Extracted: 09/21/15 Matrix: AQUEOUS

Date Analyzed: 09/22/2015 Time Analyzed: 12:30

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSA150921-01	09/22/2015	12:47
.	E15-08382-001MS	09/22/2015	13:05
.	E15-08382-001MSD	09/22/2015	13:22
FIELD_BL	E15-08277-014	09/22/2015	13:39
MW-1	E15-08382-001	09/22/2015	13:57
MW-1/16.	E15-08308-001	09/22/2015	14:14
MW-22/10	E15-08356-001	09/22/2015	14:32
FB-09151	E15-08356-002	09/22/2015	14:49
TWP_#1	E15-08331-001	09/22/2015	15:06
TWP_#1	E15-08332-001	09/22/2015	15:24
PZ1	E15-08466-001	09/22/2015	15:41
TWP-13	E15-08433-001	09/22/2015	15:59
TWP-14	E15-08433-002	09/22/2015	16:16
TWP-15	E15-08433-003	09/22/2015	16:34
TWP-17	E15-08433-005	09/22/2015	16:51
TWP-18	E15-08433-006	09/22/2015	17:09
TWP-19	E15-08433-007	09/22/2015	17:26
TWP-20	E15-08433-008	09/22/2015	17:43
FB-2	E15-08433-009	09/22/2015	18:01
GW-1	E15-08449-001	09/22/2015	18:18
SUMP/7.7	E15-08455-001	09/22/2015	18:36
MW-1/13.	E15-08456-001	09/22/2015	18:53
B-4/TW	E15-08365-009	09/22/2015	19:11

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B3036.D Instrument ID: MSDB

Date Extracted: 09/21/15 Matrix: AQUEOUS

Date Analyzed: 09/21/2015 Time Analyzed: 16:06

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	BLKA150921-01	09/21/2015	16:06
MW-1	E15-08382-001	09/21/2015	16:22
MW-1/16.	E15-08308-001	09/21/2015	16:38
MW-22/10	E15-08356-001	09/21/2015	16:54
FB-09151	E15-08356-002	09/21/2015	17:10
TWP_#1	E15-08331-001	09/21/2015	17:26
TWP_#1	E15-08332-001	09/21/2015	17:42
PZ1	E15-08466-001	09/21/2015	17:58
TWP-13	E15-08433-001	09/21/2015	18:14
TWP-14	E15-08433-002	09/21/2015	18:31
TWP-15	E15-08433-003	09/21/2015	18:47
TWP-17	E15-08433-005	09/21/2015	19:03
TWP-18	E15-08433-006	09/21/2015	19:19
TWP-19	E15-08433-007	09/21/2015	19:35
TWP-20	E15-08433-008	09/21/2015	19:51
FB-2	E15-08433-009	09/21/2015	20:07
GW-1	E15-08449-001	09/21/2015	20:23
SUMP/7.7	E15-08455-001	09/21/2015	20:39
MW-1/13.	E15-08456-001	09/21/2015	20:55
B-4/TW	E15-08365-009	09/21/2015	21:11

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3015.D DFTPP Injection Date : 09/21/2015

Inst ID: MSDB DFTPP Injection Time: 10:15

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	46.6	
68	Less than 2.0% of mass 69	0.8	(1.5)1
69	Mass 69 relative abundance	51.2	
70	Less than 2.0% of mass 69	0.4	(0.7)1
127	40.0 - 60.0% of mass 198	59.1	
197	Less than 1.0% of mass 198	0.5	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.9	
275	10.0 - 30.0% of mass 198	21.7	
365	Greater than 1.0% of mass 198	1.4	
441	Present, but less than mass 443	6.48	(72.2)3
442	40.0 - 100.0% of mass 198	43.8	
443	17.0 - 23.0% of mass 442	9.0	(20.5)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN040-15	ICC040BNA1	B3016.D	09/21/2015	10:26
ABN037-15	ICC001BNA1	B3017.D	09/21/2015	10:43
ABN038-15	ICC010BNA1	B3018.D	09/21/2015	11:00
ABN039-15	ICC020BNA1	B3019.D	09/21/2015	11:18
ABN041-15	ICC080BNA1	B3020.D	09/21/2015	11:35
ABN042-15	ICC160BNA1	B3021.D	09/21/2015	11:53
ABN044-15	ICC010BNA2	B3022.D	09/21/2015	12:10
ABN045-15	ICC020BNA2	B3023.D	09/21/2015	12:27
ABN046-15	ICC040BNA2	B3024.D	09/21/2015	12:45
ABN047-15	ICC080BNA2	B3025.D	09/21/2015	13:02
ABN048-15	ICC160BNA2	B3026.D	09/21/2015	13:19
ABN043-15	ICC001BNA2	B3027.D	09/21/2015	13:37
ABN049-15	ICV040BNA1	B3033.D	09/21/2015	15:15
ABN050-15	ICV040BNA2	B3034.D	09/21/2015	15:32

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3015.D DFTPP Injection Date : 09/21/2015

Inst ID: MSDB DFTPP Injection Time: 10:15

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	46.6	
68	Less than 2.0% of mass 69	0.8	(1.5)1
69	Mass 69 relative abundance	51.2	
70	Less than 2.0% of mass 69	0.4	(0.7)1
127	40.0 - 60.0% of mass 198	59.1	
197	Less than 1.0% of mass 198	0.5	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.9	
275	10.0 - 30.0% of mass 198	21.7	
365	Greater than 1.0% of mass 198	1.4	
441	Present, but less than mass 443	6.48	(72.2)3
442	40.0 - 100.0% of mass 198	43.8	
443	17.0 - 23.0% of mass 442	9.0	(20.5)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN058-15	ICC000.5SIM	B3028.D	09/21/2015	13:53
ABN056-15	ICC000.1SIM	B3029.D	09/21/2015	14:10
ABN057-15	ICC000.2SIM	B3030.D	09/21/2015	14:26
ABN059-15	ICC001.0SIM	B3031.D	09/21/2015	14:42
ABN060-15	ICC002.0SIM	B3032.D	09/21/2015	14:58
ABN061-15	ICV000.5SIM	B3035.D	09/21/2015	15:49
.	BLKA150921-01	B3036.D	09/21/2015	16:06
MW-1	E15-08382-001	B3037.D	09/21/2015	16:22
MW-1/16.	E15-08308-001	B3038.D	09/21/2015	16:38
MW-22/10	E15-08356-001	B3039.D	09/21/2015	16:54
FB-09151	E15-08356-002	B3040.D	09/21/2015	17:10
TWP_#1	E15-08331-001	B3041.D	09/21/2015	17:26
TWP_#1	E15-08332-001	B3042.D	09/21/2015	17:42
PZ1	E15-08466-001	B3043.D	09/21/2015	17:58
TWP-13	E15-08433-001	B3044.D	09/21/2015	18:14
TWP-14	E15-08433-002	B3045.D	09/21/2015	18:31
TWP-15	E15-08433-003	B3046.D	09/21/2015	18:47
TWP-17	E15-08433-005	B3047.D	09/21/2015	19:03
TWP-18	E15-08433-006	B3048.D	09/21/2015	19:19
TWP-19	E15-08433-007	B3049.D	09/21/2015	19:35
TWP-20	E15-08433-008	B3050.D	09/21/2015	19:51
FB-2	E15-08433-009	B3051.D	09/21/2015	20:07
GW-1	E15-08449-001	B3052.D	09/21/2015	20:23

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3015.D DFTPP Injection Date : 09/21/2015

Inst ID: MSDB DFTPP Injection Time: 10:15

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	46.6	
68	Less than 2.0% of mass 69	0.8	(1.5)1
69	Mass 69 relative abundance	51.2	
70	Less than 2.0% of mass 69	0.4	(0.7)1
127	40.0 - 60.0% of mass 198	59.1	
197	Less than 1.0% of mass 198	0.5	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	7.9	
275	10.0 - 30.0% of mass 198	21.7	
365	Greater than 1.0% of mass 198	1.4	
441	Present, but less than mass 443	6.48	(72.2)3
442	40.0 - 100.0% of mass 198	43.8	
443	17.0 - 23.0% of mass 442	9.0	(20.5)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
SUMP/7.7	E15-08455-001	B3053.D	09/21/2015	20:39
MW-1/13.	E15-08456-001	B3054.D	09/21/2015	20:55
B-4/TW	E15-08365-009	B3055.D	09/21/2015	21:11

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3056.D

DFTPP Injection Date : 09/22/2015

Inst ID: MSDB

DFTPP Injection Time: 11:39

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	47.3	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	54.0	
197	Less than 1.0% of mass 198	0.5	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	21.8	
365	Greater than 1.0% of mass 198	1.5	
441	Present, but less than mass 443	8.55	(73.2)3
442	40.0 - 100.0% of mass 198	54.6	
443	17.0 - 23.0% of mass 442	11.7	(21.4)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN049-15	CCV040BNA1	B3057.D	09/22/2015	11:52
ABN050-15	CCV040BNA2	B3058.D	09/22/2015	12:13
.	BLKA150921-01	B3059.D	09/22/2015	12:30
.	LCSA150921-01	B3060.D	09/22/2015	12:47
.	E15-08382-001MS	B3061.D	09/22/2015	13:05
.	E15-08382-001MSD	B3062.D	09/22/2015	13:22
FIELD_BL	E15-08277-014	B3063.D	09/22/2015	13:39
MW-1	E15-08382-001	B3064.D	09/22/2015	13:57
MW-1/16.	E15-08308-001	B3065.D	09/22/2015	14:14
MW-22/10	E15-08356-001	B3066.D	09/22/2015	14:32
FB-09151	E15-08356-002	B3067.D	09/22/2015	14:49
TWP_#1	E15-08331-001	B3068.D	09/22/2015	15:06
TWP_#1	E15-08332-001	B3069.D	09/22/2015	15:24
PZ1	E15-08466-001	B3070.D	09/22/2015	15:41
TWP-13	E15-08433-001	B3071.D	09/22/2015	15:59
TWP-14	E15-08433-002	B3072.D	09/22/2015	16:16
TWP-15	E15-08433-003	B3073.D	09/22/2015	16:34
TWP-17	E15-08433-005	B3074.D	09/22/2015	16:51
TWP-18	E15-08433-006	B3075.D	09/22/2015	17:09
TWP-19	E15-08433-007	B3076.D	09/22/2015	17:26
TWP-20	E15-08433-008	B3077.D	09/22/2015	17:43
FB-2	E15-08433-009	B3078.D	09/22/2015	18:01
GW-1	E15-08449-001	B3079.D	09/22/2015	18:18

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3056.D DFTPP Injection Date : 09/22/2015

Inst ID: MSDB DFTPP Injection Time: 11:39

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	47.3	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	40.0 - 60.0% of mass 198	54.0	
197	Less than 1.0% of mass 198	0.5	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	21.8	
365	Greater than 1.0% of mass 198	1.5	
441	Present, but less than mass 443	8.55	(73.2)3
442	40.0 - 100.0% of mass 198	54.6	
443	17.0 - 23.0% of mass 442	11.7	(21.4)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
SUMP/7.7	E15-08455-001	B3080.D	09/22/2015	18:36
MW-1/13.	E15-08456-001	B3081.D	09/22/2015	18:53
B-4/TW	E15-08365-009	B3082.D	09/22/2015	19:11

Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BW1015.M
Title : BNA CALIBRATION METHOD
Last Update : Wed Sep 23 06:21:21 2015
Response Via : Initial Calibration

KH 12

Calibration Files
1 =B3017.D 10 =B3018.D 20 =B3019.D
40 =B3016.D 80 =B3020.D 160 =B3021.D =

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD							
2)	T	N-Nitrosodimethyl	0.565	0.787	0.772	0.804	0.822	0.822	0.762	12.94
3)	T	Pyridine	0.760	0.855	0.771	0.857	0.893	0.874	0.835	6.65
4)	S	2-Fluorophenol	1.225	1.234	1.216	1.242	1.256	1.310	1.247	2.71
5)	T	Benzaldehyde	0.839	0.808	0.828	0.646	0.954	0.608	0.780	16.64
6)	S	Phenol-d5	1.467	1.468	1.448	1.444	1.506	1.555	1.481	2.86
7)	MC	Phenol	1.851	1.643	1.583	1.722	1.683	1.780	1.710	5.62
8)	T	Aniline	0.631	0.617	0.583	0.481	0.575	0.546	0.572	9.46
9)	T	Bis(2-chloroethyl	0.781	0.785	0.784	0.800	0.819	0.890	0.810	5.16
10)	M	2-Chlorophenol	1.533	1.434	1.380	1.422	1.493	1.490	1.459	3.87
11)	T	1,3-Dichlorobenze	1.684	1.592	1.554	1.600	1.642	1.653	1.621	2.93
12)	MC	1,4-Dichlorobenze	1.773	1.681	1.600	1.666	1.704	1.739	1.694	3.56
13)	T	Benzyl alcohol	0.591	0.801	0.774	0.831	0.813	0.852	0.777	12.20
14)	T	1,2-Dichlorobenze	1.511	1.543	1.483	1.532	1.595	1.580	1.541	2.72
15)	T	2-Methylphenol	1.388	1.263	1.199	1.174	1.240	1.258	1.254	5.94
16)	T	Bis(2-chloroisopr	1.379	1.369	1.333	1.361	1.419	1.383	1.374	2.05
17)	T	4-Methylphenol	1.194	1.200	1.173	1.174	1.252	1.320	1.219	4.69
18)	MP	N-Nitrosodi-n-pro	0.833	0.818	0.793	0.786	0.835	0.871	0.823	3.75
19)	T	Acetophenone	2.005	1.837	1.794	1.763	1.865	1.813	1.846	4.62
20)	T	3-Methylphenol	1.194	1.200	1.173	1.174	1.249	1.317	1.218	4.58
21)	T	Hexachloroethane	0.594	0.538	0.518	0.547	0.560	0.565	0.554	4.69
23)	I	Naphthalene-d8	ISTD							
24)	S	Nitrobenzene-d5	0.288	0.298	0.295	0.306	0.321	0.274	0.297	5.46
25)	T	Nitrobenzene	0.374	0.307	0.296	0.293	0.301	0.290	0.310	10.29
26)	T	Isophorone	0.663	0.611	0.571	0.584	0.602	0.586	0.603	5.45
27)	TC	2-Nitrophenol	0.164	0.180	0.179	0.191	0.202	0.202	0.186	8.00
28)	T	2,4-Dimethylpheno	0.260	0.312	0.306	0.316	0.333	0.323	0.308	8.30
29)	T	Bis(2-chloroethox	0.371	0.388	0.373	0.384	0.391	0.388	0.382	2.26
30)	T	Benzoic acid		0.149	0.173	0.148	0.173	0.192	0.167	11.08
31)	T	2,4-Dimethylanili	0.339	0.369	0.343	0.315	0.361	0.346	0.346	5.38
32)	TC	2,4-Dichloropheno	0.304	0.313	0.307	0.319	0.326	0.317	0.314	2.48
33)	M	1,2,4-Trichlorobe	0.365	0.363	0.353	0.365	0.373	0.371	0.365	1.96
34)	T	Naphthalene	1.230	1.043	0.995	1.084	1.092	1.027	1.079	7.65
35)	T	4-Chloroaniline	0.393	0.421	0.399	0.394	0.422	0.535	0.427	12.71
36)	T	4-Aminotoluene	0.523	0.520	0.512	0.485	0.520	0.546	0.518	3.78
37)	TC	Hexachlorobutadie	0.204	0.207	0.202	0.209	0.215	0.221	0.210	3.45
38)	T	Caprolactam	0.148	0.125	0.123	0.117	0.129	0.118	0.127	8.92
39)	T	2-Aminotoluene	0.523	0.520	0.512	0.485	0.520	0.546	0.518	3.78
40)	MC	4-Chloro-3-methyl	0.251	0.271	0.256	0.261	0.276	0.272	0.264	3.80
41)	T	2-Methylnaphthale	0.772	0.698	0.664	0.676	0.701	0.698	0.701	5.32
43)	I	Acenaphthene-d10	ISTD							
44)	TP	Hexachlorocyclope		0.244	0.178	0.268	0.284	0.277	0.250	17.13
45)	TC	2,4,6-Trichloroph	0.366	0.364	0.359	0.382	0.398	0.410	0.380	5.39
46)	T	2,4,5-Trichloroph	0.356	0.379	0.366	0.391	0.396	0.408	0.383	5.08
47)	S	2-Fluorobiphenyl	1.300	1.269	1.240	1.260	1.249	1.218	1.256	2.22
48)	T	1,1'-Biphenyl	1.666	1.483	1.450	1.542	1.529	1.506	1.529	4.88
49)	T	2-Chloronaphthale	1.210	1.113	1.060	1.115	1.137	1.146	1.130	4.33
50)	T	2-Nitroaniline	0.182	0.199	0.195	0.213	0.223	0.232	0.207	9.11
51)	T	Dimethyl phthalat	1.278	1.207	1.169	1.195	1.247	1.222	1.220	3.18
52)	T	2,6-Dinitrotoluen	0.214	0.226	0.230	0.246	0.290	0.286	0.249	11.75
53)	T	Acenaphthylene	1.865	1.711	1.688	1.756	1.792	1.775	1.764	3.57

54)	T	3-Nitroaniline	0.233	0.269	0.272	0.274	0.310	0.313	0.278	10.67
55)	MC	Acenaphthene	1.185	1.085	1.034	1.072	1.087	1.054	1.086	4.83
56)	TP	2,4-Dinitrophenol		0.066	0.068	0.099	0.094	0.094	0.084	19.00
57)	MP	4-Nitrophenol		0.113	0.134	0.140	0.159	0.157	0.141	13.20
58)	M	2,4-Dinitrotoluen	0.217	0.299	0.302	0.323	0.370	0.390	0.317	19.34
59)	T	Dibenzofuran	1.697	1.592	1.532	1.577	1.622	1.621	1.607	3.45
60)	T	Diethyl phthalate	1.158	1.138	1.109	1.130	1.198	1.181	1.152	2.87
61)	T	Fluorene	1.346	1.300	1.284	1.306	1.377	1.354	1.328	2.72
62)	T	4-Chlorophenyl ph	0.663	0.670	0.648	0.668	0.707	0.717	0.679	4.00
63)	T	4-Nitroaniline	0.243	0.289	0.291	0.291	0.337	0.331	0.297	11.47
64)		1,2,4,5-Tetrachlo	0.646	0.618	0.588	0.624	0.621	0.629	0.621	3.05
65)	T	2,3,4,6-Tetrachlo	0.242	0.290	0.304	0.306	0.330	0.339	0.302	11.45
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met		0.122	0.085	0.109	0.133	0.095	0.109	17.99
68)	TC	N-Nitrosodiphenyl	0.578	0.567	0.548	0.605	0.601	0.603	0.584	4.02
69)	T	1,2-Diphenylhydra	0.686	0.685	0.658	0.726	0.720	0.703	0.696	3.64
70)	S	2,4,6-Tribromophe	0.187	0.199	0.194	0.204	0.206	0.207	0.200	3.94
71)	T	4-Bromophenyl phe	0.260	0.272	0.253	0.280	0.288	0.291	0.274	5.58
72)	T	Hexachlorobenzene	0.359	0.320	0.309	0.335	0.351	0.350	0.337	5.76
73)	T	Atrazine	0.219	0.220	0.198	0.134	0.205	0.191	0.194	16.33
74)	MC	Pentachlorophenol		0.127	0.152	0.181	0.200	0.212	0.174	19.99
75)	T	Phenanthrene	1.198	1.095	1.043	1.117	1.145	1.139	1.123	4.63
76)	T	Anthracene	1.175	1.101	1.048	1.089	1.154	1.088	1.109	4.24
77)	T	Carbazole	1.013	0.955	0.926	0.948	1.029	0.955	0.971	4.15
78)	T	Di-n-butyl phthal	1.176	1.119	1.078	1.146	1.193	1.197	1.152	4.05
79)	TC	Fluoranthene	1.188	1.136	1.096	1.091	1.233	1.189	1.156	4.94
80)	T	Benzidine		0.477	0.550	0.461	0.722	0.541	0.550	18.83
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.264	1.201	1.122	1.340	1.196	1.186	1.218	6.15
84)	S	Terphenyl-d14	1.027	1.005	0.968	1.084	0.968	0.927	0.997	5.52
85)	T	3,3'-Dimethylbenz	0.543	0.613	0.633	0.642	0.773	0.611	0.636	11.90
86)	T	Butyl benzyl phth	0.461	0.448	0.431	0.504	0.472	0.474	0.465	5.36
87)	T	3,3'-Dichlorobenz	0.396	0.420	0.420	0.427	0.406	0.388	0.410	3.70
88)	T	Benzo[a]anthracen	1.273	1.047	1.039	1.105	1.102	1.105	1.112	7.58
89)	T	Chrysene	1.079	0.993	0.971	1.029	1.030	1.056	1.026	3.85
90)	T	Bis(2-ethylhexyl)	0.666	0.627	0.612	0.718	0.661	0.665	0.658	5.64
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	1.572	1.547	1.396	1.538	1.432	1.450	1.489	4.84
94)	T	Benzo[b]fluoranth	1.593	1.640	1.636	1.602	1.602	1.810	1.647	4.98
95)	T	Benzo[k]fluoranth	1.640	1.389	1.254	1.299	1.467	1.320	1.395	10.13
96)	TC	Benzo[a]pyrene	1.499	1.430	1.370	1.345	1.480	1.517	1.440	4.90
97)	T	Indeno[1,2,3-cd]p	1.567	1.568	1.634	1.783	1.949	2.041	1.757	11.54
98)	T	Dibenz[a,h]anthra	1.231	1.331	1.374	1.477	1.636	1.717	1.461	12.76
99)	T	Benzo[g,h,i]peryl	1.423	1.303	1.376	1.505	1.635	1.708	1.491	10.43

(#) = Out of Range

BW1015.M Wed Sep 23 06:21:32 2015 MSD_B

Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BSIM1015.M
Title : BNA CALIBRATION METHOD
Last Update : Tue Sep 22 09:37:32 2015
Response Via : Initial Calibration

Calibration Files
0.1 =B3029.D 0.2 =B3030.D 0.5 =B3028.D
1.0 =B3031.D 2.0 =B3032.D

		Compound	0.1	0.2	0.5	1.0	2.0	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD						
23)	I	Naphthalene-d8	ISTD						
43)	I	Acenaphthene-d10	ISTD						
66)	I	Phenanthrene-d10	ISTD						
72)	T	Hexachlorobenzene	0.396	0.357	0.430	0.384	0.374	0.388	7.04
74)	MC	Pentachlorophenol	0.026	0.027	0.035	0.032	0.027	0.030	13.21
82)	I	Chrysene-d12	ISTD						
88)	T	Benzo[a]anthracene	1.279	1.152	1.407	1.380	1.308	1.305	7.67
92)	I	Perylene-d12	ISTD						
94)	T	Benzo[b]fluoranthen	1.060	0.948	1.015	1.016	1.151	1.038	7.22
95)	T	Benzo[k]fluoranthen	1.373	1.548	1.558	1.493	1.507	1.496	4.94
96)	TC	Benzo[a]pyrene	1.169	1.074	1.176	1.119	1.228	1.153	5.13
97)	T	Indeno[1,2,3-cd]pyr	0.921	0.886	1.001	1.095	1.207	1.022	12.83
98)	T	Dibenz[a,h]anthrace	0.720	0.850	0.901	0.881	1.015	0.873	12.13

(#) = Out of Range

BSIM1015.M Tue Sep 22 09:37:48 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3033.D
Acq On : 21 Sep 2015 15:15
Operator : DANA
Sample : ABN049-15,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Sep 23 06:25:06 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Sep 23 06:21:21 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	67	0.00
2	T	N-Nitrosodimethylamine	0.762	0.764	-0.3	64	-0.03
3	T	Pyridine	0.835	0.816	2.3	64	-0.01
4	S	2-Fluorophenol	1.247	1.210	3.0	65	0.00
5	T	Benzaldehyde	0.780	0.708	9.2	91	0.00
6	S	Phenol-d5	1.481	1.417	4.3	66	0.00
7	MC	Phenol	1.710	1.515	11.4	59	-0.01
8	T	Aniline	0.572	0.501	12.4	70	0.00
9	T	Bis(2-chloroethyl) ether	0.810	0.779	3.8	65	0.00
10	M	2-Chlorophenol	1.459	1.371	6.0	65	0.00
11	T	1,3-Dichlorobenzene	1.621	1.542	4.9	65	0.00
12	MC	1,4-Dichlorobenzene	1.694	1.632	3.7	66	0.00
13	T	Benzyl alcohol	0.777	0.753	3.1	61	0.00
14	T	1,2-Dichlorobenzene	1.541	1.488	3.4	65	0.00
15	T	2-Methylphenol	1.254	1.146	8.6	66	-0.01
16	T	Bis(2-chloroisopropyl) ethe	1.374	1.324	3.6	65	0.00
17	T	4-Methylphenol	1.219	1.161	4.8	66	-0.01
18	MP	N-Nitrosodi-n-propylamine	0.823	0.785	4.6	67	-0.02
19	T	Acetophenone	1.846	1.733	6.1	66	-0.01
20	T	3-Methylphenol	1.218	1.161	4.7	66	-0.01
21	T	Hexachloroethane	0.554	0.524	5.4	64	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	66	0.00
24	S	Nitrobenzene-d5	0.297	0.307	-3.4	67	0.00
25	T	Nitrobenzene	0.310	0.300	3.2	68	0.00
26	T	Isophorone	0.603	0.587	2.7	67	-0.01
27	TC	2-Nitrophenol	0.186	0.191	-2.7	66	0.00
28	T	2,4-Dimethylphenol	0.308	0.306	0.6	64	-0.01
29	T	Bis(2-chloroethoxy) methane	0.382	0.394	-3.1	68	0.00
30	T	Benzoic acid	0.167	0.191	-14.4	86	-0.03
31	T	2,4-Dimethylaniline	0.346	0.320	7.5	67	-0.01
32	TC	2,4-Dichlorophenol	0.314	0.315	-0.3	66	0.00
33	M	1,2,4-Trichlorobenzene	0.365	0.365	0.0	66	0.00
34	T	Naphthalene	1.079	1.074	0.5	66	0.00
35	T	4-Chloroaniline	0.427	0.400	6.3	67	0.00
36	T	4-Aminotoluene	0.518	0.484	6.6	66	-0.01
37	TC	Hexachlorobutadiene	0.210	0.208	1.0	66	0.00
38	T	Caprolactam	0.127	0.124	2.4	70	-0.04
39	T	2-Aminotoluene	0.518	0.484	6.6	66	-0.01
40	MC	4-Chloro-3-methylphenol	0.264	0.267	-1.1	68	0.00
41	T	2-Methylnaphthalene	0.701	0.699	0.3	69	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	69	0.00
44	TP	Hexachlorocyclopentadiene	0.250	0.214	14.4	55	0.00
45	TC	2,4,6-Trichlorophenol	0.380	0.386	[illegible]	[illegible]	[illegible]
46	T	2,4,5-Trichlorophenol	0.383	0.379	1.0	67	0.00

47	S	2-Fluorobiphenyl	1.256	1.272	-1.3	69	0.00
48	T	1,1'-Biphenyl	1.529	1.481	3.1	66	0.00
49	T	2-Chloronaphthalene	1.130	1.137	-0.6	70	0.00
50	T	2-Nitroaniline	0.207	0.208	-0.5	67	-0.01
51	T	Dimethyl phthalate	1.220	1.223	-0.2	70	0.00
52	T	2,6-Dinitrotoluene	0.246	0.248	-0.8	69	-0.01
53	T	Acenaphthylene	1.764	1.763	0.1	69	0.00
54	T	3-Nitroaniline	0.278	0.284	-2.2	71	-0.01
55	MC	Acenaphthene	1.086	1.090	-0.4	70	0.00
56	TP	2,4-Dinitrophenol	0.084	0.101	-20.2	70	0.00
57	MP	4-Nitrophenol	0.141	0.145	-2.8	71	-0.01
58	M	2,4-Dinitrotoluene	0.317	0.340	-7.3	72	-0.01
59	T	Dibenzofuran	1.607	1.618	-0.7	70	0.00
60	T	Diethyl phthalate	1.152	1.163	-1.0	71	-0.01
61	T	Fluorene	1.328	1.338	-0.8	70	0.00
62	T	4-Chlorophenyl phenyl ether	0.679	0.688	-1.3	71	0.00
63	T	4-Nitroaniline	0.297	0.316	-6.4	75	-0.02
64		1,2,4,5-Tetrachlorobenzene	0.621	0.627	-1.0	69	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.302	0.307	-1.7	69	-0.01
66	I	Phenanthrene-d10	1.000	1.000	0.0	73	0.00
67	T	4,6-Dinitro-2-methylphenol	0.109	0.109	0.0	73	-0.02
68	TC	N-Nitrosodiphenylamine	0.584	0.584	0.0	70	-0.01
69	T	1,2-Diphenylhydrazine	0.696	0.701	-0.7	70	0.00
70	S	2,4,6-Tribromophenol	0.200	0.200	0.0	71	0.00
71	T	4-Bromophenyl phenyl ether	0.274	0.279	-1.8	73	0.00
72	T	Hexachlorobenzene	0.337	0.336	0.3	73	0.00
73	T	Atrazine	0.194	0.159	18.0	86	-0.01
74	MC	Pentachlorophenol	0.174	0.174	0.0	70	0.00
75	T	Phenanthrene	1.123	1.122	0.1	73	0.00
76	T	Anthracene	1.109	1.120	-1.0	75	0.00
77	T	Carbazole	0.971	0.991	-2.1	76	0.00
78	T	Di-n-butyl phthalate	1.152	1.150	0.2	73	0.00
79	TC	Fluoranthene	1.156	1.168	-1.0	78	0.01
80	T	Benzidine	0.550	0.514	6.5	102	0.00
82	I	Chrysene-d12	1.000	1.000	0.0	88	0.03
83	M	Pyrene	1.218	1.197	1.7	79	0.01
84	S	Terphenyl-d14	0.997	0.971	2.6	79	0.02
85	T	3,3'-Dimethylbenzidine	0.636	0.629	1.1	102	0.00
86	T	Butyl benzyl phthalate	0.465	0.460	1.1	81	0.02
87	T	3,3'-Dichlorobenzidine	0.410	0.435	-6.1	90	0.03
88	T	Benzo[a]anthracene	1.112	1.095	1.5	88	0.02
89	T	Chrysene	1.026	1.054	-2.7	90	0.02
90	T	Bis(2-ethylhexyl) phthalate	0.658	0.633	3.8	78	0.03
92	I	Perylene-d12	1.000	1.000	0.0	100	0.03
93	TC	Di-n-octyl phthalate	1.489	1.290	13.4	84	0.03
94	T	Benzo[b]fluoranthene	1.647	1.592	3.3	99	0.02
95	T	Benzo[k]fluoranthene	1.395	1.246	10.7	96	0.02
96	TC	Benzo[a]pyrene	1.440	1.356	5.8	101	0.02
97	T	Indeno[1,2,3-cd]pyrene	1.757	1.783	-1.5	100	-0.01
98	T	Dibenz[a,h]anthracene	1.461	1.495	-2.3	101	0.00
99	T	Benzo[g,h,i]perylene	1.491	1.506	-1.0	100	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

BW1015.M Wed Sep 23 06:25:18 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3035.D
Acq On : 21 Sep 2015 15:49
Operator : DANA
Sample : ABN061-15,ICV000.5SIM,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Sep 22 09:50:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	140	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	84	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	76	0.00
72	T	Hexachlorobenzene	0.388	0.446	-14.9	78	0.00
74	MC	Pentachlorophenol	0.030	0.032	-6.7	68	0.01
82	I	Chrysene-d12	1.000	1.000	0.0	90	0.00
88	T	Benzo[a]anthracene	1.305	1.281	1.8	82	0.00
92	I	Perylene-d12	1.000	1.000	0.0	67	0.02
94	T	Benzo[b]fluoranthene	1.038	1.216	-17.1	80	0.02
95	T	Benzo[k]fluoranthene	1.496	1.564	-4.5	67	0.02
96	TC	Benzo[a]pyrene	1.153	1.197	-3.8	68	0.02
97	T	Indeno[1,2,3-cd]pyrene	1.022	1.197	-17.1	80	0.04
98	T	Dibenz[a,h]anthracene	0.873	1.008	-15.5	75	0.05

(#) = Out of Range

BSIM1015.M Tue Sep 22 12:33:01 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : B3057.D
Acq On : 22 Sep 2015 11:52
Operator : KIM
Sample : ABN049-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Sep 23 06:31:16 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Sep 23 06:21:21 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	79	0.00
2	T	N-Nitrosodimethylamine	0.762	0.776	-1.8	77	-0.02
3	T	Pyridine	0.835	0.833	0.2	77	-0.01
4	S	2-Fluorophenol	1.247	1.236	0.9	79	0.00
5	T	Benzaldehyde	0.780	0.725	7.1	98	0.00
6	S	Phenol-d5	1.481	1.476	0.3	81	0.00
7	MC	Phenol	1.710	1.602	6.3	74	-0.01
8	T	Aniline	0.572	0.530	7.3	88	0.00
9	T	Bis(2-chloroethyl) ether	0.810	0.808	0.2	80	0.00
10	M	2-Chlorophenol	1.459	1.408	3.5	79	0.00
11	T	1,3-Dichlorobenzene	1.621	1.570	3.1	78	0.00
12	MC	1,4-Dichlorobenzene	1.694	1.670	1.4	80	0.00
13	T	Benzyl alcohol	0.777	0.863	-11.1	83	0.00
14	T	1,2-Dichlorobenzene	1.541	1.534	0.5	80	0.00
15	T	2-Methylphenol	1.254	1.190	5.1	81	-0.01
16	T	Bis(2-chloroisopropyl) ethe	1.374	1.404	-2.2	82	0.00
17	T	4-Methylphenol	1.219	1.252	-2.7	85	-0.01
18	MP	N-Nitrosodi-n-propylamine	0.823	0.853	-3.6	86	-0.01
19	T	Acetophenone	1.846	1.814	1.7	82	-0.01
20	T	3-Methylphenol	1.218	1.252	-2.8	85	-0.01
21	T	Hexachloroethane	0.554	0.539	2.7	78	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	83	0.00
24	S	Nitrobenzene-d5	0.297	0.304	-2.4	83	0.00
25	T	Nitrobenzene	0.310	0.292	5.8	83	0.00
26	T	Isophorone	0.603	0.597	1.0	85	-0.01
27	TC	2-Nitrophenol	0.186	0.190	-2.2	83	0.00
28	T	2,4-Dimethylphenol	0.308	0.310	-0.6	81	-0.01
29	T	Bis(2-chloroethoxy) methane	0.382	0.387	-1.3	84	0.00
30	T	Benzoic acid	0.167	0.185	-10.8	104	-0.03
31	T	2,4-Dimethylaniline	0.346	0.321	7.2	85	0.00
32	TC	2,4-Dichlorophenol	0.314	0.321	-2.2	84	0.00
33	M	1,2,4-Trichlorobenzene	0.365	0.361	1.1	82	0.00
34	T	Naphthalene	1.079	1.072	0.6	82	0.00
35	T	4-Chloroaniline	0.427	0.398	6.8	84	0.00
36	T	4-Aminotoluene	0.518	0.488	5.8	84	-0.01
37	TC	Hexachlorobutadiene	0.210	0.207	1.4	82	0.00
38	T	Caprolactam	0.127	0.126	0.8	90	-0.03
39	T	2-Aminotoluene	0.518	0.488	5.8	84	-0.01
40	MC	4-Chloro-3-methylphenol	0.264	0.269	-1.9	86	0.00
41	T	2-Methylnaphthalene	0.701	0.688	1.9	85	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	87	0.00
44	TP	Hexachlorocyclopentadiene	0.250	0.244	2.4	79	0.00
45	TC	2,4,6-Trichlorophenol	0.380	0.389	-2.4	89	0.00
46	T	2,4,5-Trichlorophenol	0.383	0.389	-1.6	87	0.00

47	S	2-Fluorobiphenyl	1.256	1.235	1.7	85	0.00
48	T	1,1'-Biphenyl	1.529	1.508	1.4	85	0.00
49	T	2-Chloronaphthalene	1.130	1.108	1.9	86	0.00
50	T	2-Nitroaniline	0.207	0.215	-3.9	88	0.00
51	T	Dimethyl phthalate	1.220	1.217	0.2	89	0.00
52	T	2,6-Dinitrotoluene	0.246	0.254	-3.3	90	-0.01
53	T	Acenaphthylene	1.764	1.781	-1.0	88	0.00
54	T	3-Nitroaniline	0.278	0.281	-1.1	89	-0.01
55	MC	Acenaphthene	1.086	1.079	0.6	88	0.00
56	TP	2,4-Dinitrophenol	0.084	0.073	13.1	64	0.00
57	MP	4-Nitrophenol	0.141	0.142	-0.7	88	-0.01
58	M	2,4-Dinitrotoluene	0.317	0.343	-8.2	92	-0.01
59	T	Dibenzofuran	1.607	1.596	0.7	88	0.00
60	T	Diethyl phthalate	1.152	1.182	-2.6	91	0.00
61	T	Fluorene	1.328	1.354	-2.0	90	0.00
62	T	4-Chlorophenyl phenyl ether	0.679	0.693	-2.1	90	0.00
63	T	4-Nitroaniline	0.297	0.310	-4.4	93	-0.01
64		1,2,4,5-Tetrachlorobenzene	0.621	0.618	0.5	86	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.302	0.315	-4.3	89	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	91	0.00
67	T	4,6-Dinitro-2-methylphenol	0.109	0.095	12.8	80	-0.01
68	TC	N-Nitrosodiphenylamine	0.584	0.598	-2.4	90	0.00
69	T	1,2-Diphenylhydrazine	0.696	0.720	-3.4	91	0.00
70	S	2,4,6-Tribromophenol	0.200	0.207	-3.5	93	0.00
71	T	4-Bromophenyl phenyl ether	0.274	0.278	-1.5	91	0.00
72	T	Hexachlorobenzene	0.337	0.340	-0.9	93	0.00
73	T	Atrazine	0.194	0.159	18.0	109	0.00
74	MC	Pentachlorophenol	0.174	0.178	-2.3	90	0.00
75	T	Phenanthrene	1.123	1.133	-0.9	93	0.00
76	T	Anthracene	1.109	1.098	1.0	92	0.00
77	T	Carbazole	0.971	0.973	-0.2	94	0.01
78	T	Di-n-butyl phthalate	1.152	1.195	-3.7	95	0.01
79	TC	Fluoranthene	1.156	1.146	0.9	96	0.02
80	T	Benzidine	0.550	0.481	12.5	101	0.00
82	I	Chrysene-d12	1.000	1.000	0.0	93	0.05
83	M	Pyrene	1.218	1.354	-11.2	94	0.03
84	S	Terphenyl-d14	0.997	1.130	-13.3	97	0.04
85	T	3,3'-Dimethylbenzidine	0.636	0.632	0.6	100	0.00
86	T	Butyl benzyl phthalate	0.465	0.515	-10.8	95	0.04
87	T	3,3'-Dichlorobenzidine	0.410	0.420	-2.4	92	0.05
88	T	Benzo[a]anthracene	1.112	1.109	0.3	94	0.05
89	T	Chrysene	1.026	1.012	1.4	92	0.04
90	T	Bis(2-ethylhexyl) phthalate	0.658	0.736	-11.9	96	0.05
92	I	Perylene-d12	1.000	1.000	0.0	95	0.05
93	TC	Di-n-octyl phthalate	1.489	1.514	-1.7	93	0.05
94	T	Benzo[b]fluoranthene	1.647	1.504	8.7	89	0.04
95	T	Benzo[k]fluoranthene	1.395	1.338	4.1	97	0.04
96	TC	Benzo[a]pyrene	1.440	1.355	5.9	95	0.04
97	T	Indeno[1,2,3-cd]pyrene	1.757	1.894	-7.8	100	0.00
98	T	Dibenz[a,h]anthracene	1.461	1.573	-7.7	101	0.01
99	T	Benzo[g,h,i]perylene	1.491	1.582	-6.1	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

BW1015.M Wed Sep 23 06:31:38 2015 MSD_B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3016.D Date Analyzed: 09/21/2015

Instrument ID: MSDB Time Analyzed: 10:26

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	86270	3.60	321954	4.38	194262	5.40
	UPPER LIMIT	172540	4.10	643908	4.88	388524	5.90
	LOWER LIMIT	43135	3.10	160977	3.88	97131	4.90
	LAB SAMPLE ID						
01	ICC001BNA1	70766	3.60	271669	4.37	167339	5.39
02	ICC010BNA1	69705	3.60	268946	4.37	171654	5.40
03	ICC020BNA1	58131	3.60	224390	4.37	141516	5.40
04	ICC080BNA1	49241	3.60	190402	4.38	119811	5.40
05	ICC160BNA1	49435	3.61	196436	4.38	121610	5.40
06	ICC010BNA2	70653	3.60	281722	4.37	183644	5.39
07	ICC020BNA2	60594	3.60	235552	4.37	148060	5.39
08	ICC040BNA2	63048	3.60	242646	4.37	152854	5.39
09	ICC080BNA2	62049	3.60	239560	4.37	147596	5.39
10	ICC160BNA2	58458	3.60	229882	4.37	138778	5.39
11	ICC001BNA2	81178	3.60	310699	4.37	193201	5.39
12	ICV040BNA1	57973	3.60	213844	4.37	133457	5.40
13	ICV040BNA2	71478	3.60	266181	4.37	164003	5.39
14							
15							
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20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3016.D Date Analyzed: 09/21/2015

Instrument ID: MSDB Time Analyzed: 10:26

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	298170	6.32	247562	7.93	171354	9.17
	UPPER LIMIT	596340	6.82	495124	8.43	342708	9.67
	LOWER LIMIT	149085	5.82	123781	7.43	85677	8.67
	LAB SAMPLE ID						
01	ICC001BNA1	279701	6.32	266744	7.91	173514	9.14
02	ICC010BNA1	280706	6.31	271904	7.90	168658	9.13
03	ICC020BNA1	234713	6.32	235852	7.89	158053	9.12
04	ICC080BNA1	193658	6.32	201825	7.89	150938	9.11
05	ICC160BNA1	198332	6.32	196018	7.89	148350	9.12
06	ICC010BNA2	308525	6.32	277763	7.93	191063	9.16
07	ICC020BNA2	252242	6.32	250306	7.91	190531	9.15
08	ICC040BNA2	258037	6.32	260306	7.91	190785	9.14
09	ICC080BNA2	255551	6.31	232508	7.94	226349	9.20
10	ICC160BNA2	240078	6.31	213832	7.93	218791	9.18
11	ICC001BNA2	308475	6.31	279165	7.90	193500	9.13
12	ICV040BNA1	217133	6.31	218735	7.92	170911	9.15
13	ICV040BNA2	272489	6.31	257975	7.91	201346	9.15
14							
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22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3028.D

Date Analyzed: 09/21/2015

Instrument ID: MSDB

Time Analyzed: 13:53

	1 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	21552	2.19	59220	2.73	31968	3.53
	UPPER LIMIT	43104	2.69	118440	3.23	63936	4.03
	LOWER LIMIT	10776	1.69	29610	2.23	15984	3.03
	LAB SAMPLE ID						
01	ICC000.1SIM	21212	2.19	57422	2.73	30981	3.54
02	ICC000.2SIM	24554	2.19	66168	2.73	36004	3.54
03	ICC001.0SIM	19818	2.19	55248	2.73	29384	3.54
04	ICC002.0SIM	18793	2.19	52775	2.73	28994	3.53
05	ICV000.5SIM	22033	2.19	82959	2.73	26906	3.53
06	BLKA150921-01	28548	2.19	77329	2.73	46311	3.54
07	E15-08382-001	27528	2.19	74836	2.73	44176	3.53
08	E15-08308-001	27638	2.19	74483	2.73	44824	3.52
09	E15-08356-001	27750	2.19	75512	2.73	45810	3.53
10	E15-08356-002	31278	2.19	84658	2.73	50673	3.52
11	E15-08331-001	28104	2.19	75251	2.73	45597	3.52
12	E15-08332-001	24862	2.19	67945	2.73	40723	3.52
13	E15-08466-001	27152	2.19	74696	2.73	48195	3.51
14	E15-08433-001	26123	2.19	73731	2.73	43489	3.51
15	E15-08433-002	25841	2.19	79954	2.73	43352	3.51
16	E15-08433-003	27599	2.19	86802	2.73	48327	3.52
17	E15-08433-005	29508	2.19	81692	2.73	48862	3.52
18	E15-08433-006	29040	2.19	82292	2.73	51252	3.51
19	E15-08433-007	28409	2.19	107051	2.73	48561	3.51
20	E15-08433-008	27991	2.19	76284	2.73	46280	3.51
21	E15-08433-009	29238	2.19	80570	2.73	48737	3.51
22	E15-08449-001	26092	2.19	76237	2.73	48314	3.51

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3028.D

Date Analyzed: 09/21/2015

Instrument ID: MSDB

Time Analyzed: 13:53

	1 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	21552	2.19	59220	2.73	31968	3.53
	UPPER LIMIT	43104	2.69	118440	3.23	63936	4.03
	LOWER LIMIT	10776	1.69	29610	2.23	15984	3.03
	LAB SAMPLE ID						
01	E15-08455-001	32458	2.19	95056	2.73	56480	3.5
02	E15-08456-001	30144	2.19	75944	2.73	51929	3.52
03	E15-08365-009	29283	2.19	81103	2.73	47573	3.51
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22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

E15-08356 0089

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3028.D

Date Analyzed: 09/21/2015

Instrument ID: MSDB

Time Analyzed: 13:53

	1 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	49056		4.28		34590		6.03		51263		7.30	
	UPPER LIMIT	98112		4.78		69180		6.53		102526		7.80	
	LOWER LIMIT	24528		3.78		17295		5.53		25632		6.80	
	LAB SAMPLE ID												
01	ICC000.1SIM	47716		4.29		32870		6.06		46467		7.33	
02	ICC000.2SIM	53718		4.28		37929		6.06		49338		7.32	
03	ICC001.0SIM	44902		4.29		32717		6.06		46463		7.33	
04	ICC002.0SIM	43814		4.27		33207		6.02		48077		7.29	
05	ICV000.5SIM	37040		4.27		31184		6.03		34247		7.31	
06	BLKA150921-01	76994		4.30		54611		6.07		61167		7.35	
07	E15-08382-001	71592		4.27		48803		6.03		53375		7.30	
08	E15-08308-001	72454		4.25		49921		5.99		53226		7.27	
09	E15-08356-001	74677		4.27		53902		6.02		59007		7.28	
10	E15-08356-002	83374		4.25		58357		5.98		62086		7.26	
11	E15-08331-001	74768		4.25		53691		5.99		59724		7.26	
12	E15-08332-001	66490		4.23		49211		5.96		54467		7.24	
13	E15-08466-001	78246		4.22		55137		5.96		59564		7.24	
14	E15-08433-001	71166		4.22		54101		5.96		61024		7.23	
15	E15-08433-002	68615		4.23		50233		5.97		54290		7.24	
16	E15-08433-003	75811		4.24		55992		5.97		60068		7.25	
17	E15-08433-005	79516		4.23		57334		5.97		60296		7.25	
18	E15-08433-006	82662		4.23		58653		5.95		59737		7.24	
19	E15-08433-007	78668		4.22		57526		5.96		60238		7.24	
20	E15-08433-008	74119		4.22		51849		5.95		54841		7.24	
21	E15-08433-009	79008		4.22		59374		5.95		59868		7.23	
22	E15-08449-001	73123		4.22		55209		5.94		59435		7.23	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3028.D

Date Analyzed: 09/21/2015

Instrument ID: MSDB

Time Analyzed: 13:53

	1 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	49056		4.28		34590		6.03		51263		7.30	
	UPPER LIMIT	98112		4.78		69180		6.53		102526		7.80	
	LOWER LIMIT	24528		3.78		17295		5.53		25632		6.80	
	LAB SAMPLE ID												
01	E15-08455-001	91185		4.21		64274		5.93		69487		7.22	
02	E15-08456-001	69185		4.22		54895		5.93		64346		7.21	
03	E15-08365-009	73041		4.22		54492		5.94		65431		7.22	
04													
05													
06													
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15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

E15-08356 0091

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3057.D Date Analyzed: 09/22/2015

Instrument ID: MSDB Time Analyzed: 11:52

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	68578		3.60		267752		4.37		169093		5.40	
	UPPER LIMIT	137156		4.10		535504		4.87		338186		5.90	
	LOWER LIMIT	34289		3.10		133876		3.87		84547		4.90	
	LAB SAMPLE ID												
01	CCV040BNA2	74988		3.60		286921		4.37		177908		5.39	
02	BLKA150921-01	54470		3.60		212299		4.37		128454		5.39	
03	LCSA150921-01	58575		3.60		224506		4.37		137991		5.39	
04	E15-08382-001MS	48357		3.60		184171		4.37		111405		5.39	
05	E15-08382-001MSD	54366		3.60		212745		4.37		125257		5.39	
06	E15-08277-014	62384		3.60		243676		4.37		146224		5.39	
07	E15-08382-001	62407		3.60		244495		4.37		143833		5.39	
08	E15-08308-001	55342		3.60		214307		4.37		130743		5.39	
09	E15-08356-001	53905		3.60		207741		4.37		125543		5.39	
10	E15-08356-002	62474		3.60		246998		4.37		150419		5.39	
11	E15-08331-001	63953		3.60		250219		4.37		153650		5.39	
12	E15-08332-001	52418		3.60		203851		4.37		122428		5.39	
13	E15-08466-001	57495		3.60		219997		4.37		133099		5.39	
14	E15-08433-001	54141		3.60		211010		4.37		128435		5.39	
15	E15-08433-002	56977		3.60		219089		4.37		130858		5.39	
16	E15-08433-003	53690		3.60		209473		4.37		127477		5.39	
17	E15-08433-005	53511		3.60		207724		4.37		127127		5.39	
18	E15-08433-006	53467		3.60		208865		4.37		125854		5.39	
19	E15-08433-007	57315		3.60		212635		4.37		133580		5.39	
20	E15-08433-008	54891		3.60		215951		4.37		130587		5.39	
21	E15-08433-009	59216		3.60		229137		4.37		136563		5.39	
22	E15-08449-001	58640		3.60		227431		4.37		141408		5.39	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3057.D

Date Analyzed: 09/22/2015

Instrument ID: MSDB

Time Analyzed: 11:52

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	68578	3.60	267752	4.37	169093	5.40
	UPPER LIMIT	137156	4.10	535504	4.87	338186	5.90
	LOWER LIMIT	34289	3.10	133876	3.87	84547	4.90
	LAB SAMPLE ID						
01	E15-08455-001	58774	3.60	231149	4.37	142672	5.39
02	E15-08456-001	54577	3.6	205700	4.37	121831	5.4
03	E15-08365-009	68537	3.6	257934	4.37	153305	5.39
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3057.D

Date Analyzed: 09/22/2015

Instrument ID: MSDB

Time Analyzed: 11:52

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	272386		6.32		230904		7.94		162040		9.18	
	UPPER LIMIT	544772		6.82		461808		8.44		324080		9.68	
	LOWER LIMIT	136193		5.82		115452		7.44		81020		8.68	
	LAB SAMPLE ID												
01	CCV040BNA2	288803		6.31		250200		7.91		188404		9.15	
02	BLKA150921-01	214970		6.31		190706		7.91		147678		9.15	
03	LCSA150921-01	231993		6.31		200979		7.89		155222		9.11	
04	E15-08382-001MS	176988		6.31		149994		7.89		124504		9.12	
05	E15-08382-001MSD	204709		6.31		172144		7.91		142215		9.16	
06	E15-08277-014	246473		6.31		215024		7.88		165150		9.12	
07	E15-08382-001	233443		6.31		205528		7.90		162688		9.12	
08	E15-08308-001	215308		6.31		187555		7.88		143253		9.11	
09	E15-08356-001	206627		6.31		183140		7.88		141297		9.11	
10	E15-08356-002	252479		6.31		218516		7.88		161992		9.10	
11	E15-08331-001	264426		6.31		229787		7.87		166764		9.09	
12	E15-08332-001	208968		6.31		185296		7.89		143667		9.13	
13	E15-08466-001	220524		6.31		191370		7.89		144956		9.12	
14	E15-08433-001	215288		6.31		186193		7.85		140466		9.07	
15	E15-08433-002	217986		6.31		189293		7.86		149502		9.08	
16	E15-08433-003	211467		6.31		186755		7.85		142488		9.06	
17	E15-08433-005	215084		6.31		191669		7.83		143801		9.06	
18	E15-08433-006	208461		6.30		184924		7.86		141539		9.11	
19	E15-08433-007	221761		6.31		184731		7.84		134967		9.06	
20	E15-08433-008	212404		6.31		189711		7.84		142184		9.07	
21	E15-08433-009	227193		6.30		194264		7.85		146231		9.09	
22	E15-08449-001	242321		6.31		220996		7.84		164616		9.06	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

E15-08356 0094

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3057.D

Date Analyzed: 09/22/2015

Instrument ID: MSDB

Time Analyzed: 11:52

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	272386	6.32	230904	7.94	162040	9.18
	UPPER LIMIT	544772	6.82	461808	8.44	324080	9.68
	LOWER LIMIT	136193	5.82	115452	7.44	81020	8.68
	LAB SAMPLE ID						
01	E15-08455-001	238031	6.31	207736	7.85	154001	9.07
02	E15-08456-001	180439	6.31	156428	7.85	148965	9.07
03	E15-08365-009	239224	6.31	190711	7.87	181551	9.1
04							
05							
06							
07							
08							
09							
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12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

E15-08356 0096

SEMI-VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : B3066.D
Acq On : 22 Sep 2015 14:32
Operator : KIM
Sample : MW-22/10,E15-08356-001,A,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 23 09:19:05 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 11:33:15 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.60	152	53905	40.00	UG	0.00
23) Naphthalene-d8	4.37	136	207741	40.00	UG	0.00
43) Acenaphthene-d10	5.39	164	125543	40.00	UG	0.00
66) Phenanthrene-d10	6.31	188	206627	40.00	UG	-0.01
82) Chrysene-d12	7.88	240	183140	40.00	UG	-0.02
92) Perylene-d12	9.11	264	141297	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.94	82	51455	33.36	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	66.72%		
47) 2-Fluorobiphenyl	4.99	172	136364	34.59	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery =	69.18%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.19	244	181036	39.68	UG	0.00
Spiked Amount 50.000	Range 23 - 124		Recovery =	79.36%		

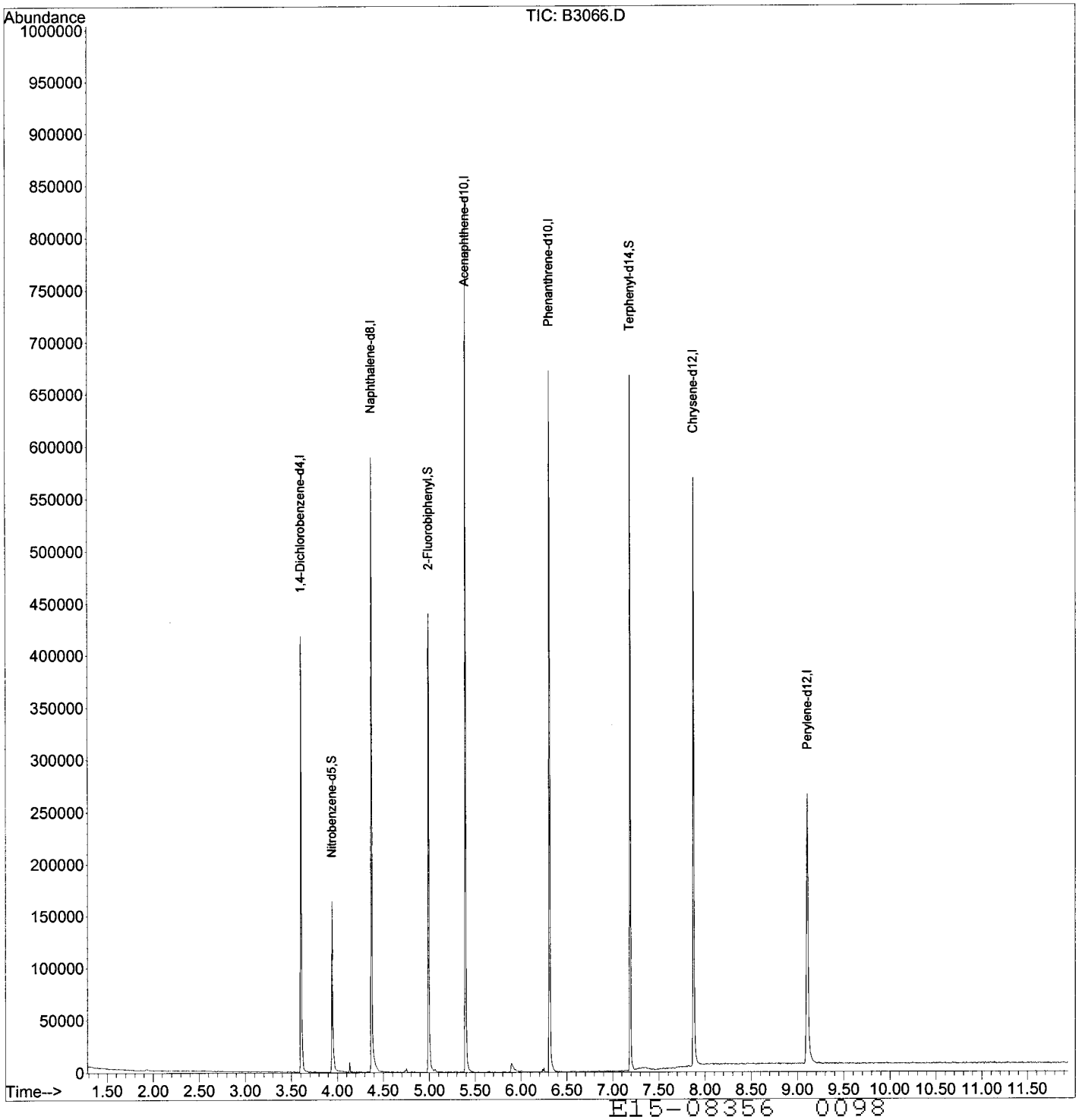
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : B3066.D
Acq On : 22 Sep 2015 14:32
Operator : KIM
Sample : MW-22/10,E15-08356-001,A,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 23 09:19:05 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 11:33:15 2015
Response via : Initial Calibration



E15-08356 0098

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3039.D
Acq On : 21 Sep 2015 16:54
Operator : DANA
Sample : MW-22/10,E15-08356-001,Ia,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 22 12:48:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:37:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.19	152	27750	1.00	UG	0.00
23) Naphthalene-d8	2.73	136	75512	1.00	UG	0.00
43) Acenaphthene-d10	3.53	164	45810m	1.00	UG	0.00
66) Phenanthrene-d10	4.27	188	74677m	1.00	UG	-0.02
82) Chrysene-d12	6.02	240	53902	1.00	UG	-0.04
92) Perylene-d12	7.28	264	59007m	1.00	UG	-0.04

System Monitoring Compounds						
4) 2-Fluorophenol		0.00	112	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
6) Phenol-d5		0.00	99	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
24) Nitrobenzene-d5		0.00	82	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
47) 2-Fluorobiphenyl		0.00	172	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
70) 2,4,6-Tribromophenol		0.00	330	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
84) Terphenyl-d14		0.00	244	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#

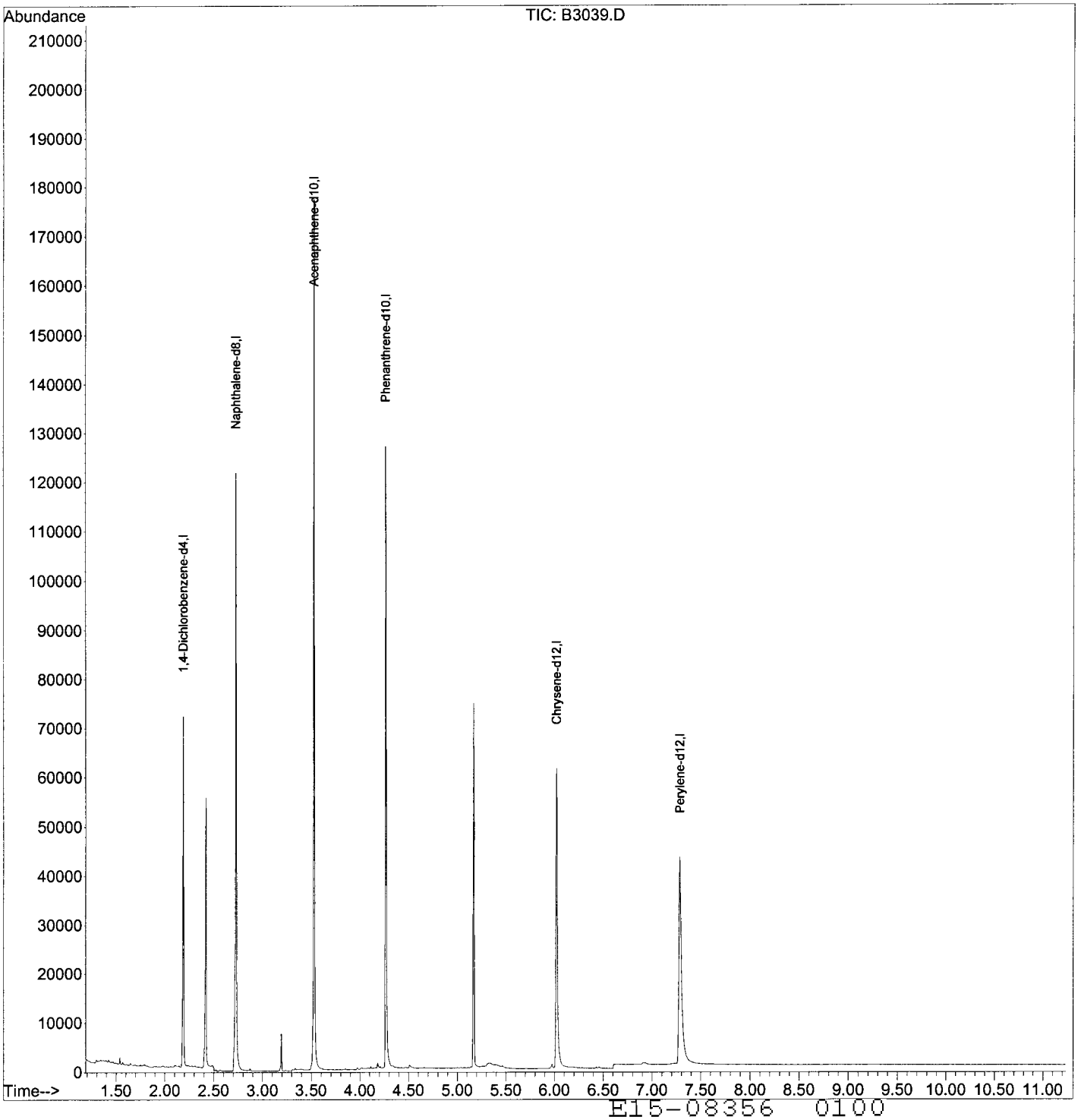
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3039.D
Acq On : 21 Sep 2015 16:54
Operator : DANA
Sample : MW-22/10,E15-08356-001,Ia,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Sep 22 12:48:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:37:32 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : B3067.D
Acq On : 22 Sep 2015 14:49
Operator : KIM
Sample : FB-09151,E15-08356-002,A,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 23 09:22:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 11:33:15 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.60	152	62474	40.00	UG	0.00
23) Naphthalene-d8	4.37	136	246998	40.00	UG	0.00
43) Acenaphthene-d10	5.39	164	150419	40.00	UG	0.00
66) Phenanthrene-d10	6.31	188	252479	40.00	UG	0.00
82) Chrysene-d12	7.88	240	218516	40.00	UG	-0.02
92) Perylene-d12	9.10	264	161992	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.94	82	47790	26.06	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 52.12%			
47) 2-Fluorobiphenyl	4.99	172	150077	31.77	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 63.54%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.19	244	275042	50.52	UG	0.00
Spiked Amount 50.000	Range 23 - 124		Recovery = 101.04%			

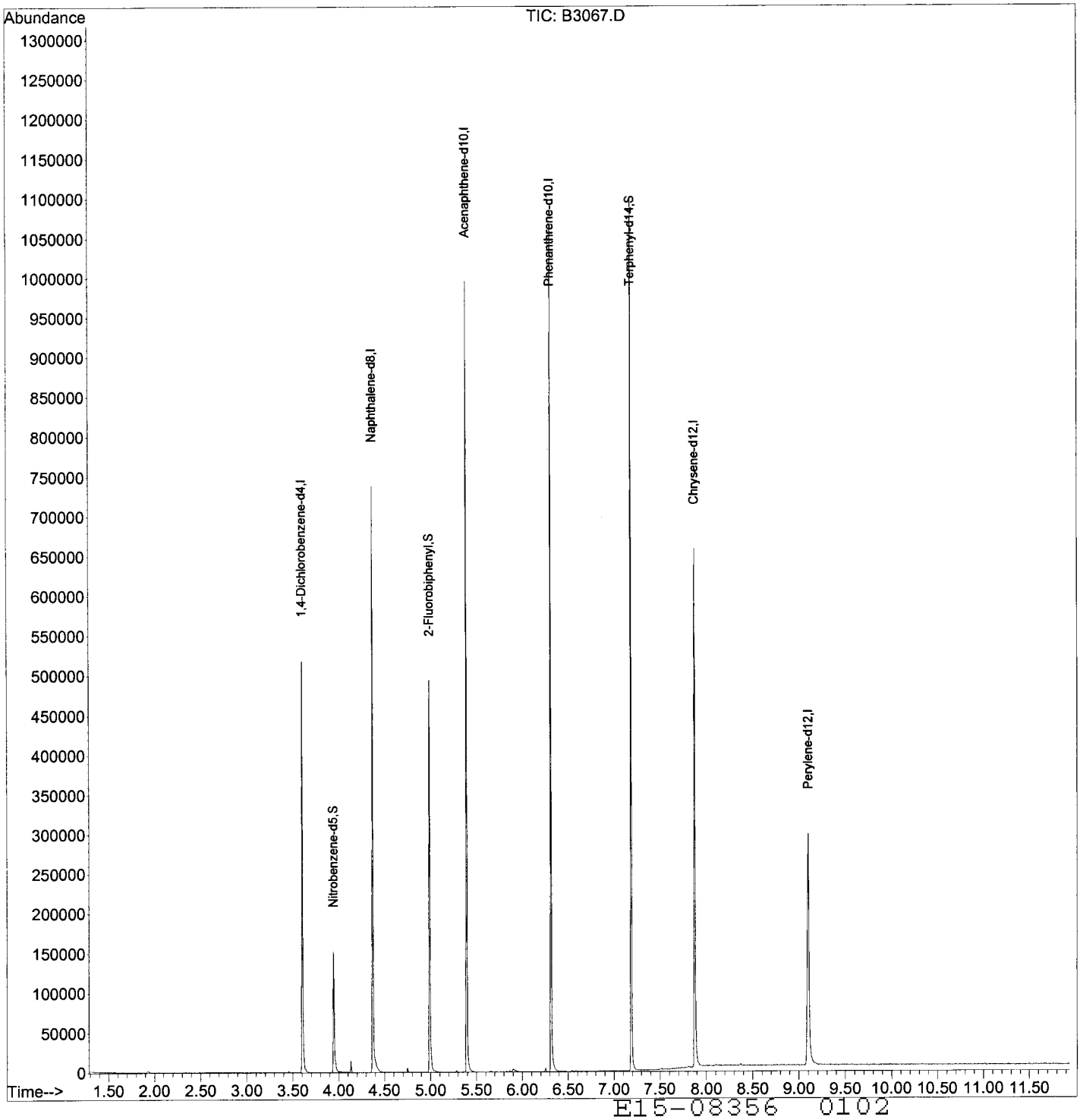
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : B3067.D
Acq On : 22 Sep 2015 14:49
Operator : KIM
Sample : FB-09151,E15-08356-002,A,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 23 09:22:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 11:33:15 2015
Response via : Initial Calibration



E15-08356 0102

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3040.D
Acq On : 21 Sep 2015 17:10
Operator : DANA
Sample : FB-09151,E15-08356-002,Ia,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 22 12:49:31 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:37:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.19	152	31278	1.00	UG	0.00
23) Naphthalene-d8	2.73	136	84658	1.00	UG	0.00
43) Acenaphthene-d10	3.52	164	50673	1.00	UG	-0.02
66) Phenanthrene-d10	4.25	188	83374m	1.00	UG	-0.04
82) Chrysene-d12	5.98	240	58357	1.00	UG	-0.08
92) Perylene-d12	7.26	264	62086	1.00	UG	-0.06

System Monitoring Compounds						
4) 2-Fluorophenol		0.00	112	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
6) Phenol-d5		0.00	99	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
24) Nitrobenzene-d5		0.00	82	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
47) 2-Fluorobiphenyl		0.00	172	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
70) 2,4,6-Tribromophenol		0.00	330	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
84) Terphenyl-d14		0.00	244	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#

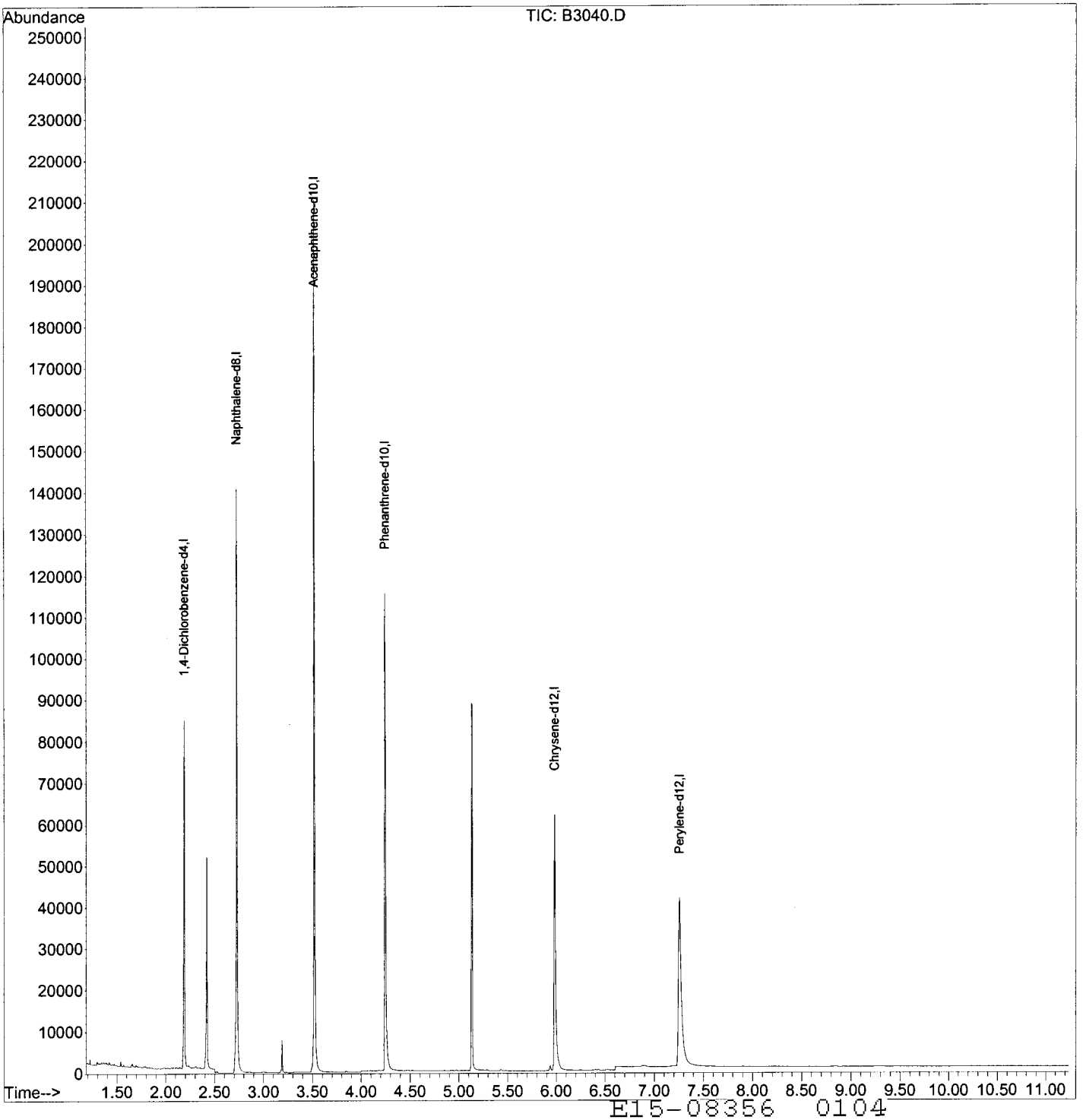
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3040.D
Acq On : 21 Sep 2015 17:10
Operator : DANA
Sample : FB-09151,E15-08356-002,Ia,1000ml,100,1
Misc : 150921-01,09/21/15,09/16/15,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 22 12:49:31 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:37:32 2015
Response via : Initial Calibration



E15-08356 0104

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA150921-01
Client ID: .
Date Received: NA
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
Data file: B3059.D
SIM Data file: B3036.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		1.00	0.235
Pyridine	ND		1.00	0.286
Benzaldehyde	ND		1.00	0.276
Phenol	ND		1.00	0.204
Aniline	ND		1.00	0.283
Bis(2-chloroethyl) ether	ND		1.00	0.373
2-Chlorophenol	ND		1.00	0.211
1,3-Dichlorobenzene	ND		1.00	0.293
1,4-Dichlorobenzene	ND		1.00	0.299
Benzyl alcohol	ND		1.00	0.208
1,2-Dichlorobenzene	ND		1.00	0.258
2-Methylphenol	ND		1.00	0.294
Bis(2-chloroisopropyl) ether	ND		1.00	0.253
4-Methylphenol **	ND		1.00	0.376
N-Nitrosodi-n-propylamine	ND		1.00	0.223
Acetophenone	ND		1.00	0.244
3-Methylphenol	ND		1.00	0.376
Hexachloroethane	ND		1.00	0.364
Nitrobenzene	ND		1.00	0.239
Isophorone	ND		1.00	0.233
2-Nitrophenol	ND		1.00	0.319
2,4-Dimethylphenol	ND		1.00	0.285
Bis(2-chloroethoxy) methane	ND		1.00	0.232
Benzoic acid	ND		10.0	0.330
2,4-Dimethylaniline	ND		1.00	0.234
2,4-Dichlorophenol	ND		1.00	0.253
1,2,4-Trichlorobenzene	ND		1.00	0.245
Naphthalene	ND		1.00	0.341
4-Chloroaniline	ND		1.00	0.337
4-Aminotoluene	ND		1.00	0.266
Hexachlorobutadiene	ND		1.00	0.229
Caprolactam	ND		1.00	0.366
2-Aminotoluene	ND		1.00	0.266
4-Chloro-3-methylphenol	ND		1.00	0.334
2-Methylnaphthalene	ND		1.00	0.224
Hexachlorocyclopentadiene	ND		10.0	0.362
2,4,6-Trichlorophenol	ND		1.00	0.261
2,4,5-Trichlorophenol	ND		1.00	0.306
1,1'-Biphenyl	ND		1.00	0.210
2-Chloronaphthalene	ND		1.00	0.256
2-Nitroaniline	ND		1.00	0.288
Dimethyl phthalate	ND		1.00	0.265

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA150921-01
Client ID: .
Date Received: NA
Date Extracted: 09/21/2015
Date Analyzed: 09/22/2015
Data file: B3059.D
SIM Data file: B3036.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		1.00	0.235
Acenaphthylene	ND		1.00	0.246
3-Nitroaniline	ND		1.00	0.281
Acenaphthene	ND		1.00	0.251
2,4-Dinitrophenol	ND		10.0	0.413
4-Nitrophenol	ND		10.0	0.371
2,4-Dinitrotoluene	ND		1.00	0.263
Dibenzofuran	ND		1.00	0.298
Diethyl phthalate	ND		1.00	0.264
Fluorene	ND		1.00	0.203
4-Chlorophenyl phenyl ether	ND		1.00	0.297
4-Nitroaniline	ND		1.00	0.318
1,2,4,5-Tetrachlorobenzene	ND		1.00	0.226
2,3,4,6-Tetrachlorophenol	ND		1.00	0.275
4,6-Dinitro-2-methylphenol	ND		10.0	0.220
N-Nitrosodiphenylamine	ND		1.00	0.260
1,2-Diphenylhydrazine	ND		1.00	0.250
4-Bromophenyl phenyl ether	ND		1.00	0.248
Hexachlorobenzene *	ND		0.020	0.020
Atrazine	ND		1.00	0.259
Pentachlorophenol *	ND		0.100	0.100
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Carbazole	ND		1.00	0.248
Di-n-butyl phthalate	ND		1.00	0.262
Fluoranthene	ND		1.00	0.206
Benzidine	ND		10.0	0.267
Pyrene	ND		1.00	0.256
3,3'-Dimethylbenzidine	ND		1.00	0.320
Butyl benzyl phthalate	ND		1.00	0.391
3,3'-Dichlorobenzidine	ND		1.00	0.391
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Bis(2-ethylhexyl) phthalate	ND		1.00	0.429
Di-n-octyl phthalate	ND		1.00	0.399
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (83): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

E15-08356 0106 4-Methylphenol

B --- Compound detected in Blank
C --- Common laboratory contamination

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : B3059.D
Acq On : 22 Sep 2015 12:30
Operator : KIM
Sample : .,BLKA150921-01,A,1000ml,100,1
Misc : 150921-01,09/21/15,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 22 15:20:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 11:33:15 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.60	152	54470	40.00	UG	0.00
23) Naphthalene-d8	4.37	136	212299	40.00	UG	0.00
43) Acenaphthene-d10	5.39	164	128454	40.00	UG	0.00
66) Phenanthrene-d10	6.31	188	214970	40.00	UG	-0.01
82) Chrysene-d12	7.91	240	190706	40.00	UG	0.02
92) Perylene-d12	9.15	264	147678	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	2.78	112	68402	40.28	UG	0.00
Spiked Amount 100.000	Range 10 - 100		Recovery = 40.28%			
6) Phenol-d5	3.37	99	58390	28.94	UG	-0.01
Spiked Amount 100.000	Range 10 - 102		Recovery = 28.94%			
24) Nitrobenzene-d5	3.94	82	45156	28.65	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 57.30%			
47) 2-Fluorobiphenyl	4.99	172	132827	32.93	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 65.86%			
70) 2,4,6-Tribromophenol	5.92	330	55447	51.66	UG	-0.01
Spiked Amount 100.000	Range 22 - 115		Recovery = 51.66%			
84) Terphenyl-d14	7.21	244	254287	53.52	UG	0.02
Spiked Amount 50.000	Range 23 - 124		Recovery = 107.04%			

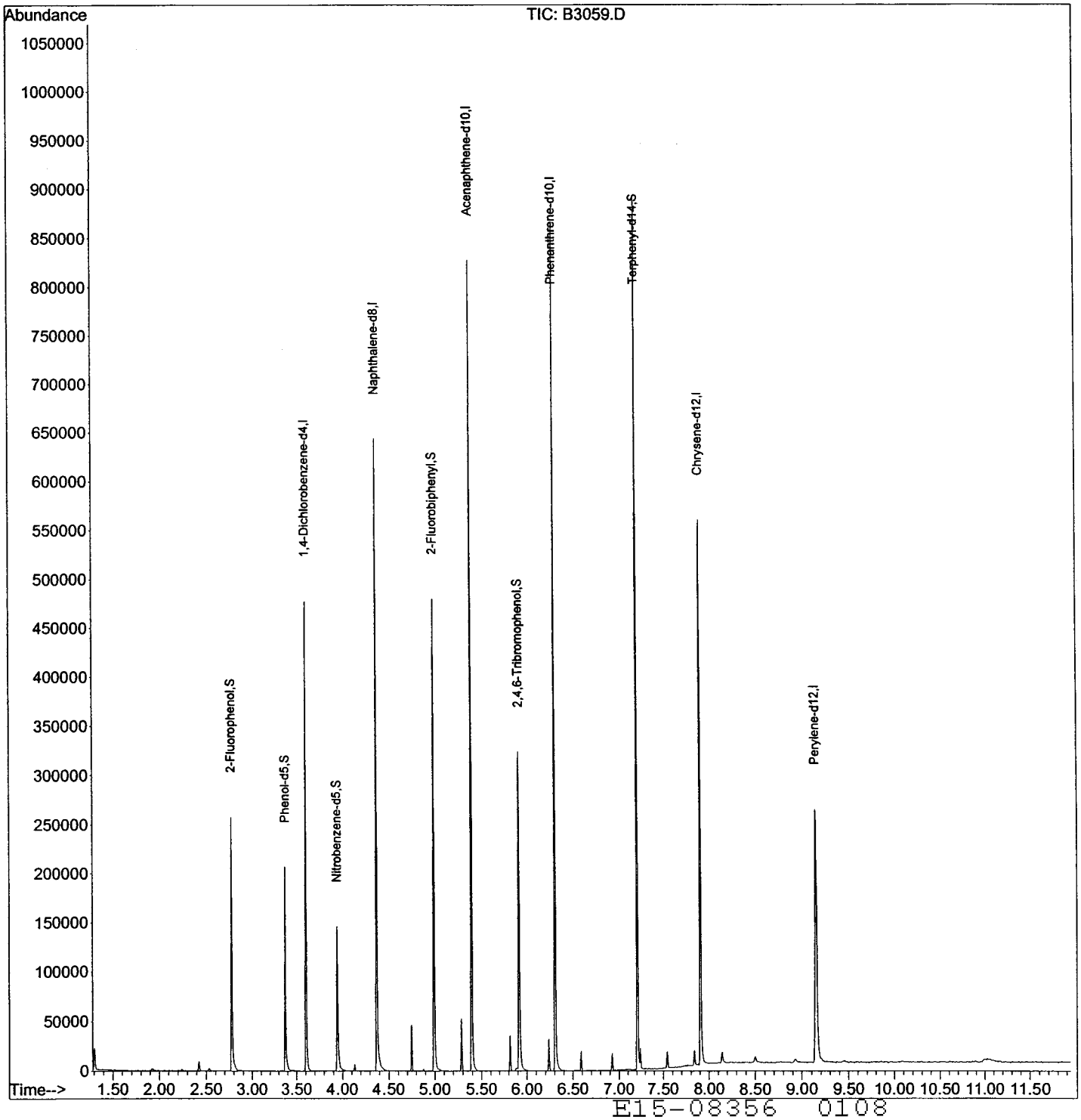
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-22-15\
Data File : B3059.D
Acq On : 22 Sep 2015 12:30
Operator : KIM
Sample : .,BLKA150921-01,A,1000ml,100,1
Misc : 150921-01,09/21/15,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 22 15:20:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 11:33:15 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3036.D
Acq On : 21 Sep 2015 16:06
Operator : DANA
Sample : .,BLKA150921-01,Ia,1000ml,100,1
Misc : 150921-01,09/21/15,NA,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 22 12:43:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:37:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.19	152	28548	1.00	UG	0.00
23) Naphthalene-d8	2.73	136	77329	1.00	UG	0.00
43) Acenaphthene-d10	3.54	164	46311	1.00	UG	0.00
66) Phenanthrene-d10	4.30	188	76994m	1.00	UG	0.02
82) Chrysene-d12	6.07	240	54611m	1.00	UG	0.01
92) Perylene-d12	7.35	264	61167	1.00	UG	0.02

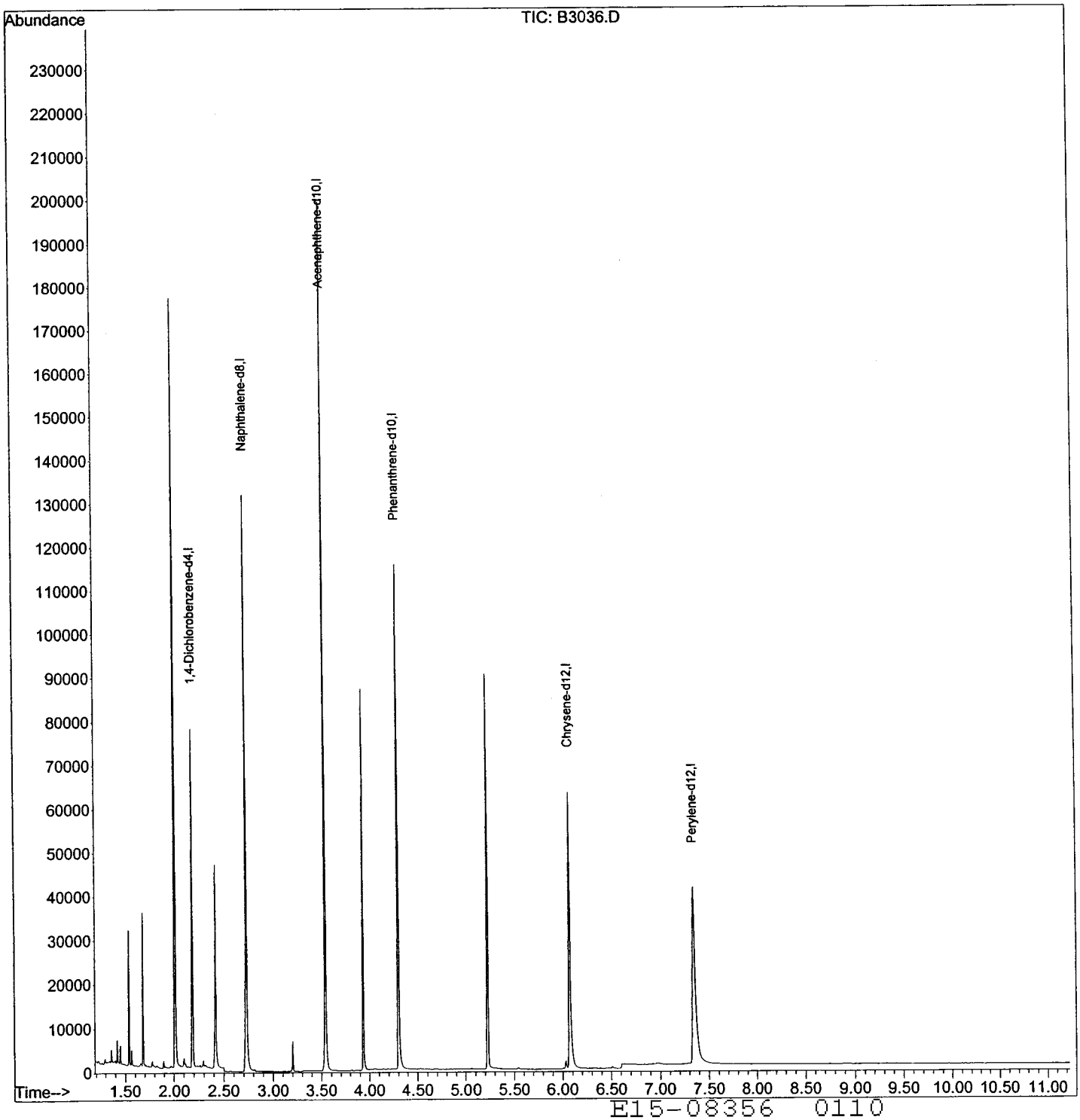
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDChem\1\DATA\09-21-15\
Data File : B3036.D
Acq On : 21 Sep 2015 16:06
Operator : DANA
Sample : .,BLKA150921-01,Ia,1000ml,100,1
Misc : 150921-01,09/21/15,NA,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Sep 22 12:43:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1015.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:37:32 2015
Response via : Initial Calibration



SAMPLE TRACKING

IAL
Integrated Analytical Laboratories LLC

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

Customer Information

Company: GEI Consultants
Address: 18000 Horizon Way
Suite 200
Telephone #: 856-608-6860
Fax #: 856-608-6864
Project Manager: Chris Dailey
EMAIL Address: Cdailey@geiconsultants
Project Name: SIC
Project Location (State): NJ
Bottle Order #: BO2551
☑ "Report to"/"Invoice To" same as above
Sampled by: Luke Cuccurullo

COMPLETED BY IAL:
____ Field Sampling ____ Equipment Rental

Reporting Information

REPORT TO:
Address:
Attn:
FAX #
INVOICE TO:
Address:
Attn:
PO #
Quote #

Sample Matrix

DW - Drinking Water
WW - Waste Water
GW - Groundwater
SW - Surface Water
LIQ - Liquid (Specify)
OI - Oil
S - Soil
SOL - Solid
SL - Sludge
W - Wipe
B - Biphasic

****Rush TAT Charge**

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables

NJ, CT, PA	NY
☐ Results Only	☐ ASP Category A
☑ Reduced	☐ ASP Category B*
☐ Regulatory/ Full*	

EDDs

☑ NJ SRP
☐ NYSDEC EQuIS
☑ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected:

Low Med High

These samples have been previously analyzed by IAL
☐ YES ☑ NO

Turn-Around Time (TAT)

Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Std 3 week
Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015

TAT for PHC (if other than 2 weeks):

Regulatory Requirement

New Jersey	New York
☐ GWQS	☐ AWQS (TOGS Table 1)
☐ IGW	☐ GWEL (TOGS Table 5)
☐ SRS	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	OTHER Reg. Req. (specify)

SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	Volatiles-BTEX GQ	PAH	Sample Specific Notes:
MW-22	10-11	9/15/15	13:00	GW	4	1	✓	✓	
FB-091515	—	9/15/15	14:00	GW	4	2	✓	✓	
TB-091515	—	9/15/15	—	GW	2	3	✓	✓	

Known Hazard: YES / NO
Describe:

Preservative Code: 1 = None, 2 = HCl, 3 = HNO3, 4 = MeOH, 5 = NaOH, 6 = H2SO4, 7 = Other

Container Code: A = Amber Glass, B = Plastic, C = Vial, D = Glass, E = EnCore, T = Terracore

Preservative (use code)
Container Type (use code)

Special Instructions/QC Requirements & Comments:

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one :
☐ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
Luke Cuccurullo	9/16/15			9.16.15	16:44
	9/16/15	4:20		9/16/15	4:20

FOR LAB USE ONLY
SDG #: 8356
Cooler Temp: 4 °C

IAL Rev 2/2014

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

PAGE: 1 of 1

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-08356: SIC

To: Chris Dailey
GEI Consultants, Inc.
Fax: 1(856) 608-6864
EMail: cdailey@geiconsultants.com;datagr(

Report To

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054
Attn: Chris Dailey

Bill To

GEI Consultants, Inc.
400 Unicorn Park Drive

Woburn, MA 01801
Attn: Accounts Payable

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Reduced		Sep 16, 2015 @ 16:20	NA	Sep 30, 2015	Oct 07, 2015 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. SRP TXT, Equis GEI

**** QC Requirement (must meet):** NJ GWQS

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
08356-001	MW-22	10.5/11	09/15/15@13:00	Aqueous	ug/L (ppb)	
08356-002	FB-091515	NA	09/15/15@14:00	Aqueous	ug/L (ppb)	
08356-003	TB-091515	NA	09/15/15	Aqueous	ug/L (ppb)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	BTEX	Cancel	624	STD/2 WKS	9/29/2015
	TCL VO+15	Analyze	8260C	STD/2 WKS	9/29/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	9/22/2015
002	TCL VO+15	Analyze	8260C	STD/2 WKS	9/29/2015
	BTEX	Cancel	624	STD/2 WKS	9/29/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	9/22/2015
003	BTEX	Cancel	624	STD/2 WKS	9/29/2015
	TCL VO+15	Analyze	8260C	STD/2 WKS	9/29/2015

Project Notes:

NOTE 1 taken by Frank on 09/16/2015 08:25
ANY E QUALIFIED RESULTS NEED A COMBINED FORM 1.

REV 1 taken by kim on 09/18/2015 02:54
PER BRIAN MANNINO, CHANGE VO LIST FROM BTEX TO TCL VO+15, AND CHANGE METHOD FROM 624 TO 8260C.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 15** **08356** CLIENT: [illegible]

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

COC: (COMPLETE) / INCOMPLETE

Comments

KEY

✓ = YES/NA

✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✓	no-Extra Bottles	
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✓	pH Check (exclude VOs)[1]	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✓	**Chain of Custody is Clear**	

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [illegible] DATE 9/16/15

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ☑

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [illegible] E15-08356 01147/15

REV 03/2013

Laboratory Custody Chronicle

IAL Case No.

E15-08356

Client GEI Consultants, Inc.

Project SIC

Received On 9/16/2015@16:20

Department: Volatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL VOA 15	08356-001	Aqueous	n/a	n/a	9/22/15	Sylvia
"	-002	"	n/a	n/a	9/22/15	Sylvia
"	-003	"	n/a	n/a	9/22/15	Sylvia

Department: Semivolatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL/PAH + SIMS	-001	Aqueous	9/21/15	Frank L.	9/22/15	JC
"	-002	"	9/21/15	Frank L.	9/22/15	JC

E15-08356 0115

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

IAL
Integrated Analytical Laboratories LLC

ANALYTICAL DATA REPORT

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054

Project Name: **SIC**
IAL Case Number: **E15-10258**

These data have been reviewed and accepted by:

Michael H. Leffin, Ph.D.
Laboratory Director

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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* Methodology is included in the IAL Project Information Page

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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This report was finalized on November 30, 2015

* Methodology is included in the IAL Project Information Page

Sample Summary

IAL Case No.

E15-10258

Client GEI Consultants, Inc.

Project SIC

Received On 11/ 6/2015@18:32

Lab ID	*Client Sample ID*	*Depth Top/Bottom*	*Sampling Time*	*Matrix*	*# of Container*
10258-001	MW-21	n/a	11/ 4/2015@11:00	Aqueous	4
10258-002	FB-11042015	n/a	11/ 4/2015@12:30	Aqueous	4
10258-003	MW-22	n/a	11/ 4/2015@12:55	Aqueous	4
10258-004	MW-20	n/a	11/ 4/2015@14:25	Aqueous	4
10258-005	MW-18	n/a	11/ 4/2015@14:55	Aqueous	4
10258-006	MW-11	n/a	11/ 5/2015@10:25	Aqueous	4
10258-007	MW-23	n/a	11/ 5/2015@11:55	Aqueous	4
10258-008	MW-16	n/a	11/ 5/2015@13:20	Aqueous	4
10258-009	MW-13	n/a	11/ 5/2015@13:45	Aqueous	4
10258-010	FB-11052015	n/a	11/ 5/2015@15:40	Aqueous	4
10258-011	MW-25	n/a	11/ 5/2015@16:45	Aqueous	4
10258-012	MW-19RR	n/a	11/ 6/2015@09:00	Aqueous	4
10258-013	FB-11062015	n/a	11/ 6/2015@10:45	Aqueous	4
10258-014	MW-24-2	n/a	11/ 6/2015@11:10	Aqueous	4
10258-015	MW-24-1	n/a	11/ 6/2015@11:45	Aqueous	4
10258-016	MW-26	n/a	11/ 6/2015@13:45	Aqueous	4
10258-017	TRIP BLANK	n/a	11/ 6/2015	Aqueous	2
10258-018	FB-110315	n/a	11/ 3/2015	Aqueous	4
10258-019	TRIP BLANK	n/a	11/ 4/2015	Aqueous	3

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DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

B Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.

C Indicates analyte is a common laboratory contaminant.

D Indicates analyte was reported from diluted analysis.

E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.

J Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.

N Presumptive evidence of a compound from the use of GC/MS library search.

X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.

Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

RL Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.

MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.

PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.

ND Indicates analyte was analyzed for but not detected above the MDL.

DF Dilution Factor

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

MS Matrix Spike

MSD Matrix Spike Duplicate

DUP Duplicate

SAMPLE DELIVERY GROUP CASE NARRATIVE
(Conformance / Non-Conformance Summary)

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-10258

Integrated Analytical Laboratories, LLC. received nineteen (19) samples** from GEI Consultants, Inc. (IAL SDG# **E15-10258**, Project: SIC) on November 6, 2015 for the analysis of :

(19) TCL VO + 15
(17) TCL/PAH + SIMS

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order.
Cooler temperature was acceptable at 4 ± 2°C

Volatiles By 8260C	**Batch: 151113B**	**Matrix: Aqueous**

QC
- Calibration curve met QC criteria.
- Internal standards recovery met QC criteria.
- Surrogate percent recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria.

E15-10258
- All samples were analyzed within holding time.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-10258-001	1	NA
E15-10258-002	1	NA
E15-10258-003	1	NA
E15-10258-004	1	NA
E15-10258-005	1	NA
E15-10258-006	1	NA
E15-10258-007	1	NA
E15-10258-008	1	NA
E15-10258-009	1	NA
E15-10258-010	1	NA
E15-10258-011	1	NA
E15-10258-012	1	NA
E15-10258-013	1	NA
E15-10258-014	1	NA
E15-10258-015	1	NA
E15-10258-016	1	NA
E15-10258-017	1	NA
E15-10258-018	1	NA
E15-10258-019	1	NA

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-10258

Semivolatiles By 8270D SIM	Batch: 151110-05	Matrix: Aqueous

QC

- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery met QC criteria.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

E15-10258

- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- Sample(s) used for aqueous BNA analyses contained varying levels of sediment. Precautions were taken to take an aliquot representative of the sample. However, due to the nature of aqueous samples containing sediment, reproduction of results may prove difficult. The rough amount of sediment present in the samples is as follows: 10258-003:1%; 10258-005:1%.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-10258-001	1	NA
E15-10258-002	1	NA
E15-10258-003	1	NA
E15-10258-004	1	NA
E15-10258-005	1	NA
E15-10258-018	1	NA

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E15-10258

Semivolatiles By 8270D SIM	Batch: 151111-01	Matrix: Aqueous

QC

- Calibration curve met QC criteria.
- Internal standard recovery met QC criteria.
- Surrogate recovery met QC criteria. NJDEP DKQP criteria not met.
- Method blank met QC criteria.
- LCS percent recovery met QC criteria. NJDEP DKQP criteria not met.
- MS/MSD RPD met QC criteria.
- MS/MSD percent recovery met QC criteria. NJDEP DKQP criteria not met.

E15-10258

- Extraction holding time met requirement for each sample.
- Analysis holding time met requirement for each sample.
- Sample(s) used for aqueous BNA analyses contained varying levels of sediment. Precautions were taken to take an aliquot representative of the sample. However, due to the nature of aqueous samples containing sediment, reproduction of results may prove difficult. The rough amount of sediment present in the samples is as follows: 10258-006:1%; 10258-007:1%; 10258-011:2%; 10258-014:1%; 10258-015:1%.

Dilution Summary:

Sample ID	DF(s)	Dilution For
E15-10258-006	1	NA
E15-10258-007	1	NA
E15-10258-008	1	NA
E15-10258-009	1	NA
E15-10258-010	1	NA
E15-10258-011	1	NA
E15-10258-012	1	NA
E15-10258-013	1	NA
E15-10258-014	1	NA
E15-10258-015	1	NA
E15-10258-016	1	NA

The result reported for 1,2-Diphenylhydrazine is also representative of Azobenzene. 1,2-Diphenylhydrazine rapidly decomposes to Azobenzene when exposed to water or heat. Analytical results from analysis of 1,2-Diphenylhydrazine will be directly compared to the applicable criteria for Azobenzene and/or 1,2-Diphenylhydrazine.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

11/24/2015
Date

E15-10258 0006

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
Client: GEI Consultants, Inc.
Project Location: SIC
IAL Project #: E15-10258
IAL Sample ID(s): E15-10258-001 ~ -019
Sampling Date(s): 11/4/2015

List of DKQP Method Used:
TCL VO by 8260C
TCL/PAH + SIM by 8270D SIM

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP	X		
1A	Were the method specified handling, preservation, and holding time requirements met?	X		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)			X
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	X		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?		X	
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?	X		
5B	Were these reporting limits met?		X	
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	X		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?		X	

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E15-10258

Lab ID:	10258-001			10258-002			10258-003			10258-004		
Client ID:	MW-21			FB-11042015			MW-22			MW-20		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	11/4/15			11/4/15			11/4/15			11/4/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Tetrachloroethene	ND		0.495	ND		0.495	0.573	J	0.495	ND		0.495
TOTAL VO's:	ND			ND			0.573	J		ND		
TOTAL TIC's:	ND			ND			ND			ND		
TOTAL VO's & TIC's:	ND			ND			0.573	J		ND		
Semivolatiles - PAH (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Naphthalene	ND		0.341	ND		0.341	ND		0.341	ND		0.341
2-Methylnaphthalene	ND		0.224	ND		0.224	ND		0.224	ND		0.224
Acenaphthylene	ND		0.246	ND		0.246	ND		0.246	ND		0.246
Acenaphthene	ND		0.251	ND		0.251	ND		0.251	ND		0.251
Fluorene	ND		0.203	ND		0.203	ND		0.203	ND		0.203
Phenanthrene	ND		0.225	ND		0.225	ND		0.225	ND		0.225
Anthracene	ND		0.258	ND		0.258	ND		0.258	ND		0.258
Fluoranthene	ND		0.206	ND		0.206	ND		0.206	ND		0.206
Pyrene	ND		0.256	ND		0.256	ND		0.256	ND		0.256
Benzo[a]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Chrysene	ND		0.320	ND		0.320	ND		0.320	ND		0.320
Benzo[b]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[k]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[a]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Indeno[1,2,3-cd]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Dibenz[a,h]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[g,h,i]perylene	ND		0.325	ND		0.325	ND		0.325	ND		0.325

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E15-10258

Lab ID:	10258-005			10258-006			10258-007			10258-008		
Client ID:	MW-18			MW-11			MW-23			MW-16		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	11/4/15			11/5/15			11/5/15			11/5/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Tetrachloroethene	0.821	J	0.495	ND		0.495	ND		0.495	ND		0.495
TOTAL VO's:	0.821	J		ND			ND			ND		
TOTAL TIC's:	ND			ND			ND			ND		
TOTAL VO's & TIC's:	0.821	J		ND			ND			ND		
Semivolatiles - PAH (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Naphthalene	ND		0.341	ND		0.341	ND		0.341	ND		0.341
2-Methylnaphthalene	ND		0.224	ND		0.224	ND		0.224	ND		0.224
Acenaphthylene	ND		0.246	ND		0.246	ND		0.246	ND		0.246
Acenaphthene	ND		0.251	ND		0.251	ND		0.251	ND		0.251
Fluorene	ND		0.203	ND		0.203	ND		0.203	ND		0.203
Phenanthrene	ND		0.225	ND		0.225	ND		0.225	ND		0.225
Anthracene	ND		0.258	ND		0.258	ND		0.258	ND		0.258
Fluoranthene	ND		0.206	ND		0.206	ND		0.206	ND		0.206
Pyrene	ND		0.256	ND		0.256	ND		0.256	ND		0.256
Benzo[a]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Chrysene	ND		0.320	ND		0.320	ND		0.320	ND		0.320
Benzo[b]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[k]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[a]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Indeno[1,2,3-cd]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Dibenz[a,h]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[g,h,i]perylene	ND		0.325	ND		0.325	ND		0.325	ND		0.325

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E15-10258

Lab ID:	10258-009			10258-010			10258-011			10258-012		
Client ID:	MW-13			FB-11052015			MW-25			MW-19RR		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	11/5/15			11/5/15			11/5/15			11/6/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Benzene	ND		0.388	ND		0.388	1.12		0.388	ND		0.388
Tetrachloroethene	ND		0.495	ND		0.495	ND		0.495	1.05		0.495
TOTAL VO's:	ND			ND			1.12			1.05		
TOTAL TIC's:	ND			ND			ND			6.90	JN	
TOTAL VO's & TIC's:	ND			ND			1.12			7.95	JN	
Semivolatiles - PAH (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Naphthalene	ND		0.341	ND		0.341	2.92		0.341	ND		0.341
2-Methylnaphthalene	ND		0.224	ND		0.224	0.505	J	0.224	ND		0.224
Acenaphthylene	ND		0.246	ND		0.246	ND		0.246	ND		0.246
Acenaphthene	ND		0.251	ND		0.251	ND		0.251	ND		0.251
Fluorene	ND		0.203	ND		0.203	ND		0.203	ND		0.203
Phenanthrene	ND		0.225	ND		0.225	ND		0.225	ND		0.225
Anthracene	ND		0.258	ND		0.258	ND		0.258	ND		0.258
Fluoranthene	ND		0.206	ND		0.206	ND		0.206	ND		0.206
Pyrene	ND		0.256	ND		0.256	ND		0.256	ND		0.256
Benzo[a]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Chrysene	ND		0.320	ND		0.320	ND		0.320	ND		0.320
Benzo[b]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[k]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[a]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Indeno[1,2,3-cd]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Dibenz[a,h]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[g,h,i]perylene	ND		0.325	ND		0.325	ND		0.325	ND		0.325

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E15-10258

Lab ID:	10258-013			10258-014			10258-015			10258-016		
Client ID:	FB-11062015			MW-24-2			MW-24-1			MW-26		
Matrix:	Aqueous			Aqueous			Aqueous			Aqueous		
Sampled Date	11/6/15			11/6/15			11/6/15			11/6/15		
PARAMETER(Units)	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Acetone	ND		1.43	ND		1.43	68.5		1.43	ND		1.43
Carbon disulfide	ND		0.505	ND		0.505	0.891	J	0.505	ND		0.505
2-Butanone (MEK)	ND		0.872	ND		0.872	2.58		0.872	ND		0.872
Benzene	ND		0.388	5.24		0.388	ND		0.388	3.46		0.388
Tetrachloroethene	ND		0.495	ND		0.495	ND		0.495	1.03		0.495
Ethylbenzene	ND		0.420	2.33		0.420	ND		0.420	1.75		0.420
Total Xylenes	ND		1.04	ND		1.04	ND		1.04	2.36		1.04
Isopropylbenzene	ND		0.581	ND		0.581	ND		0.581	1.00		0.581
TOTAL VO's:	ND			7.57			72.0	J		9.60		
TOTAL TIC's:	ND			45.3	JN		ND			38.5	JN	
TOTAL VO's & TIC's:	ND			52.9	JN		72.0	J		48.1	JN	
Semivolatiles - PAH (Units)	*(ug/L)*			*(ug/L)*			*(ug/L)*			*(ug/L)*		
Naphthalene	ND		0.341	ND		0.341	ND		0.341	12.5		0.341
2-Methylnaphthalene	ND		0.224	ND		0.224	ND		0.224	8.99		0.224
Acenaphthylene	ND		0.246	ND		0.246	ND		0.246	ND		0.246
Acenaphthene	ND		0.251	5.38		0.251	ND		0.251	13.3		0.251
Fluorene	ND		0.203	ND		0.203	ND		0.203	3.97		0.203
Phenanthrene	ND		0.225	ND		0.225	ND		0.225	5.09		0.225
Anthracene	ND		0.258	ND		0.258	ND		0.258	1.61		0.258
Fluoranthene	ND		0.206	ND		0.206	ND		0.206	0.606	J	0.206
Pyrene	ND		0.256	ND		0.256	ND		0.256	0.740	J	0.256
Benzo[a]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Chrysene	ND		0.320	ND		0.320	ND		0.320	ND		0.320
Benzo[b]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[k]fluoranthene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[a]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Indeno[1,2,3-cd]pyrene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Dibenz[a,h]anthracene	ND		0.100	ND		0.100	ND		0.100	ND		0.100
Benzo[g,h,i]perylene	ND		0.325	ND		0.325	ND		0.325	ND		0.325

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.
All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.
N = Presumptive evidence of a compound from the use of GC/MS library search.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: GEI Consultants, Inc.
Project: SIC
Lab Case No.: E15-10258

	Lab ID:	10258-017			10258-018			10258-019		
	Client ID:	TRIP BLANK			FB-110315			TRIP BLANK		
	Matrix:	Aqueous			Aqueous			Aqueous		
	Sampled Date	11/6/15			11/3/15			11/4/15		
PARAMETER(Units)		Conc	Q	MDL	Conc	Q	MDL	Conc	Q	MDL
Volatiles (Units)		*(ug/L)*			*(ug/L)*			*(ug/L)*		
TOTAL VO's:		ND			ND			ND		
TOTAL TIC's:		ND			ND			ND		
TOTAL VO's & TIC's:		ND			ND			ND		
Semivolatiles - PAH (Units)		*(ug/L)*			*(ug/L)*			*(ug/L)*		
Naphthalene		~		~	ND		0.341	~		~
2-Methylnaphthalene		~		~	ND		0.224	~		~
Acenaphthylene		~		~	ND		0.246	~		~
Acenaphthene		~		~	ND		0.251	~		~
Fluorene		~		~	ND		0.203	~		~
Phenanthrene		~		~	ND		0.225	~		~
Anthracene		~		~	ND		0.258	~		~
Fluoranthene		~		~	ND		0.206	~		~
Pyrene		~		~	ND		0.256	~		~
Benzo[a]anthracene		~		~	ND		0.100	~		~
Chrysene		~		~	ND		0.320	~		~
Benzo[b]fluoranthene		~		~	ND		0.100	~		~
Benzo[k]fluoranthene		~		~	ND		0.100	~		~
Benzo[a]pyrene		~		~	ND		0.100	~		~
Indeno[1,2,3-cd]pyrene		~		~	ND		0.100	~		~
Dibenz[a,h]anthracene		~		~	ND		0.100	~		~
Benzo[g,h,i]perylene		~		~	ND		0.325	~		~

~ = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-001
Client ID: MW-21
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8288.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-001
Client ID: MW-21
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8288.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-001
Client ID: MW-21
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8288.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-002
Client ID: FB-11042015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8282.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-002
Client ID: FB-11042015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8282.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-002
Client ID: FB-11042015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8282.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-003
Client ID: MW-22
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8289.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-003
Client ID: MW-22
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8289.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	0.573	J	1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	0.573	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-003
Client ID: MW-22
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8289.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-004
Client ID: MW-20
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8290.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-004
Client ID: MW-20
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8290.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-004
Client ID: MW-20
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8290.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-005
Client ID: MW-18
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8291.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-005
Client ID: MW-18
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8291.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	0.821	J	1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	0.821	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-005
Client ID: MW-18
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8291.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-006
Client ID: MW-11
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8292.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-006
Client ID: MW-11
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8292.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-006
Client ID: MW-11
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8292.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-007
Client ID: MW-23
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8293.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-007
Client ID: MW-23
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8293.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-007
Client ID: MW-23
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8293.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-008
Client ID: MW-16
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8294.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-008
Client ID: MW-16
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8294.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-008
Client ID: MW-16
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8294.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-009
Client ID: MW-13
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8295.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-009
Client ID: MW-13
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8295.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-009
Client ID: MW-13
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8295.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-010
Client ID: FB-11052015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8283.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-010
Client ID: FB-11052015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8283.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-010
Client ID: FB-11052015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8283.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-011
Client ID: MW-25
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8296.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	1.12		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-011
Client ID: MW-25
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8296.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	1.12			

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-011
Client ID: MW-25
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8296.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-012
Client ID: MW-19RR
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8297.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-012
Client ID: MW-19RR
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8297.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	1.05		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	1.05			

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-012
Client ID: MW-19RR
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8297.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
000091-20-3	Naphthalene	6.90	JN	15.79

Total TICs = 6.90 JN

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-013
Client ID: FB-11062015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8284.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-013
Client ID: FB-11062015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8284.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-013
Client ID: FB-11062015
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8284.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-014
Client ID: MW-24-2
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8298.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	5.24		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-014
Client ID: MW-24-2
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8298.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	2.33		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	7.57			

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-014
Client ID: MW-24-2
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8298.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	Unknown Aromatic	25.6	J	13.53
000767-59-9	1H-Indene, 1-methyl-	8.70	JN	15.31
000275-51-4	Azulene	5.50	JN	15.79
004453-90-1	1,4-Methanonaphthalene, 1,4-dihydr	5.50	JN	17.15

Total TICs = 45.3 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-015
Client ID: MW-24-1
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8299.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	68.5		5.00	1.43
Carbon disulfide	0.891	J	1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	2.58		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-015
Client ID: MW-24-1
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8299.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	72.0	J		

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-015
Client ID: MW-24-1
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8299.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-016
Client ID: MW-26
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8303.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 1000

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	3.46		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-016
Client ID: MW-26
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8303.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 1000

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	1.03		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	1.75		1.00	0.420
Total Xylenes	2.36		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	1.00		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441
Total Target Compounds (52):	9.60			

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-016
Client ID: MW-26
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8303.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 1000

CAS #	Compound	Estimated Concentration	Q	Retention Time
000611-15-4	Benzene, 1-ethenyl-2-methyl-	13.4	JN	13.53
000091-20-3	Naphthalene	19.8	JN	15.79
000091-57-6	Naphthalene, 2-methyl-	5.30	JN	17.15

Total TICs = 38.5 JN

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-017
Client ID: TRIP_BLANK
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8285.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-017
Client ID: TRIP_BLANK
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8285.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-017
Client ID: TRIP_BLANK
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8285.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-018
Client ID: FB-110315
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8286.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-018
Client ID: FB-110315
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8286.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-018
Client ID: FB-110315
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8286.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-019
Client ID: TRIP_BLANK
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8287.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: E15-10258-019
Client ID: TRIP_BLANK
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Data file: G8287.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: E15-10258-019
Client ID: TRIP_BLANK
Date Received: 11/06/2015
Date Analyzed: 11/14/2015
Date File: G8287.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

D --- Dilution Performed

J --- Estimated concentration for TICs

N --- Presumptive evidence of a compound from the use of GC/MS NIST library search

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-001
Client ID: MW-21
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5949.D
SIM Data file: A5926.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-002
Client ID: FB-11042
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5950.D
SIM Data file: A5927.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-003
Client ID: MW-22
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5951.D
SIM Data file: A5928.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-004
Client ID: MW-20
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5952.D
SIM Data file: A5929.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-005
Client ID: MW-18
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5953.D
SIM Data file: A5930.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-006
Client ID: MW-11
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/12/2015
Data file: B4070.D
SIM Data file: B4052.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-007
Client ID: MW-23
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/12/2015
Data file: B4071.D
SIM Data file: B4053.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-008
Client ID: MW-16
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/12/2015
Data file: B4072.D
SIM Data file: B4054.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-009
Client ID: MW-13
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/12/2015
Data file: B4073.D
SIM Data file: B4055.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-10258 0080

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-010
Client ID: FB-11052
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/13/2015
Data file: B4074.D
SIM Data file: B4056.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-10258 0081

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-011
Client ID: MW-25
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/13/2015
Data file: B4075.D
SIM Data file: B4057.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	2.92		1.00	0.341
2-Methylnaphthalene	0.505	J	1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325
Total Target Compounds (17):	3.43	J	* - RL & MDL from SIM run	

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-012
Client ID: MW-19RR
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/13/2015
Data file: B4076.D
SIM Data file: B4058.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-013
Client ID: FB-11062
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/13/2015
Data file: B4077.D
SIM Data file: B4059.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-014
Client ID: MW-24-2
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/13/2015
Data file: B4078.D
SIM Data file: B4060.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	5.38		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 5.38

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-015
Client ID: MW-24-1
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/13/2015
Data file: B4079.D
SIM Data file: B4061.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

E15-10258 0086

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-016
Client ID: MW-26
Date Received: 11/06/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/13/2015
Data file: B4080.D
SIM Data file: B4062.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	12.5		1.00	0.341
2-Methylnaphthalene	8.99		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	13.3		1.00	0.251
Fluorene	3.97		1.00	0.203
Phenanthrene	5.09		1.00	0.225
Anthracene	1.61		1.00	0.258
Fluoranthene	0.606	J	1.00	0.206
Pyrene	0.740	J	1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325
Total Target Compounds (17):	46.8	J	* - RL & MDL from SIM run	

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: E15-10258-018
Client ID: FB-11031
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5947.D
SIM Data file: A5924.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Naphthalene	ND		1.00	0.341
2-Methylnaphthalene	ND		1.00	0.224
Acenaphthylene	ND		1.00	0.246
Acenaphthene	ND		1.00	0.251
Fluorene	ND		1.00	0.203
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Fluoranthene	ND		1.00	0.206
Pyrene	ND		1.00	0.256
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (17): 0

* - RL & MDL from SIM run

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

VOLATILE ORGANICS

VOLATILE ORGANICS QC SUMMARY

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/14/2015

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA151113b	AQUEOUS	G8281.D	92	98	98
E15-10258-002	AQUEOUS	G8282.D	92	99	100
E15-10258-010	AQUEOUS	G8283.D	92	99	98
E15-10258-013	AQUEOUS	G8284.D	93	98	99
E15-10258-017	AQUEOUS	G8285.D	99	99	99
E15-10258-018	AQUEOUS	G8286.D	94	100	98
E15-10258-019	AQUEOUS	G8287.D	103	99	99
E15-10258-001	AQUEOUS	G8288.D	98	99	99
E15-10258-003	AQUEOUS	G8289.D	99	98	101
E15-10258-004	AQUEOUS	G8290.D	100	99	100
E15-10258-005	AQUEOUS	G8291.D	101	98	100
E15-10258-006	AQUEOUS	G8292.D	105	98	102
E15-10258-007	AQUEOUS	G8293.D	104	99	102
E15-10258-008	AQUEOUS	G8294.D	104	99	102
E15-10258-009	AQUEOUS	G8295.D	108	99	102
E15-10258-011	AQUEOUS	G8296.D	110	100	101
E15-10258-012	AQUEOUS	G8297.D	110	99	101
E15-10258-014	AQUEOUS	G8298.D	106	98	102
E15-10258-015	AQUEOUS	G8299.D	112	100	101
LCSA151113b	AQUEOUS	G8300.D	111	100	107
10258-001MS	AQUEOUS	G8301.D	109	100	105
10258-001MSD	AQUEOUS	G8302.D	110	101	106
E15-10258-016	AQUEOUS	G8303.D	107	101	104

	Concentration	DKQPs	Leachate Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	70-130	59-138	43-133
SMC2 = Toluene-d8	50 ppb	70-130	40-133	39-137
SMC3 = Bromofluorobenzene	50 ppb	70-130	42-152	45-145

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference

INTEGRATED ANALYTICAL LABORATORIES

8260

LCS ACCURACY REPORT

Lab ID: LCSA151113b
Date Received:
Date Analyzed: 11/14/2015
LCS Data file: G8300.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	LCS Conc.	%Rec.	#
Dichlorodifluoromethane	50.0	0.0	53.0	106	
Chloromethane	50.0	0.0	46.5	93	
Vinyl chloride	50.0	0.0	52.6	105	
Bromomethane	50.0	0.0	51.1	102	
Chloroethane	50.0	0.0	53.5	107	
Trichlorofluoromethane	50.0	0.0	36.2	72	
Acrolein	150	0.0	139.1	93	
1,1-Dichloroethene	50.0	0.0	51.8	104	
Acetone	50.0	0.0	44.5	89	
Carbon disulfide	50.0	0.0	50.1	100	
Vinyl acetate	50.0	0.0	49.3	99	
Methylene chloride	50.0	0.0	50.7	101	
Acrylonitrile	150.0	0.0	190.2	127	
tert-Butyl alcohol (TBA)	100.0	0.0	82.9	83	
trans-1,2-Dichloroethene	50.0	0.0	51.4	103	
Methyl tert-butyl ether (MTBE)	50.0	0.0	54.6	109	
1,1-Dichloroethane	50.0	0.0	54.0	108	
Diisopropyl ether (DIPE)	50.0	0.0	55.1	110	
cis-1,2-Dichloroethene	50.0	0.0	51.8	104	
2,2-Dichloropropane	50.0	0.0	41.8	84	
2-Butanone (MEK)	50.0	0.0	46.8	94	
Bromochloromethane	50.0	0.0	53.5	107	
Chloroform	50.0	0.0	56.8	114	
1,1,1-Trichloroethane	50.0	0.0	63.4	127	
Carbon tetrachloride	50.0	0.0	55.9	112	
1,1-Dichloropropene	50.0	0.0	54.6	109	
1,2-Dichloroethane (EDC)	50.0	0.0	60.6	121	
Benzene	50.0	0.0	51.4	103	
Trichloroethene	50.0	0.0	58.4	117	
1,2-Dichloropropane	50.0	0.0	53.4	107	
Dibromomethane	50.0	0.0	56.5	113	
1,4-Dioxane	1500	0.0	1412	94	
Bromodichloromethane	50.0	0.0	62.6	125	
2-Chloroethyl vinyl ether	50.0	0.0	58.4	117	
cis-1,3-Dichloropropene	50.0	0.0	53.2	106	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	55.4	111	
Toluene	50.0	0.0	52.9	106	
trans-1,3-Dichloropropene	50.0	0.0	55.7	111	
1,1,2-Trichloroethane	50.0	0.0	54.8	110	
Tetrachloroethene	50.0	0.0	53.6	107	
1,3-Dichloropropane	50.0	0.0	53.7	107	

E15-10258 0092

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA151113b
Date Received:
Date Analyzed: 11/14/2015
LCS Data file: G8300.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#
2-Hexanone	50.0	0.0	53.2	106	
Dibromochloromethane	50.0	0.0	62.9	126	
1,2-Dibromoethane (EDB)	50.0	0.0	55.8	112	
Chlorobenzene	50.0	0.0	53.8	108	
1,1,1,2-Tetrachloroethane	50.0	0.0	65.2	130	
Ethylbenzene	50.0	0.0	54.7	109	
m,p-Xylene	100.0	0.0	104.4	104	
o-Xylene	50.0	0.0	53.5	107	
Styrene	50.0	0.0	54.5	109	
Bromoform	50.0	0.0	46.5	93	
Isopropylbenzene	50.0	0.0	55.9	112	
1,1,2,2-Tetrachloroethane	50.0	0.0	51.7	103	
Bromobenzene	50.0	0.0	54.8	110	
1,2,3-Trichloropropane	50.0	0.0	55.6	111	
n-Propylbenzene	50.0	0.0	55.0	110	
2-Chlorotoluene	50.0	0.0	55.6	111	
1,3,5-Trimethylbenzene	50.0	0.0	55.0	110	
4-Chlorotoluene	50.0	0.0	55.6	111	
tert-Butylbenzene	50.0	0.0	56.5	113	
1,2,4-Trimethylbenzene	50.0	0.0	55.5	111	
sec-Butylbenzene	50.0	0.0	55.5	111	
1,3-Dichlorobenzene	50.0	0.0	54.1	108	
4-Isopropyltoluene	50.0	0.0	55.6	111	
1,4-Dichlorobenzene	50.0	0.0	53.9	108	
n-Butylbenzene	50.0	0.0	54.6	109	
1,2-Dichlorobenzene	50.0	0.0	53.6	107	
1,2-Dibromo-3-chloropropane	50.0	0.0	62.3	125	
1,2,4-Trichlorobenzene	50.0	0.0	54.2	108	
Hexachlorobutadiene	50.0	0.0	55.1	110	
Naphthalene	50.0	0.0	53.6	107	
1,2,3-Trichlorobenzene	50.0	0.0	52.8	106	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	55.2	110	
Methyl acetate	50.0	0.0	50.1	100	
Cyclohexane	50.0	0.0	54.9	110	
Methylcyclohexane	50.0	0.0	51.8	104	

	Leachate Aqueous/Meoh	Soil/Sediment
LCS Recovery Limits	70-130	70-130

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits

E15-10258 0093

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA151113b
Date Received:
Date Analyzed: 11/14/2015
LCS Data file: G8300.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.	#

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
LCS ACCURACY (%REC)	70-130	70-130

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

8260

MS/MSD SPIKE REPORT

Lab ID: E15-10258-001
Client ID: MW-21
Date Received: NA
Date Analyzed: 11/14/2015
MS Data file: G8301.D
MSD Data file: G8302.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
Dichlorodifluoromethane	50.0	0.0	36.7	73		42.1	84		14	
Chloromethane	50.0	0.0	42.5	85		47.6	95		11	
Vinyl chloride	50.0	0.0	47.9	96		51.3	103		7	
Bromomethane	50.0	0.0	47.7	95		50.0	100		5	
Chloroethane	50.0	0.0	48.8	98		52.5	105		7	
Trichlorofluoromethane	50.0	0.0	51.7	103		55.2	110		7	
Acrolein	150	0.0	136	91		133	89		2	
1,1-Dichloroethene	50.0	0.0	45.6	91		48.5	97		6	
Acetone	50.0	0.0	47.5	95		47.0	94		1	
Carbon disulfide	50.0	0.0	45.1	90		48.4	97		7	
Vinyl acetate	50.0	0.0	45.3	91		46.9	94		3	
Methylene chloride	50.0	0.0	46.9	94		49.7	99		6	
Acrylonitrile	150	0.0	170	113		173	115		2	
tert-Butyl alcohol (TBA)	100	0.0	92.1	92		87.9	88		5	
trans-1,2-Dichloroethene	50.0	0.0	47.4	95		49.4	99		4	
Methyl tert-butyl ether (MTBE)	50.0	0.0	51.2	102		54.4	109		6	
1,1-Dichloroethane	50.0	0.0	49.5	99		52.6	105		6	
Diisopropyl ether (DIPE)	50.0	0.0	50.8	102		54.1	108		6	
cis-1,2-Dichloroethene	50.0	0.0	47.6	95		51.4	103		8	
2,2-Dichloropropane	50.0	0.0	35.6	71		36.7	73		3	
2-Butanone (MEK)	50.0	0.0	46.0	92		48.7	97		6	
Bromochloromethane	50.0	0.0	49.7	99		53.3	107		7	
Chloroform	50.0	0.0	52.8	106		55.7	111		5	
1,1,1-Trichloroethane	50.0	0.0	57.2	114		59.9	120		5	
Carbon tetrachloride	50.0	0.0	59.4	119		64.0	128		7	
1,1-Dichloropropene	50.0	0.0	48.4	97		52.4	105		8	
1,2-Dichloroethane (EDC)	50.0	0.0	56.0	112		59.2	118		6	
Benzene	50.0	0.0	48.2	96		51.1	102		6	
Trichloroethene	50.0	0.0	54.5	109		56.5	113		4	
1,2-Dichloropropane	50.0	0.0	51.0	102		54.1	108		6	
Dibromomethane	50.0	0.0	54.4	109		57.2	114		5	
1,4-Dioxane	1,500	0.0	1580	105		1420	95		11	
Bromodichloromethane	50.0	0.0	60.4	121		62.8	126		4	
2-Chloroethyl vinyl ether	50.0	0.0	0.0	0	*$	0.0	0	*$	NC	*$
cis-1,3-Dichloropropene	50.0	0.0	51.0	102		53.5	107		5	
4-Methyl-2-pentanone (MIBK)	50.0	0.0	53.6	107		56.9	114		6	
Toluene	50.0	0.0	49.3	99		51.6	103		5	
trans-1,3-Dichloropropene	50.0	0.0	53.5	107		55.8	112		4	
1,1,2-Trichloroethane	50.0	0.0	51.7	103		54.2	108		5	
Tetrachloroethene	50.0	0.0	49.3	99		52.0	104		5	
1,3-Dichloropropane	50.0	0.0	51.6	103		54.6	109		6	

E15-10258 0095

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: E15-10258-001
Client ID: MW-21
Date Received: NA
Date Analyzed: 11/14/2015
MS Data file: G8301.D
MSD Data file: G8302.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
2-Hexanone	50.0	0.0	52.4	105		54.8	110		4	
Dibromochloromethane	50.0	0.0	61.4	123		63.9	128		4	
1,2-Dibromoethane (EDB)	50.0	0.0	53.0	106		56.5	113		6	
Chlorobenzene	50.0	0.0	49.3	99		52.4	105		6	
1,1,1,2-Tetrachloroethane	50.0	0.0	59.6	119		63.7	127		7	
Ethylbenzene	50.0	0.0	49.8	100		53.1	106		6	
m,p-Xylene	100	0.0	96.5	97		101.6	102		5	
o-Xylene	50.0	0.0	50.0	100		52.0	104		4	
Styrene	50.0	0.0	51.3	103		54.2	108		5	
Bromoform	50.0	0.0	60.2	120		58.1	116		4	
Isopropylbenzene	50.0	0.0	51.1	102		53.7	107		5	
1,1,2,2-Tetrachloroethane	50.0	0.0	48.6	97		52.0	104		7	
Bromobenzene	50.0	0.0	50.8	102		54.0	108		6	
1,2,3-Trichloropropane	50.0	0.0	52.5	105		55.3	111		5	
n-Propylbenzene	50.0	0.0	50.7	101		53.0	106		4	
2-Chlorotoluene	50.0	0.0	51.2	102		54.2	108		6	
1,3,5-Trimethylbenzene	50.0	0.0	51.2	102		53.6	107		5	
4-Chlorotoluene	50.0	0.0	51.2	102		54.2	108		6	
tert-Butylbenzene	50.0	0.0	51.7	103		53.7	107		4	
1,2,4-Trimethylbenzene	50.0	0.0	51.9	104		53.7	107		3	
sec-Butylbenzene	50.0	0.0	50.8	102		53.1	106		4	
1,3-Dichlorobenzene	50.0	0.0	50.9	102		52.7	105		3	
4-Isopropyltoluene	50.0	0.0	51.0	102		53.3	107		4	
1,4-Dichlorobenzene	50.0	0.0	50.2	100		52.5	105		4	
n-Butylbenzene	50.0	0.0	51.1	102		52.7	105		3	
1,2-Dichlorobenzene	50.0	0.0	49.7	99		52.8	106		6	
1,2-Dibromo-3-chloropropane	50.0	0.0	59.4	119		63.5	127		7	
1,2,4-Trichlorobenzene	50.0	0.0	51.3	103		54.4	109		6	
Hexachlorobutadiene	50.0	0.0	50.6	101		53.5	107		6	
Naphthalene	50.0	0.0	51.4	103		55.5	111		8	
1,2,3-Trichlorobenzene	50.0	0.0	51.8	104		54.6	109		5	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	39.8	80		45.5	91		13	
Methyl acetate	50.0	0.0	48.6	97		50.8	102		4	
Cyclohexane	50.0	0.0	41.5	83		47.0	94		12	
Methylcyclohexane	50.0	0.0	38.7	77		43.3	87		11	

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
NC Not calculable

E15-10258 0096

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: E15-10258-001
Client ID: MW-21
Date Received: NA
Date Analyzed: 11/14/2015
MS Data file: G8301.D
MSD Data file: G8302.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#

2-Chloroethyl vinyl ether has zero spike recovery in the MS/MSD. This is due to the HCL acid preservation used on the samples. It is a known phenomenon, that this compound decomposes in the presence of acid.

As per SW-846 8260C, up to 10% of the compounds may be out , but must be within 40-160%
As per NJDEP DKQPs, only the following compounds may be in the 40-160% range:
Acetone; Bromomethane; 2-Butanone (MEK); Carbon disulfide; Chloroethane; Chloromethane
1,2-Dibromo-3-chloropropane; Dichlorodifluoromethane; 1,4-Dioxane; 2-Hexanone
Naphthalene; 4-Methyl-2-pentanone (MIBK); Trichlorofluoromethane

	Leachate Aqueous/Meoh	Soil/Sediment
MS/MSD Recovery Limits	70-130	70-130
MS/MSD RPD Limits (IAL/DKQP)	30/20	30/30

Column used to flag recovery and RPD values that did not meet criteria
* Values outside of QC limits
S Values outside of NJ DKQP limits
NC Not calculable

VOLATILE METHOD BLANK SUMMARY

Lab File ID: G8281.D

Instrument ID: MSD_G

Date Analyzed: 11/14/2015

Time Analyzed: 00:51

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
FB-11042015	E15-10258-002	11/14/2015	1:20
FB-11052015	E15-10258-010	11/14/2015	1:48
FB-11062015	E15-10258-013	11/14/2015	2:17
TRIP_BLANK	E15-10258-017	11/14/2015	2:45
FB-110315	E15-10258-018	11/14/2015	3:13
TRIP_BLANK	E15-10258-019	11/14/2015	3:42
MW-21	E15-10258-001	11/14/2015	4:10
MW-22	E15-10258-003	11/14/2015	4:38
MW-20	E15-10258-004	11/14/2015	5:06
MW-18	E15-10258-005	11/14/2015	5:34
MW-11	E15-10258-006	11/14/2015	6:03
MW-23	E15-10258-007	11/14/2015	6:31
MW-16	E15-10258-008	11/14/2015	6:59
MW-13	E15-10258-009	11/14/2015	7:28
MW-25	E15-10258-011	11/14/2015	7:56
MW-19RR	E15-10258-012	11/14/2015	8:24
MW-24-2	E15-10258-014	11/14/2015	8:52
MW-24-1	E15-10258-015	11/14/2015	9:21
LCSA151113b	LCSA151113b	11/14/2015	9:49
10258-001MS	10258-001MS	11/14/2015	10:18
10258-001MSD	10258-001MSD	11/14/2015	10:46
MW-26	E15-10258-016	11/14/2015	11:21

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G8255.D

Inst ID: MSD_G

BFB Injection Date: 11/13/2015

BFB Injection Time: 12:33

m/z	Ion Abudance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	24.2
75	30.0 - 60.0% of mass 95	54.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	56.5
175	5.0 - 9.0% of mass 174	4.1 (7.2)1
176	95.0 - 101.0% of mass 174	55.1 (97.5)1
177	5.0 - 9.0% of mass 176	3.6 (6.5)2
	1-Value is % mass 174	2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC100	G8260.D	11/13/2015	14:56
ICC001	ICC001	G8256.D	11/13/2015	13:01
ICC002	ICC002	G8257.D	11/13/2015	13:30
ICC005	ICC005	G8258.D	11/13/2015	13:58
ICC020	ICC020	G8259.D	11/13/2015	14:27
ICC150	ICC150	G8261.D	11/13/2015	15:24
ICC200	ICC200	G8262.D	11/13/2015	15:52
ICV100	ICV100	G8264.D	11/13/2015	16:49
BLKA151113a	BLKA151113a	G8266.D	11/13/2015	17:46
FB	E15-10156-032	G8267.D	11/13/2015	18:14
FIELD_BLANK-TB	E15-10324-021	G8268.D	11/13/2015	18:42
WR-GW3	E15-10324-022	G8269.D	11/13/2015	19:11
MW-1	E15-10355-001	G8270.D	11/13/2015	19:39
MW-1(C)/9.7	E15-10201-001	G8271.D	11/13/2015	20:08
ZPZ-1	E15-10096-001	G8272.D	11/13/2015	20:36
TMP-1/16.6	E15-10217-001	G8273.D	11/13/2015	21:05
LCSA151113a	E15-10295-001	G8274.D	11/13/2015	21:33
10355-001MS	LCSA151113a	G8275.D	11/13/2015	22:01
10355-001MSD	10355-001MS	G8276.D	11/13/2015	22:29
	10355-001MSD	G8277.D	11/13/2015	22:57

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G8278.D

Inst ID: MSD_G

BFB Injection Date: 11/13/2015

BFB Injection Time: 23:26

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	23.0			
75	30.0 - 60.0% of mass 95	52.7			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.1			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	51.3			
175	5.0 - 9.0% of mass 174	3.7	(	7.3	)1
176	95.0 - 101.0% of mass 174	50.4	(	98.2	)1
177	5.0 - 9.0% of mass 176	3.4	(	6.7	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV100	G8279.D	11/13/2015	23:54
BLKA151113b	BLKA151113b	G8281.D	11/14/2015	0:51
FB-11042015	E15-10258-002	G8282.D	11/14/2015	1:20
FB-11052015	E15-10258-010	G8283.D	11/14/2015	1:48
FB-11062015	E15-10258-013	G8284.D	11/14/2015	2:17
TRIP_BLANK	E15-10258-017	G8285.D	11/14/2015	2:45
FB-110315	E15-10258-018	G8286.D	11/14/2015	3:13
TRIP_BLANK	E15-10258-019	G8287.D	11/14/2015	3:42
MW-21	E15-10258-001	G8288.D	11/14/2015	4:10
MW-22	E15-10258-003	G8289.D	11/14/2015	4:38
MW-20	E15-10258-004	G8290.D	11/14/2015	5:06
MW-18	E15-10258-005	G8291.D	11/14/2015	5:34
MW-11	E15-10258-006	G8292.D	11/14/2015	6:03
MW-23	E15-10258-007	G8293.D	11/14/2015	6:31
MW-16	E15-10258-008	G8294.D	11/14/2015	6:59
MW-13	E15-10258-009	G8295.D	11/14/2015	7:28
MW-25	E15-10258-011	G8296.D	11/14/2015	7:56
MW-19RR	E15-10258-012	G8297.D	11/14/2015	8:24
MW-24-2	E15-10258-014	G8298.D	11/14/2015	8:52
MW-24-1	E15-10258-015	G8299.D	11/14/2015	9:21

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G8278.D

Inst ID: MSD_G

BFB Injection Date : 11/13/201

BFB Injection Time: 23:26

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	23.0			
75	30.0 - 60.0% of mass 95	52.7			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.1			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	51.3			
175	5.0 - 9.0% of mass 174	3.7	(	7.3	)1
176	95.0 - 101.0% of mass 174	50.4	(	98.2	)1
177	5.0 - 9.0% of mass 176	3.4	(	6.7	)2
	1-Value is % mass 174	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
LCSA151113b	LCSA151113b	G8300.D	11/14/2015	9:49
10258-001MS	10258-001MS	G8301.D	11/14/2015	10:18
10258-001MSD	10258-001MSD	G8302.D	11/14/2015	10:46
MW-26	E15-10258-016	G8303.D	11/14/2015	11:21

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G8260.D

Instrument ID: MSD_G

Date Analyzed: 11/13/2015

Time Analyzed: 14:56

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	449295	6.20	822134	7.02	817362	10.36
	UPPER LIMIT	898590	6.70	1644268	7.52	1634724	10.86
	LOWER LIMIT	224647.5	5.70	411067	6.52	408681	9.86
	LAB SAMPLE ID						
01	ICC001	501089	6.20	872511	7.02	873221	10.36
02	ICC002	511326	6.20	892157	7.02	883044	10.37
03	ICC005	501399	6.20	877644	7.02	879423	10.37
04	ICC020	472817	6.20	832673	7.02	837084	10.37
05	ICC150	474832	6.20	877108	7.02	865444	10.36
06	ICC200	469758	6.20	895900	7.02	879232	10.37
07	ICV100	499569	6.20	906810	7.02	893968	10.36
08	BLKA151113a	538674	6.20	941667	7.02	921093	10.36
09	E15-10156-032	483025	6.20	843896	7.02	830879	10.37
10	E15-10324-021	502083	6.20	863862	7.02	852275	10.37
11	E15-10324-022	426593	6.20	747222	7.02	734868	10.36
12	E15-10355-001	412161	6.20	707556	7.02	700980	10.36
13	E15-10201-001	313012	6.20	550479	7.02	553312	10.37
14	E15-10096-001	302116	6.20	524765	7.02	529746	10.36
15	E15-10217-001	404105	6.20	698259	7.02	680555	10.36
16	E15-10295-001	460183	6.20	792516	7.02	790647	10.37
17	LCSA151113a	503889	6.20	888901	7.02	885575	10.36
18	10355-001MS	465010	6.20	816355	7.02	808400	10.37
19	10355-001MSD	475178	6.20	837254	7.02	820830	10.37
20							
21							
22							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G8279.D

Date Analyzed: 11/13/2015

Instrument ID: MSD_G

Time Analyzed: 23:54

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	376254	6.20	682954	7.02	679001	10.36
	UPPER LIMIT	752508	6.70	1365908	7.52	1358002	10.86
	LOWER LIMIT	188127	5.70	341477	6.52	339500.5	9.86
	LAB SAMPLE ID						
01	BLKA151113b	479616	6.20	843360	7.02	824728	10.37
02	E15-10258-002	488052	6.20	844369	7.02	829292	10.37
03	E15-10258-010	476055	6.20	820060	7.02	804172	10.37
04	E15-10258-013	493459	6.20	859844	7.02	827974	10.36
05	E15-10258-017	354719	6.20	635001	7.02	625691	10.36
06	E15-10258-018	492041	6.20	844358	7.02	831233	10.37
07	E15-10258-019	287121	6.20	522205	7.02	522606	10.37
08	E15-10258-001	438450	6.20	756692	7.02	741051	10.36
09	E15-10258-003	468057	6.20	808567	7.02	789761	10.36
10	E15-10258-004	439730	6.20	752599	7.02	742733	10.36
11	E15-10258-005	430258	6.20	735646	7.02	721294	10.37
12	E15-10258-006	415435	6.20	726783	7.02	716719	10.36
13	E15-10258-007	416736	6.20	717612	7.02	708505	10.36
14	E15-10258-008	392087	6.20	665500	7.02	666033	10.36
15	E15-10258-009	389403	6.20	672022	7.02	670732	10.36
16	E15-10258-011	280511	6.20	493304	7.02	499905	10.36
17	E15-10258-012	268157	6.20	467682	7.02	474772	10.36
18	E15-10258-014	377474	6.20	639028	7.02	622797	10.36
19	E15-10258-015	260089	6.20	456682	7.02	465612	10.36
20	LCSA151113b	355199	6.20	626422	7.02	620083	10.36
21	10258-001MS	380455	6.20	657970	7.02	668074	10.36
22	10258-001MSD	358028	6.20	625364	7.02	632094	10.36

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G8279.D

Date Analyzed: 11/13/2015

Instrument ID: MSD_G

Time Analyzed: 23:54

	50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	376254	6.20	682954	7.02	679001	10.36
	UPPER LIMIT	752508	6.70	1365908	7.52	1358002	10.86
	LOWER LIMIT	188127	5.70	341477	6.52	339500.5	9.86
	LAB SAMPLE ID						
23	E15-10258-016	388564	6.21	663307	7.02	679134	10.37
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8288.D
Acq On : 14 Nov 2015 4:10
Operator : Sylvia
Sample : MW-21,E15-10258-001,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Nov 14 14:25:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	438450	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	756692	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	741051	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	460636	48.75	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 97.50%			
41) Toluene-d8	8.70	98	974133	49.28	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.56%			
59) Bromofluorobenzene	11.77	95	502716	49.34	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 98.68%			

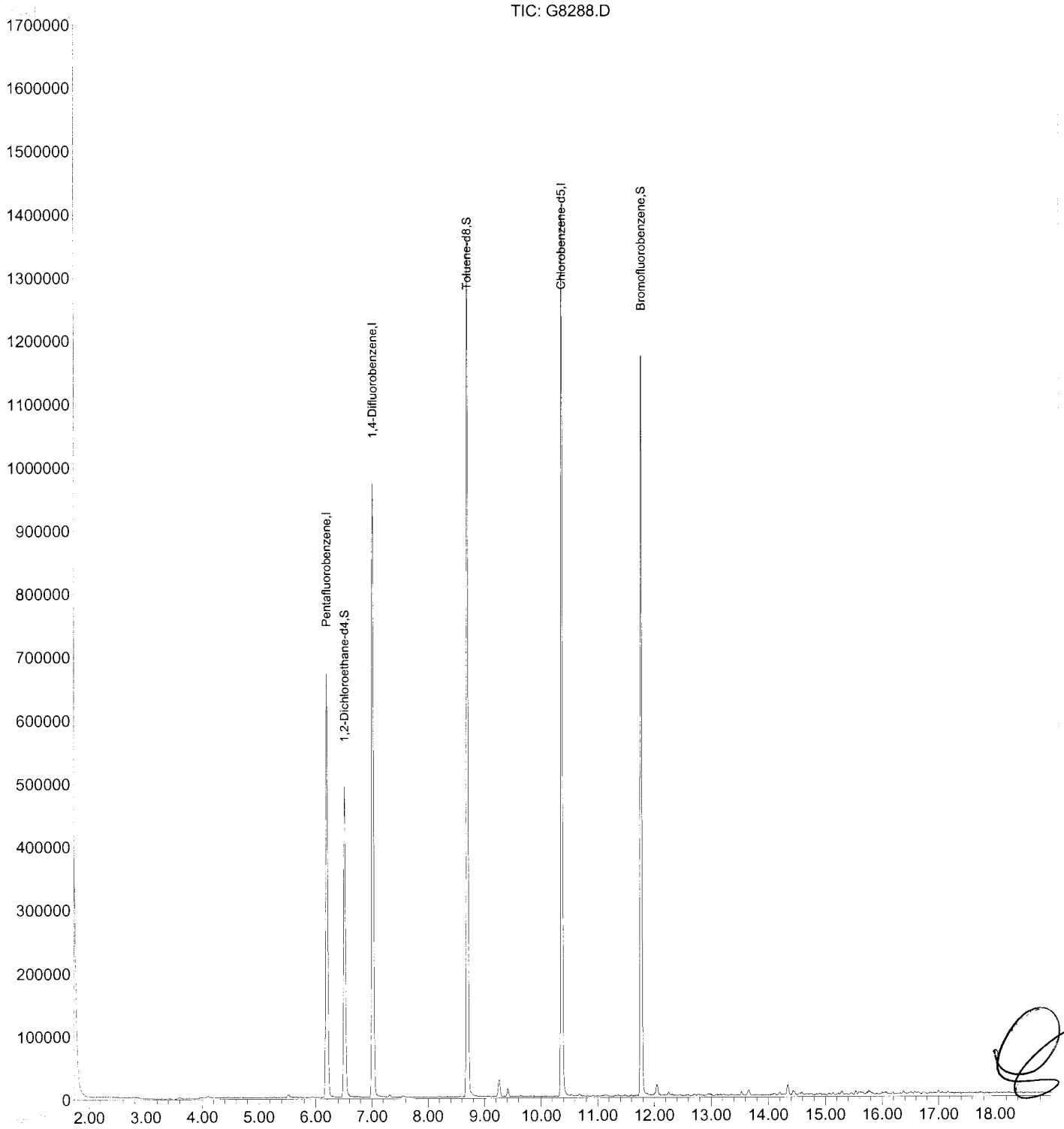
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

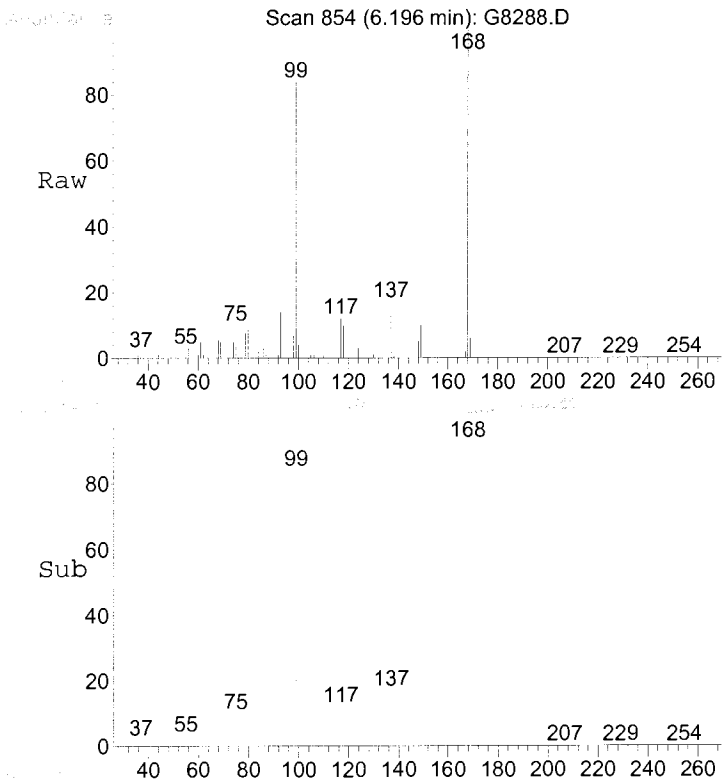
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8288.D
Acq On : 14 Nov 2015 4:10
Operator : Sylvia
Sample : MW-21,E15-10258-001,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 34 Sample Multiplier: 1

Quant Time: Nov 14 14:25:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration



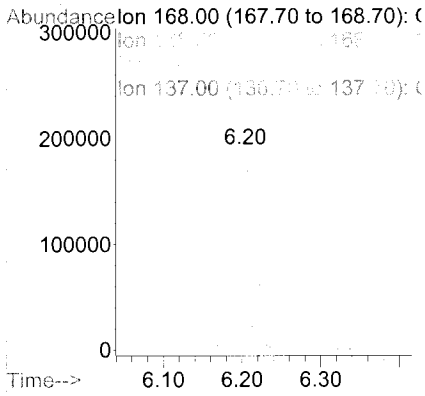
E15-10258 0107

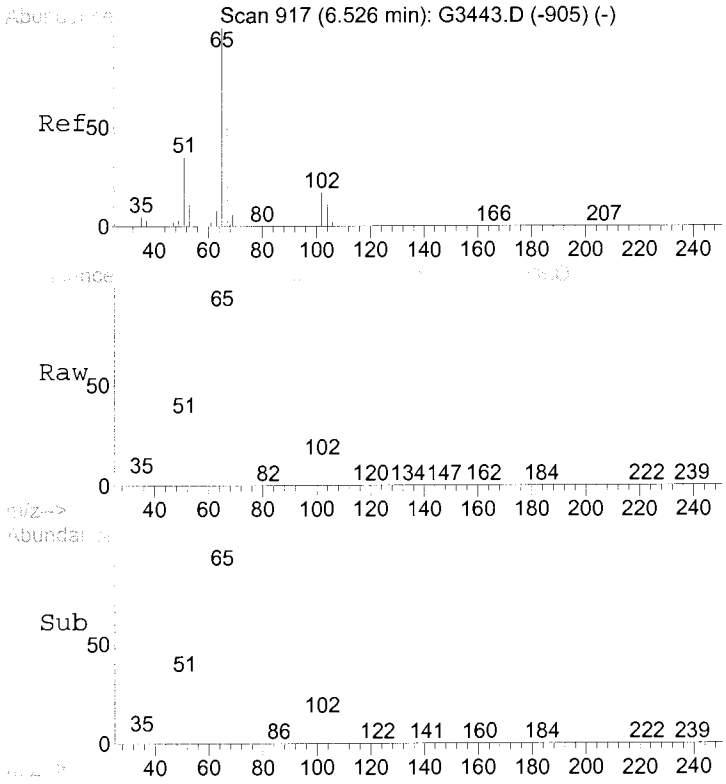


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8288.D
Acq: 14 Nov 2015 4:10

Tgt Ion:168 Resp: 438450

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

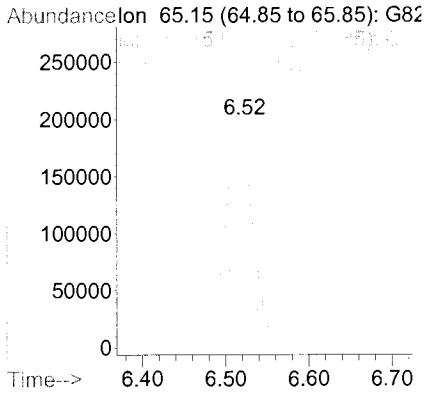


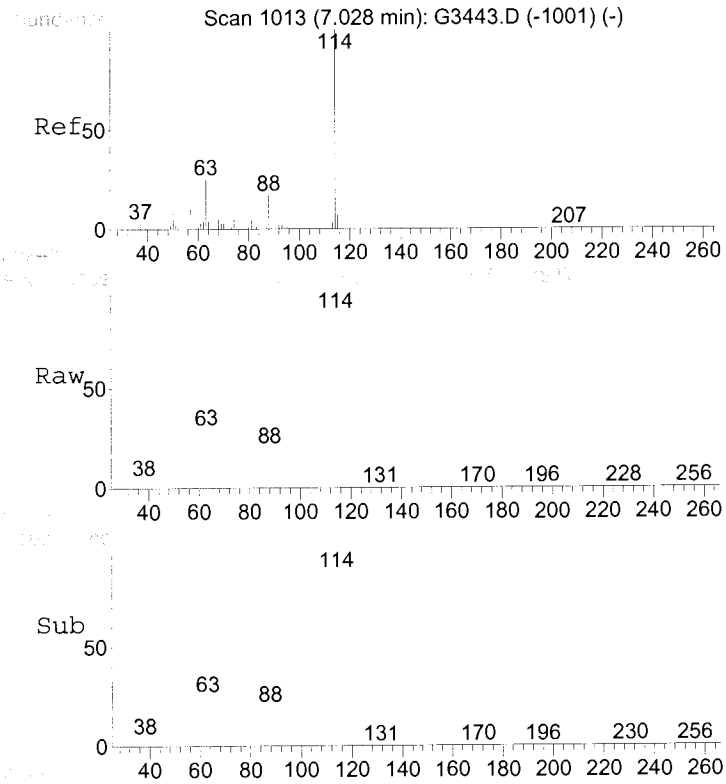


#30
1,2-Dichloroethane-d4
Concen: 48.75 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8288.D
Acq: 14 Nov 2015 4:10

Tgt Ion: 65 Resp: 460636

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.8	43.2	64.8

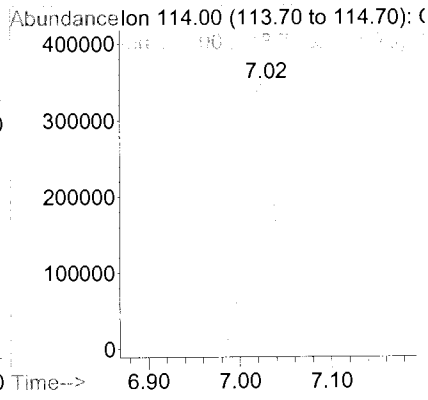


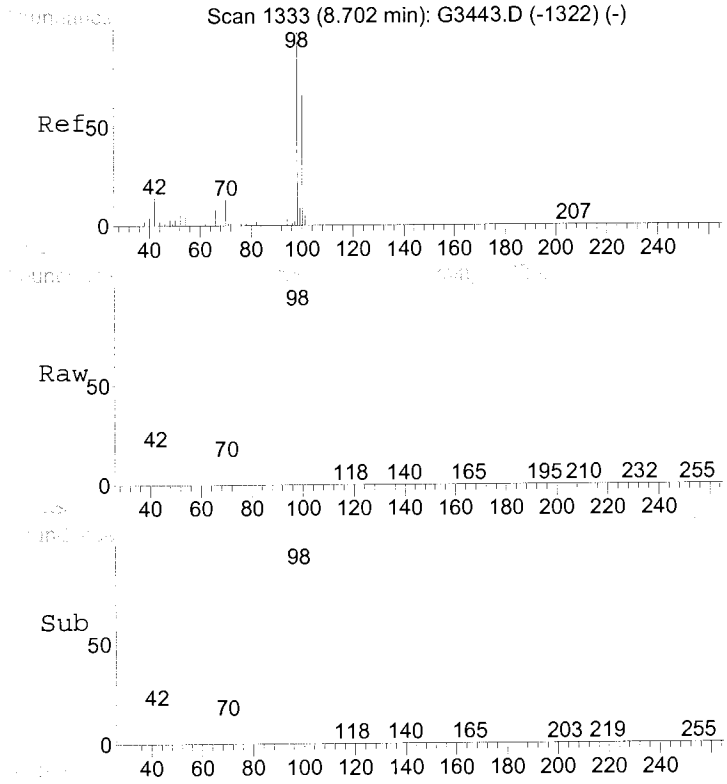


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8288.D
Acq: 14 Nov 2015 4:10

Tgt Ion:114 Resp: 756692

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

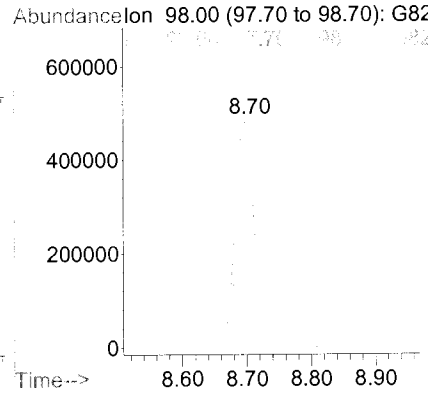


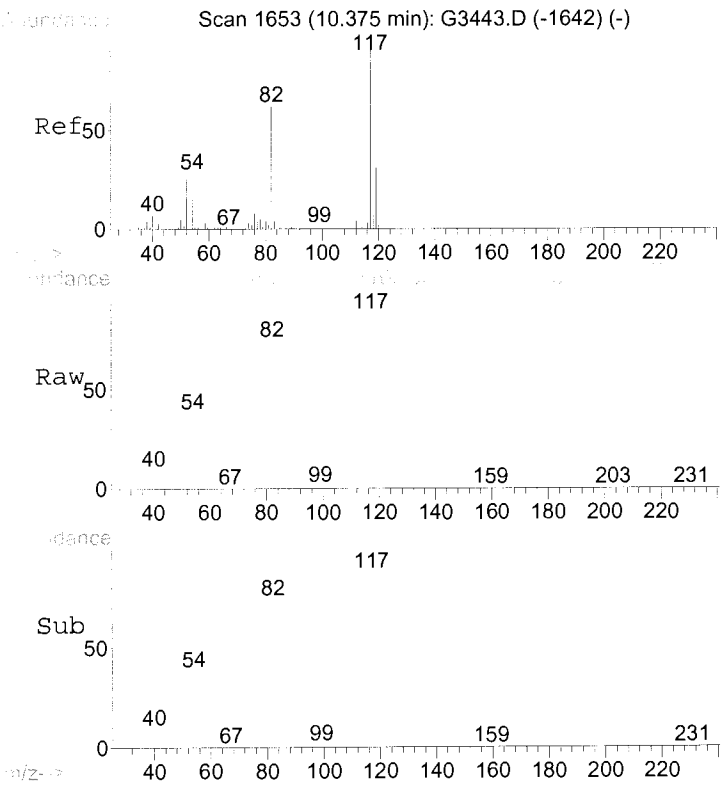


#41
Toluene-d8
Concen: 49.28 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8288.D
Acq: 14 Nov 2015 4:10

Tgt Ion: 98 Resp: 974133

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.4	53.4	80.0

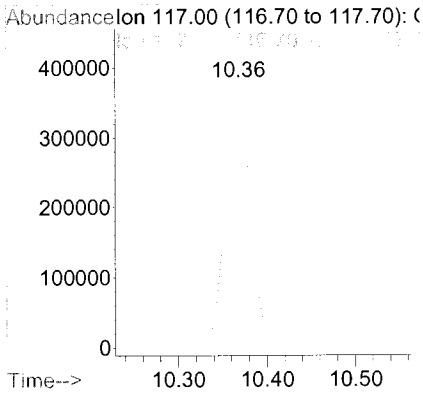


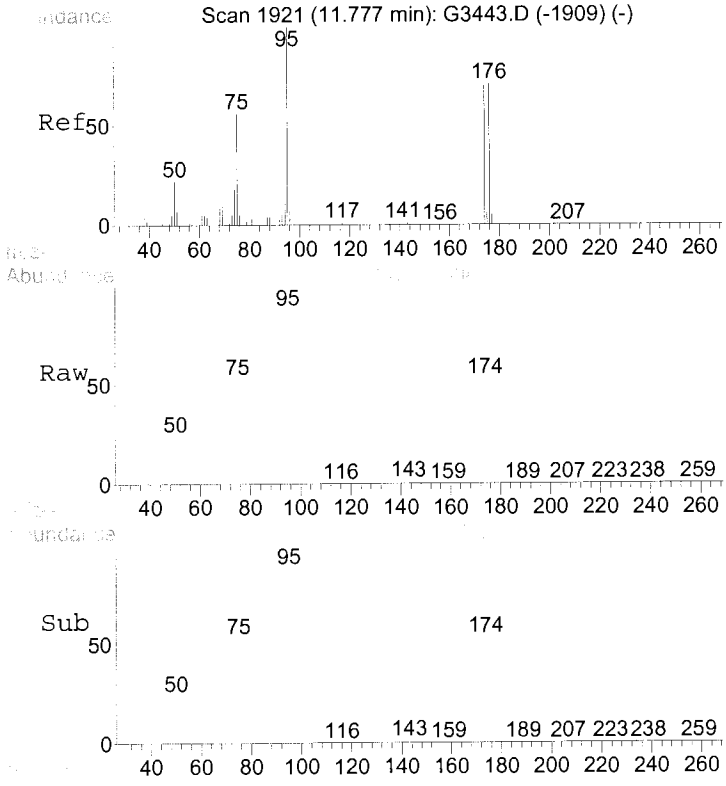


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8288.D
Acq: 14 Nov 2015 4:10

Tgt Ion:117 Resp: 741051

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

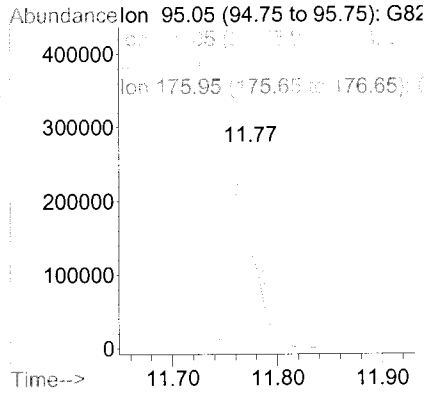




#59
Bromofluorobenzene
Concen: 49.34 UG
RT: 11.77 min Scan# 1920
Delta R.T. 0.00 min
Lab File: G8288.D
Acq: 14 Nov 2015 4:10

Tgt Ion: 95 Resp: 502716

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.8	62.9	94.3#
176	53.1	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8288.D
Acq On : 14 Nov 2015 4:10
Operator : Sylvia
Sample : MW-21,E15-10258-001,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 34 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	842	854	874	rBV	673618	1555477	56.31%	12.291%
2	6.516	903	915	938	rBV	491941	1128817	40.86%	8.920%
3	7.023	999	1012	1036	rBV	972210	2102516	76.11%	16.614%
4	8.697	1322	1332	1369	rBV	1362475	2762430	100.00%	21.828%
5	9.261	1430	1440	1451	rBV	27155	65227	2.36%	0.515%
6	10.365	1638	1651	1678	rBV	1419718	2747208	99.45%	21.708%
7	11.772	1910	1920	1937	rBV	1172007	2207057	79.90%	17.440%
8	12.044	1959	1972	1995	rVB	16840	46077	1.67%	0.364%
9	14.345	2399	2412	2424	rVB	16634	40632	1.47%	0.321%

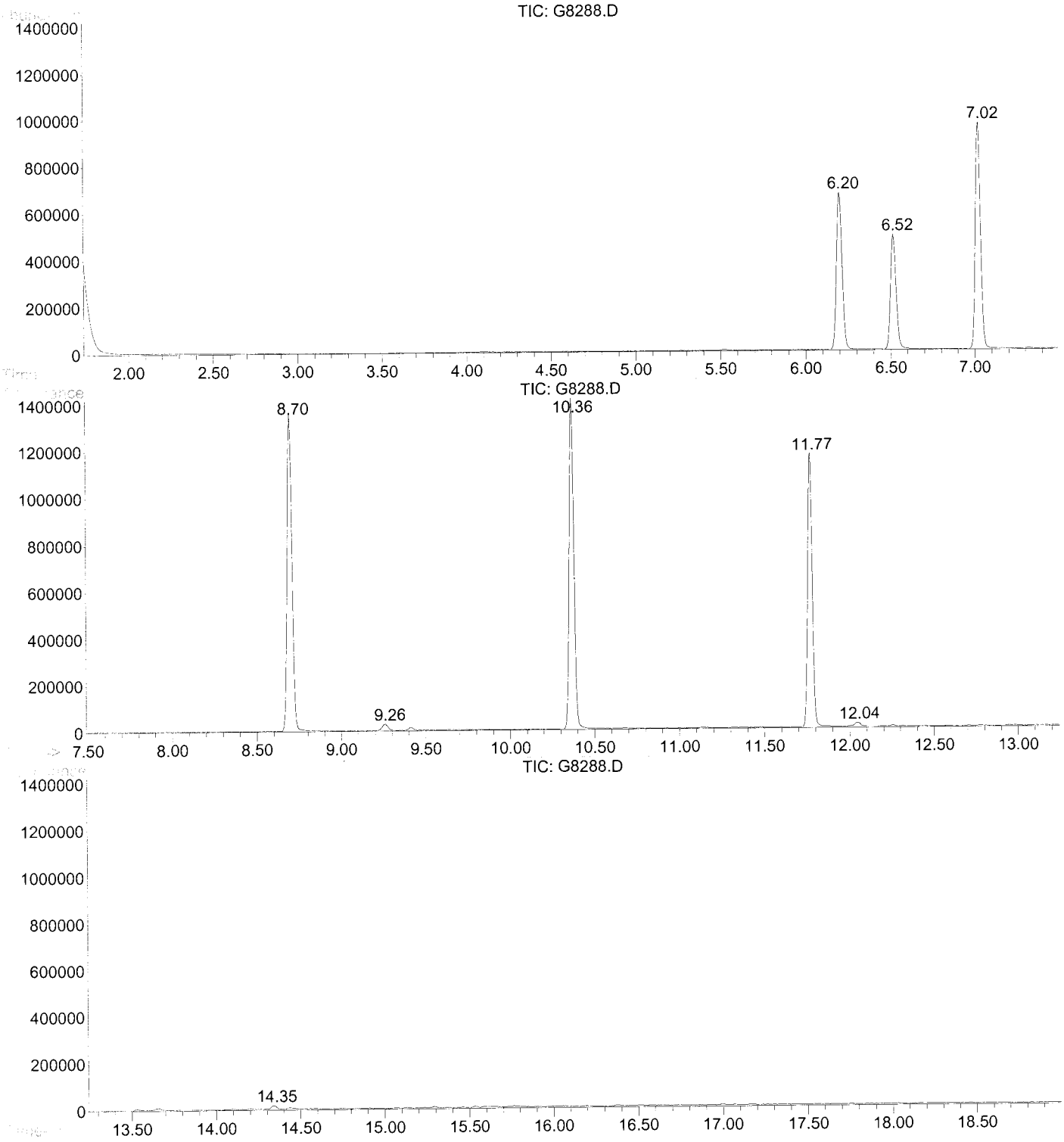
Sum of corrected areas: 12655441

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8288.D
Acq On : 14 Nov 2015 4:10
Operator : Sylvia
Sample : MW-21,E15-10258-001,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 34 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-13-15\
Data File : G8282.D
Acq On : 14 Nov 2015 1:20
Operator : Sylvia
Sample : FB-11042015,E15-10258-002,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Nov 14 13:53:06 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	488052	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	844369	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	829292	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	481634	45.79	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 91.58%			
41) Toluene-d8	8.70	98	1092818	49.54	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.08%			
59) Bromofluorobenzene	11.77	95	571694	50.14	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 100.28%			

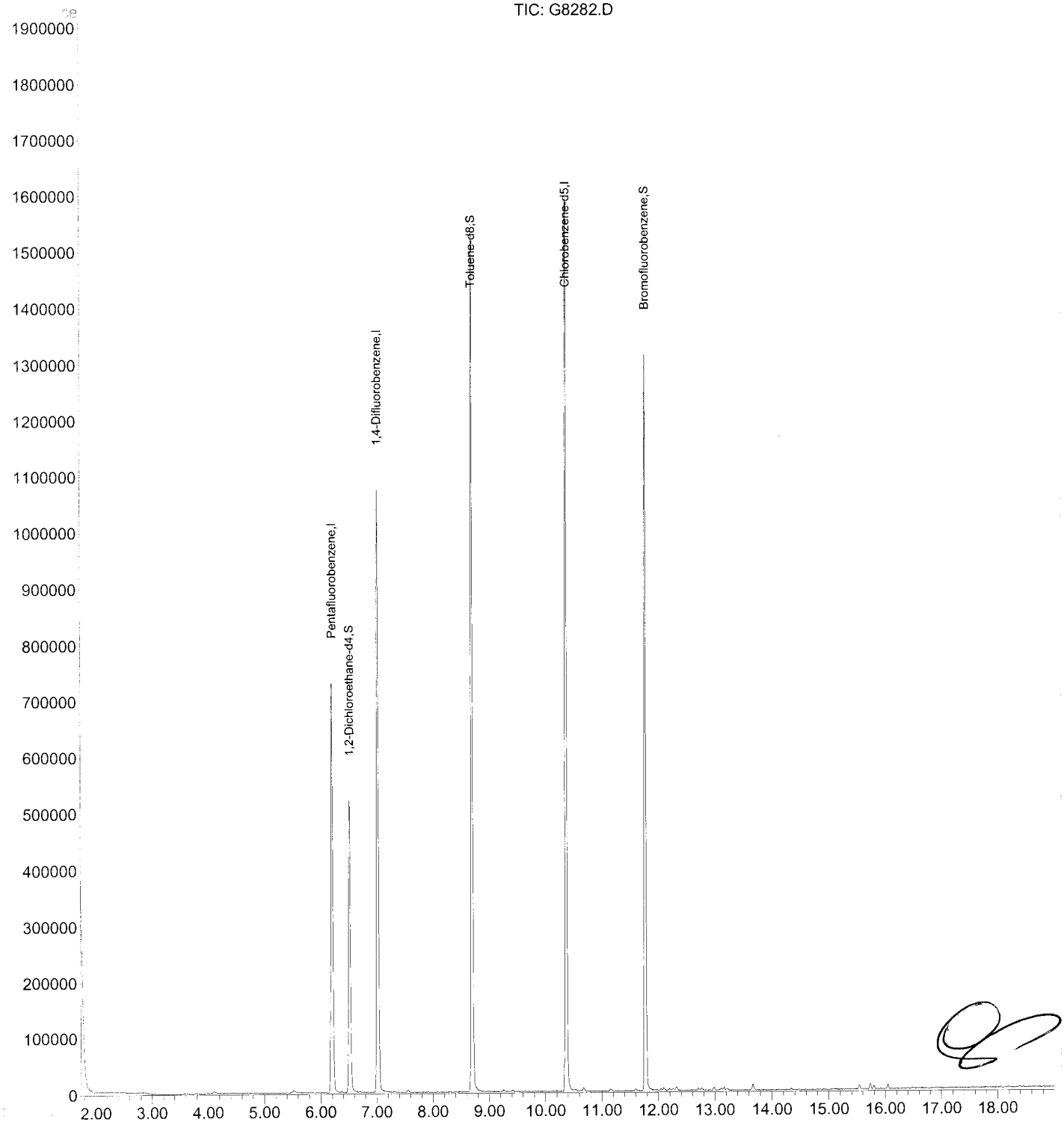
Target Compounds	Qvalue

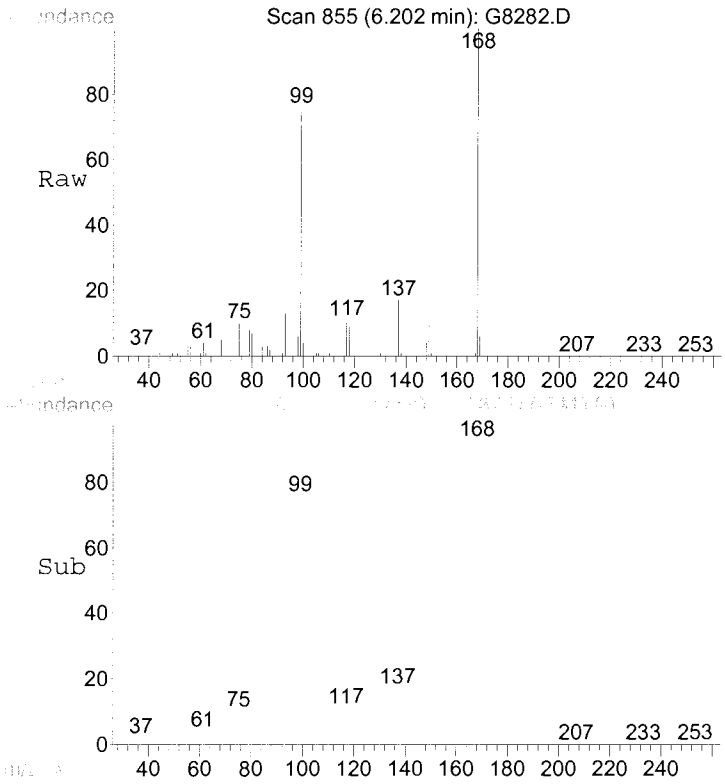
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-13-15\
Data File : G8282.D
Acq On : 14 Nov 2015 1:20
Operator : Sylvia
Sample : FB-11042015,E15-10258-002,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Nov 14 13:53:06 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

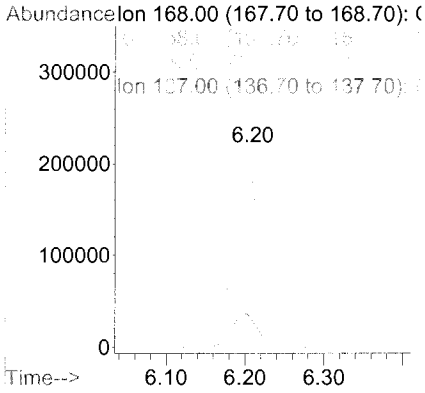


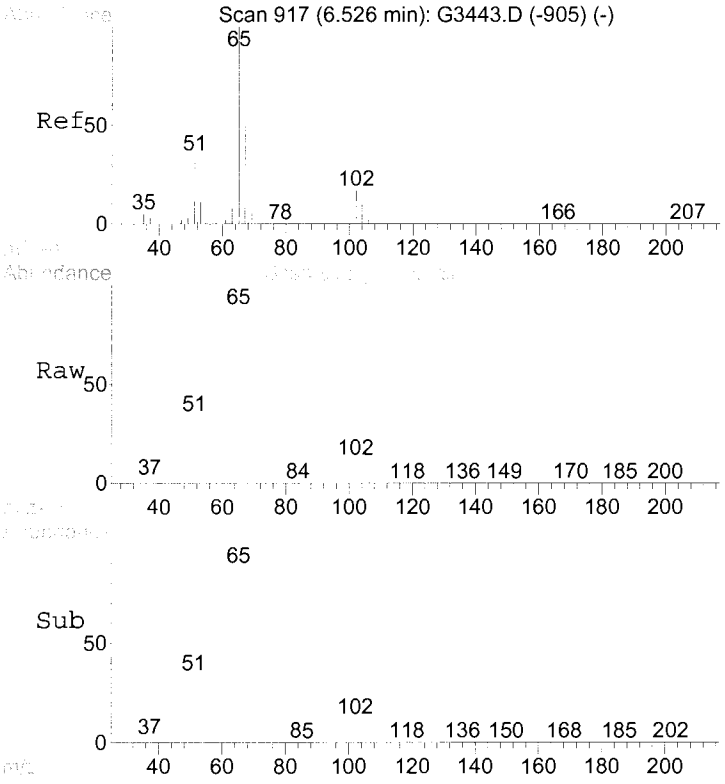


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8282.D
Acq: 14 Nov 2015 1:20

Tgt Ion:168 Resp: 488052

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	81.5	0.0	0.0#
137	16.8	0.0	0.0#

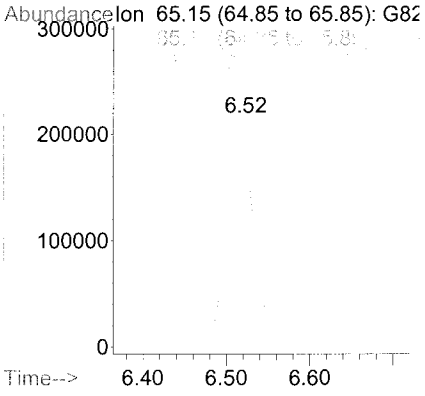


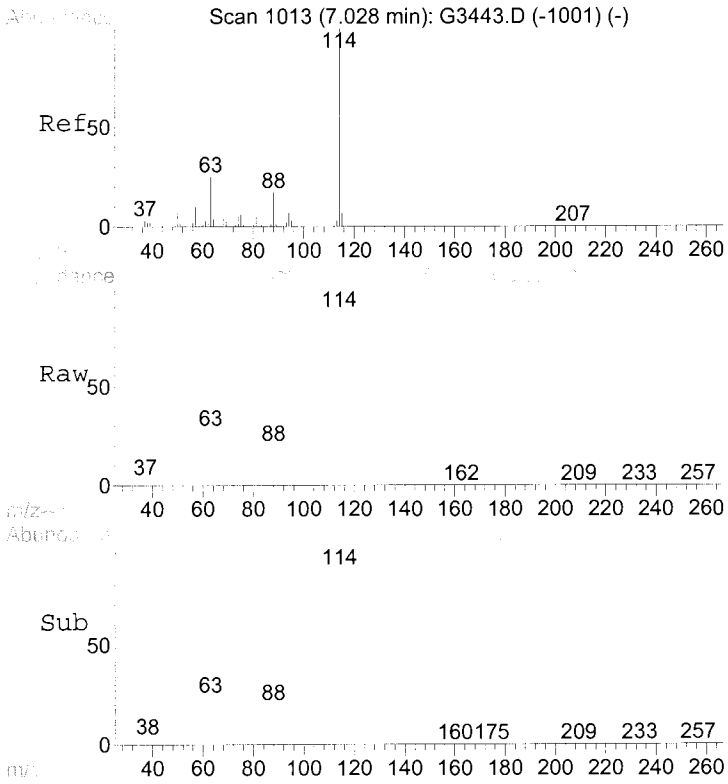


#30
1,2-Dichloroethane-d4
Concen: 45.79 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8282.D
Acq: 14 Nov 2015 1:20

Tgt Ion: 65 Resp: 481634

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	46.1	43.2	64.8

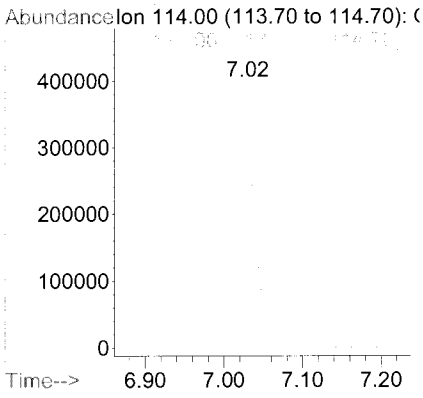


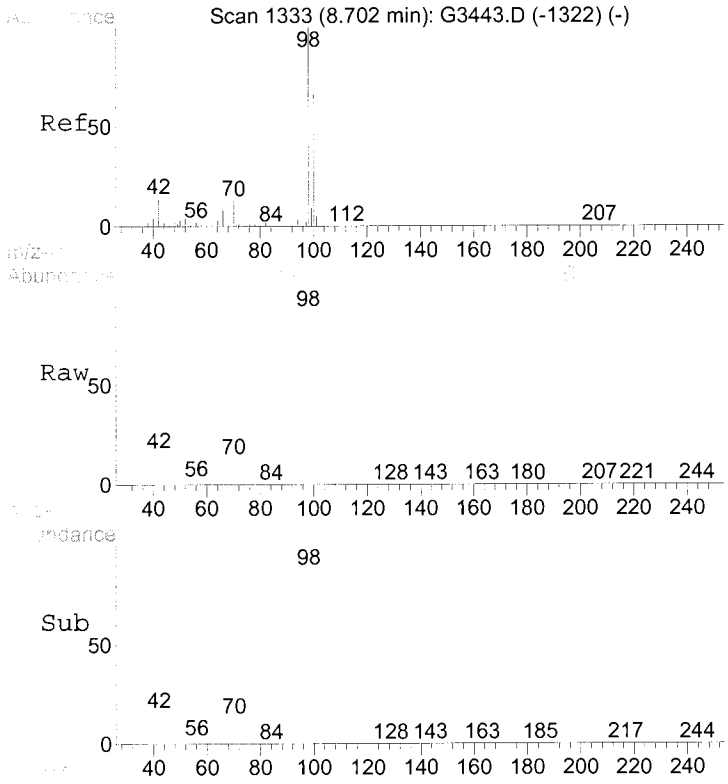


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8282.D
Acq: 14 Nov 2015 1:20

Tgt Ion:114 Resp: 844369

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

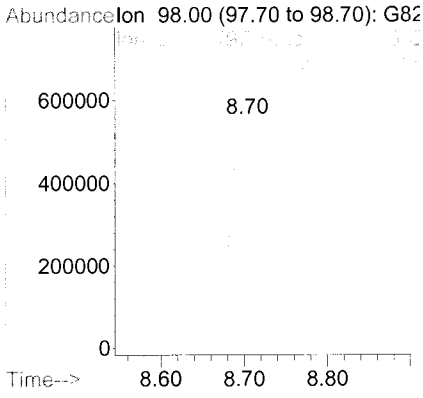


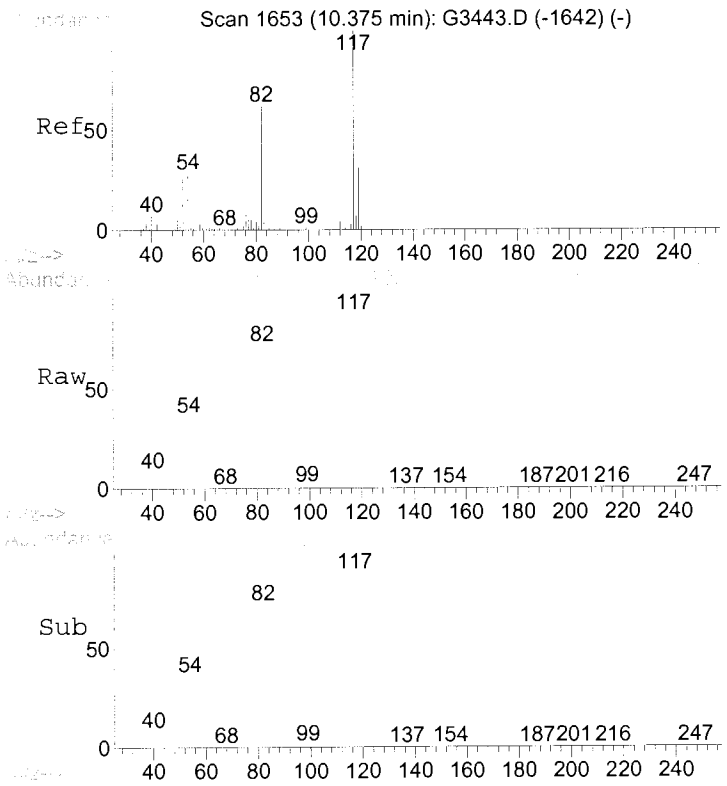


#41
Toluene-d8
Concen: 49.54 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8282.D
Acq: 14 Nov 2015 1:20

Tgt Ion: 98 Resp: 1092818

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.3	53.4	80.0

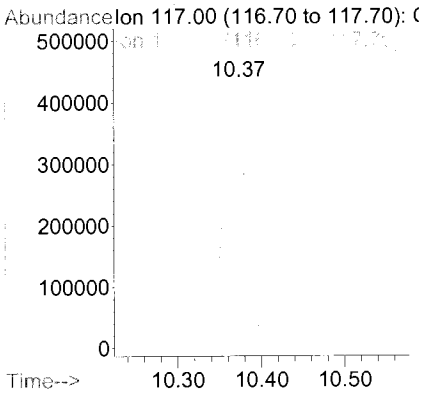


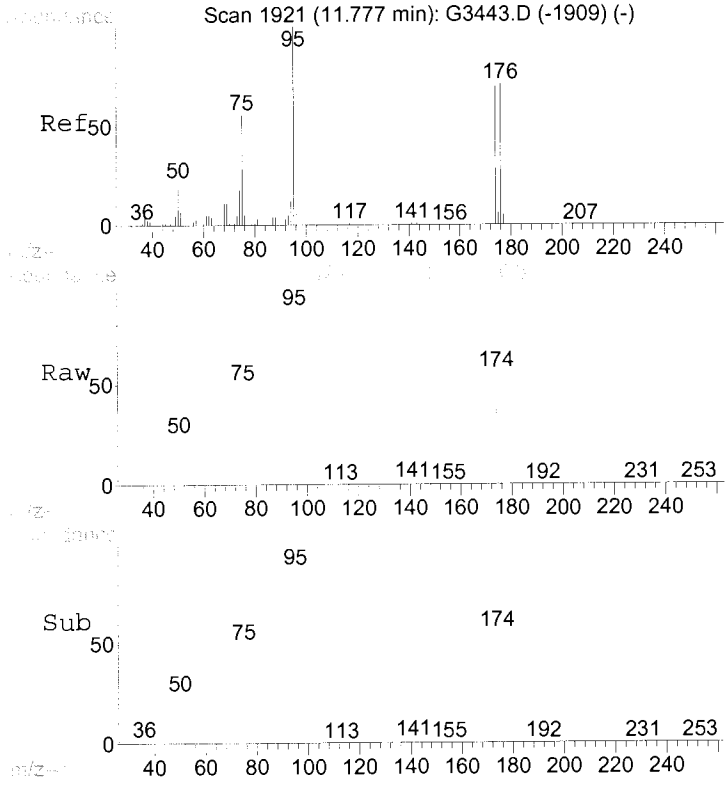


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.37 min Scan# 1652
Delta R.T. 0.00 min
Lab File: G8282.D
Acq: 14 Nov 2015 1:20

Tgt Ion:117 Resp: 829292

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

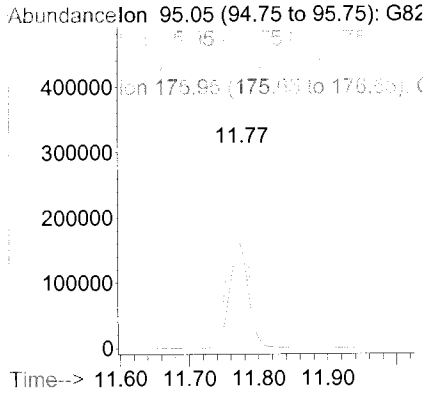




#59
Bromofluorobenzene
Concen: 50.14 UG
RT: 11.77 min Scan# 1920
Delta R.T. 0.00 min
Lab File: G8282.D
Acq: 14 Nov 2015 1:20

Tgt Ion: 95 Resp: 571694

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.8	62.9	94.3#
176	52.8	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8282.D
Acq On : 14 Nov 2015 1:20
Operator : Sylvia
Sample : FB-11042015,E15-10258-002,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 28 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.202	840	855	880	rBV	730468	1703146	55.71%	12.361%
2	6.515	902	915	937	rBV	519423	1194933	39.08%	8.672%
3	7.018	1000	1011	1034	rBV	1072816	2294924	75.06%	16.656%
4	8.697	1319	1332	1367	rBV	1545757	3052523	99.84%	22.154%
5	10.370	1641	1652	1675	rBV	1591743	3057405	100.00%	22.189%
6	11.772	1905	1920	1945	rBV	1311884	2475831	80.98%	17.968%

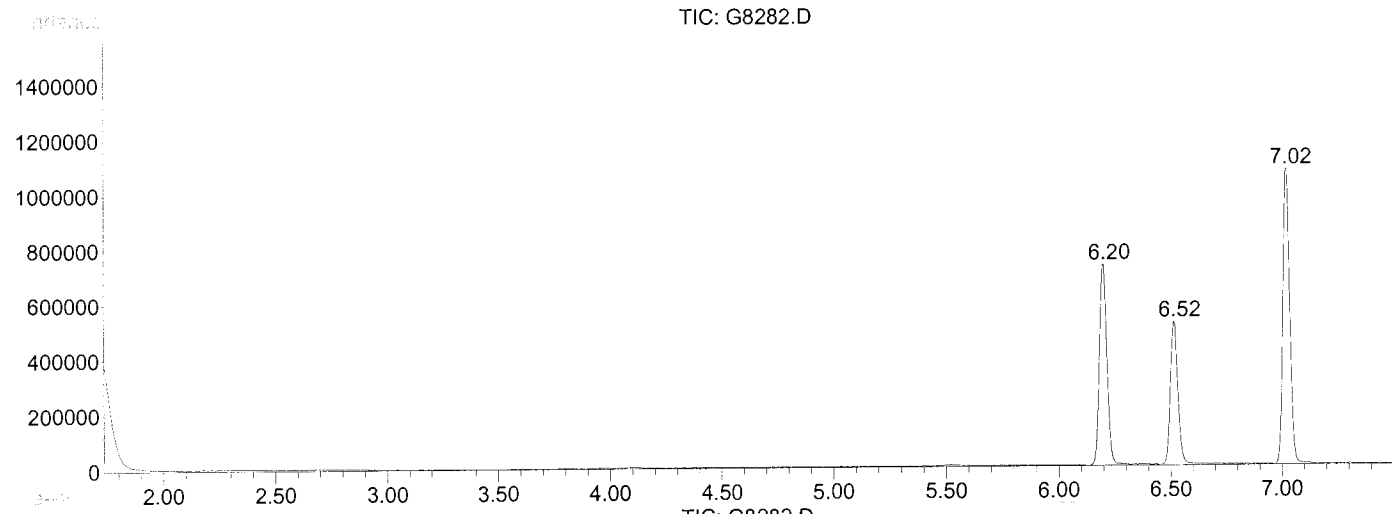
Sum of corrected areas: 13778762

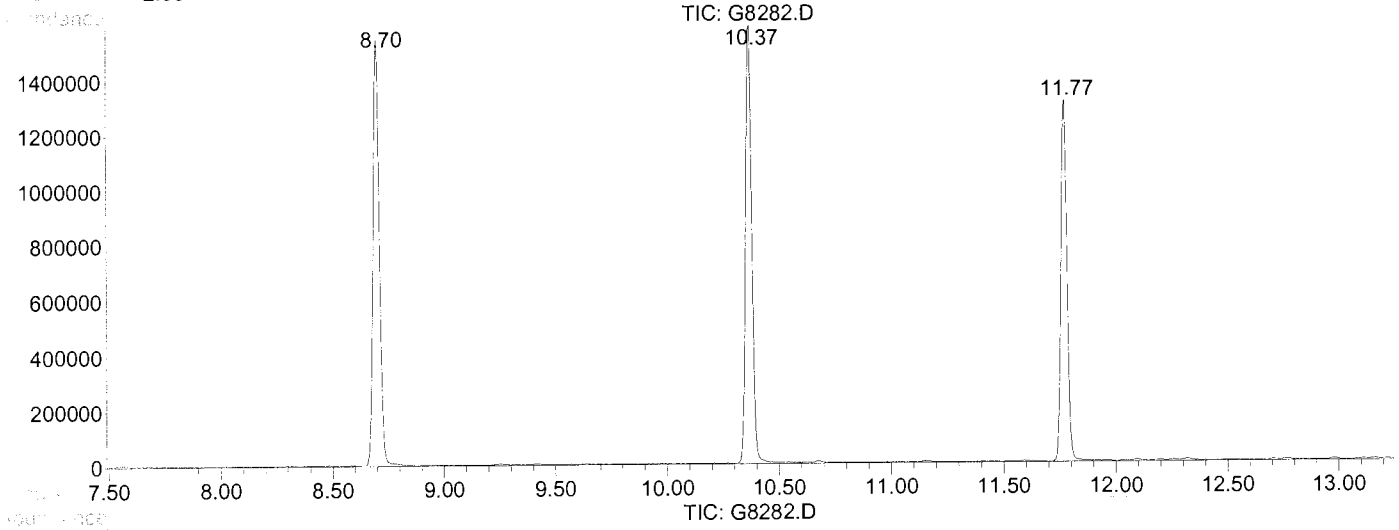
LSC Report - Integrated Chromatogram

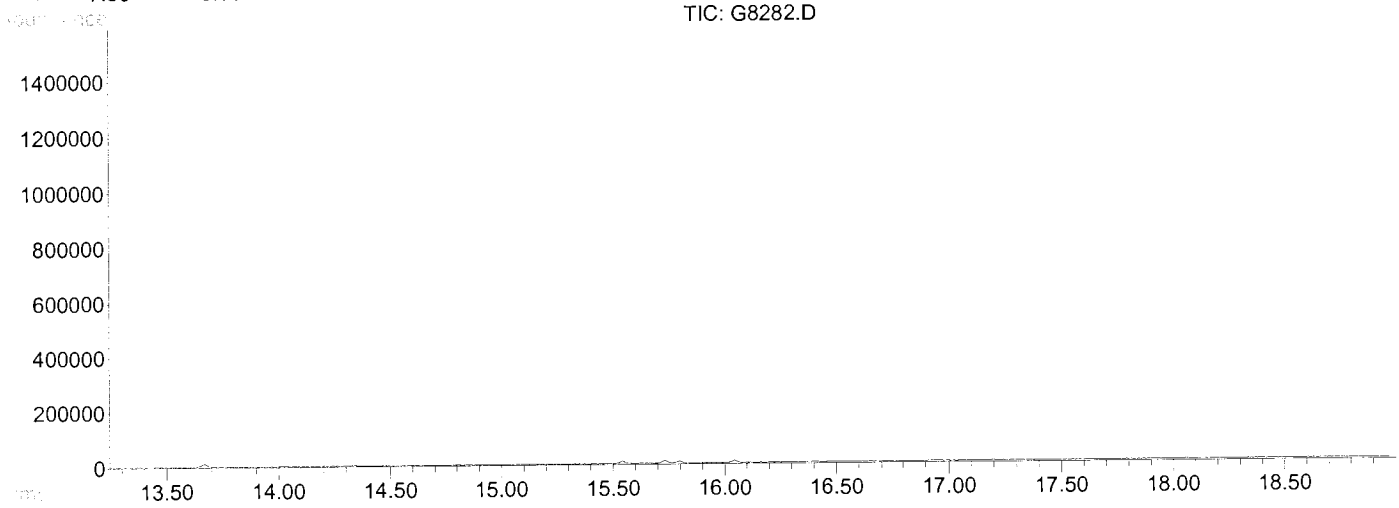
Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8282.D
Acq On : 14 Nov 2015 1:20
Operator : Sylvia
Sample : FB-11042015,E15-10258-002,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 28 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8289.D
Acq On : 14 Nov 2015 4:38
Operator : Sylvia
Sample : MW-22,E15-10258-003,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Nov 14 14:30:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

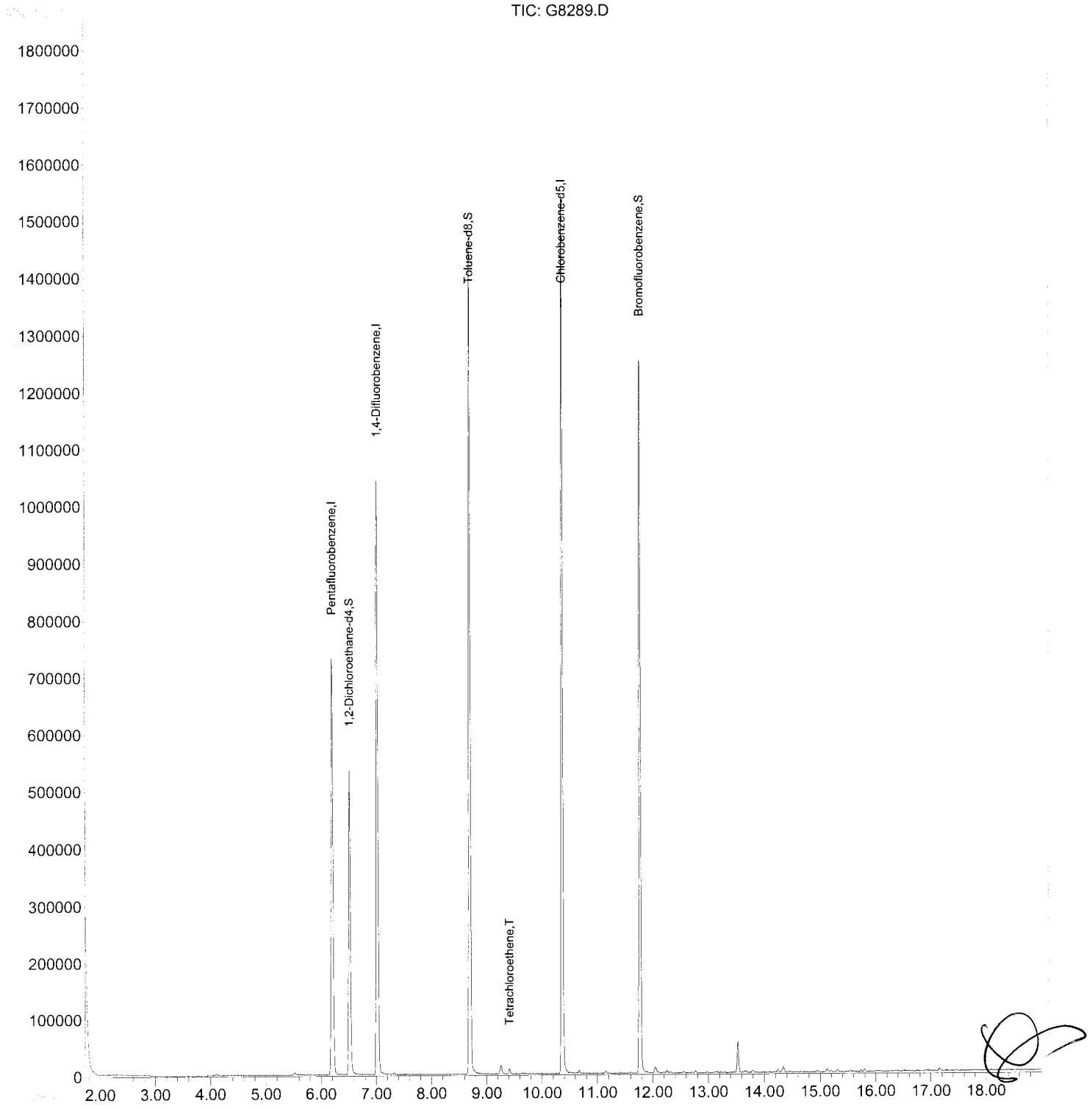
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	468057	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	808567	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	789761	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	501406	49.71	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 99.42%			
41) Toluene-d8	8.70	98	1039552	49.22	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.44%			
59) Bromofluorobenzene	11.77	95	546312	50.31	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 100.62%			
Target Compounds						Qvalue
45) Tetrachloroethene	9.41	166	2570m	0.57	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

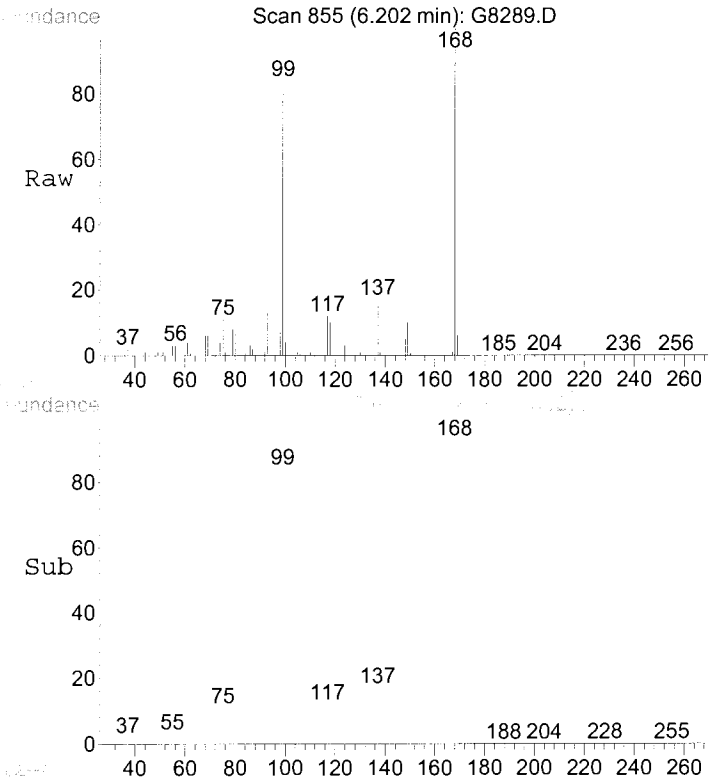
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8289.D
Acq On : 14 Nov 2015 4:38
Operator : Sylvia
Sample : MW-22,E15-10258-003,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Nov 14 14:30:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration



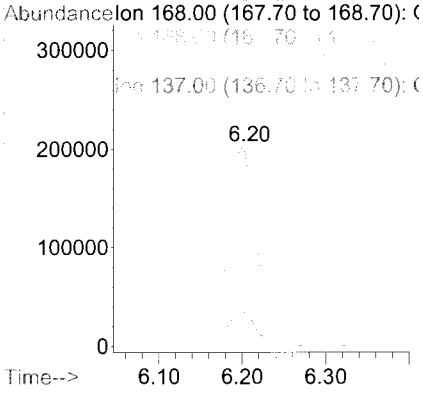
E15-10258

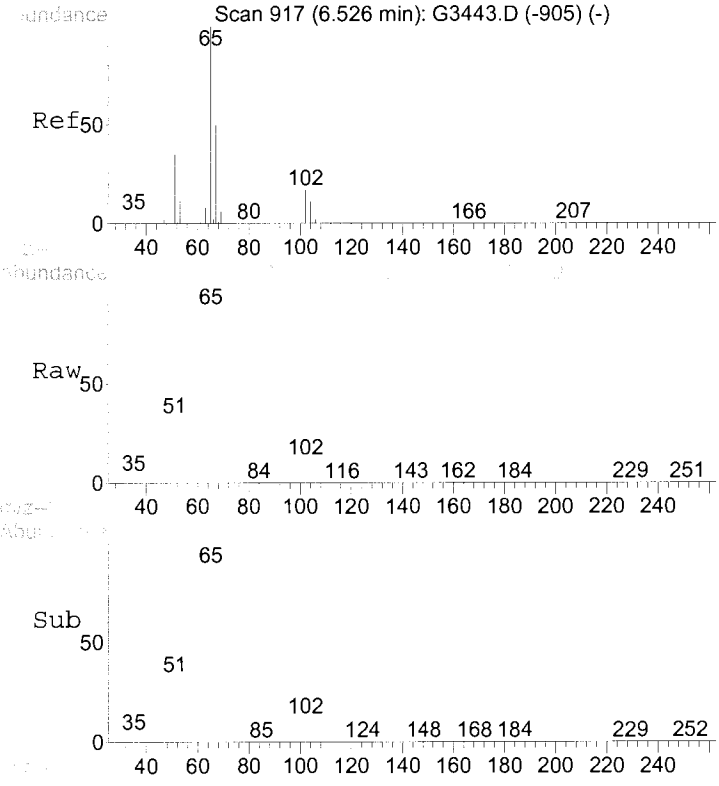


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8289.D
Acq: 14 Nov 2015 4:38

Tgt Ion:168 Resp: 468057

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	85.2	0.0	0.0#
137	17.6	0.0	0.0#

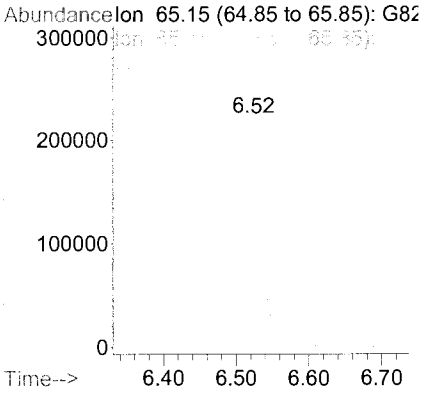


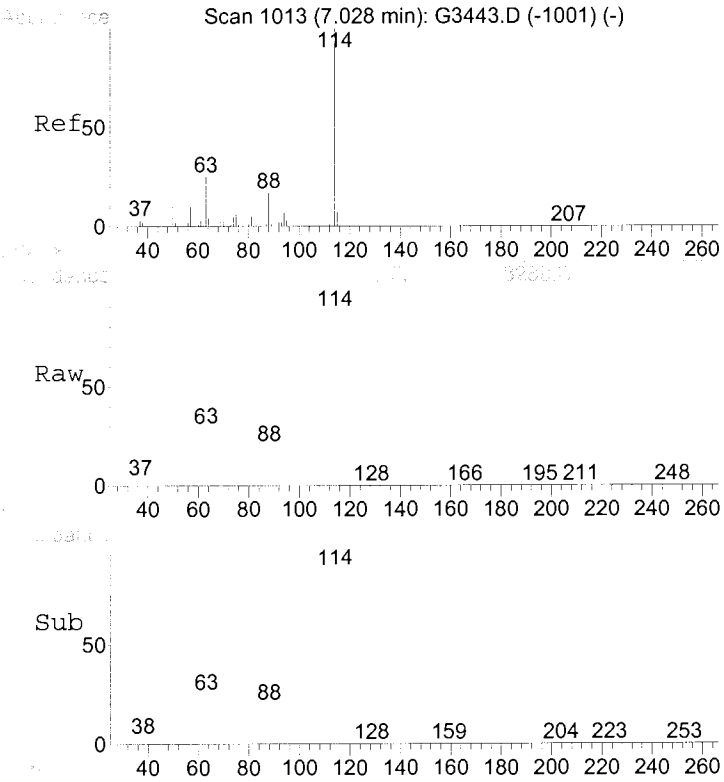


#30
1,2-Dichloroethane-d4
Concen: 49.71 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8289.D
Acq: 14 Nov 2015 4:38

Tgt Ion: 65 Resp: 501406

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.5	43.2	64.8

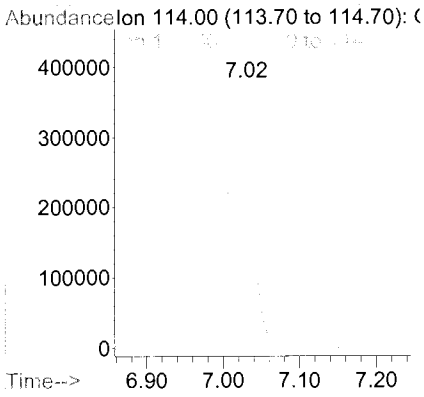


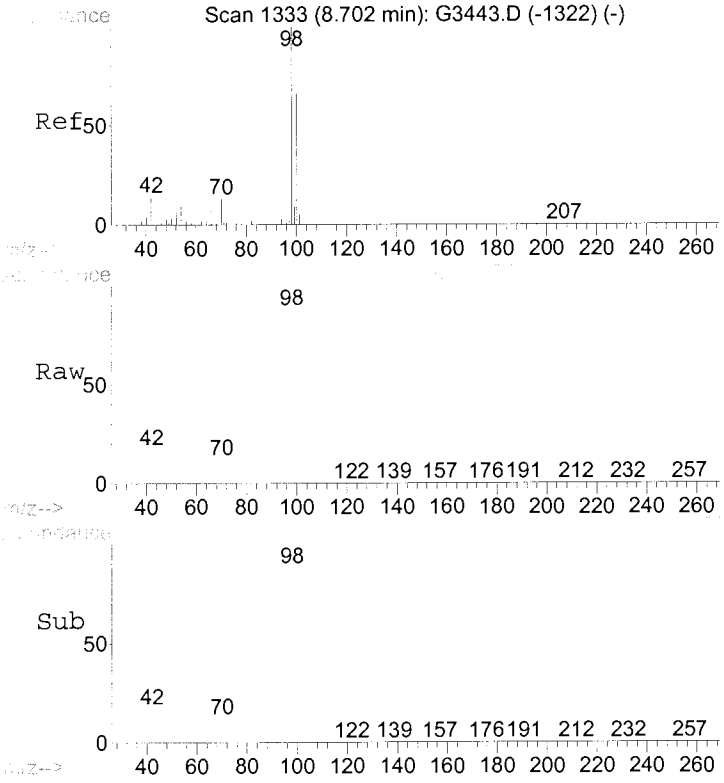


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8289.D
Acq: 14 Nov 2015 4:38

Tgt Ion:114 Resp: 808567

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

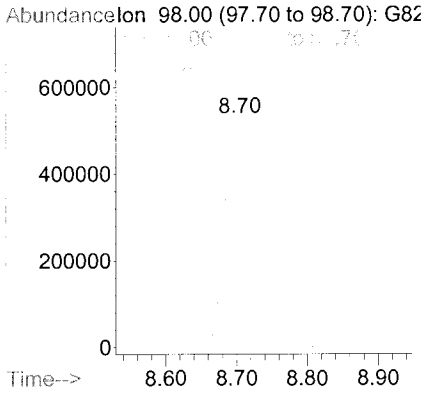


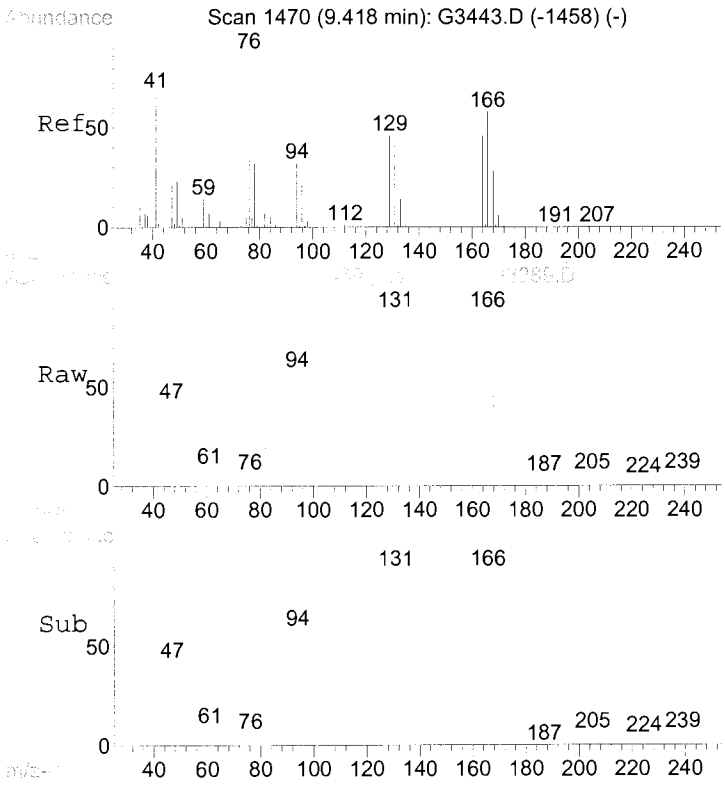


#41
Toluene-d8
Concen: 49.22 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8289.D
Acq: 14 Nov 2015 4:38

Tgt Ion: 98 Resp: 1039552

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.6	53.4	80.0

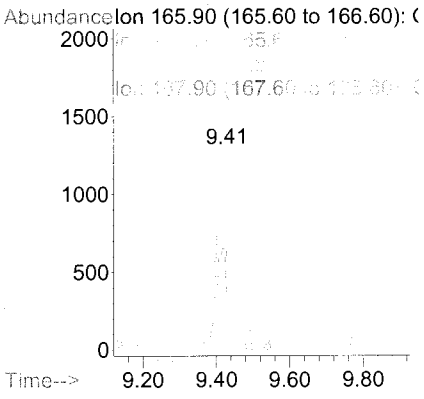


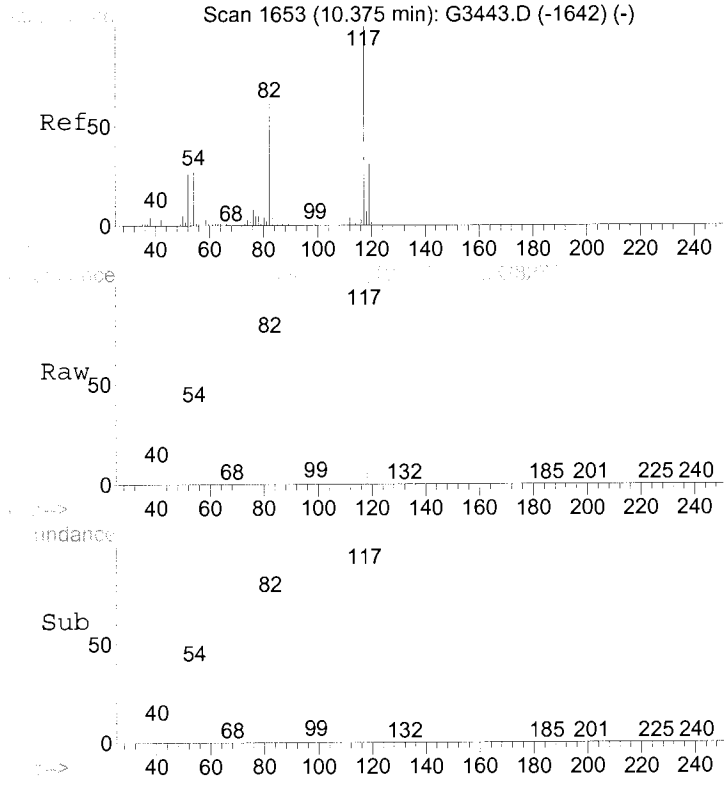


#45
Tetrachloroethene
Concen: 0.57 UG m
RT: 9.41 min Scan# 1469
Delta R.T. 0.00 min
Lab File: G8289.D
Acq: 14 Nov 2015 4:38

Tgt Ion:166 Resp: 2570

Ion	Ratio	Lower	Upper
166	100		
166	0.0	80.0	120.0#
129	0.0	0.0	0.0
168	0.0	38.3	57.5#

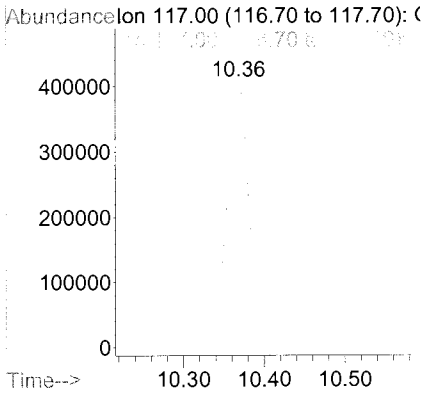


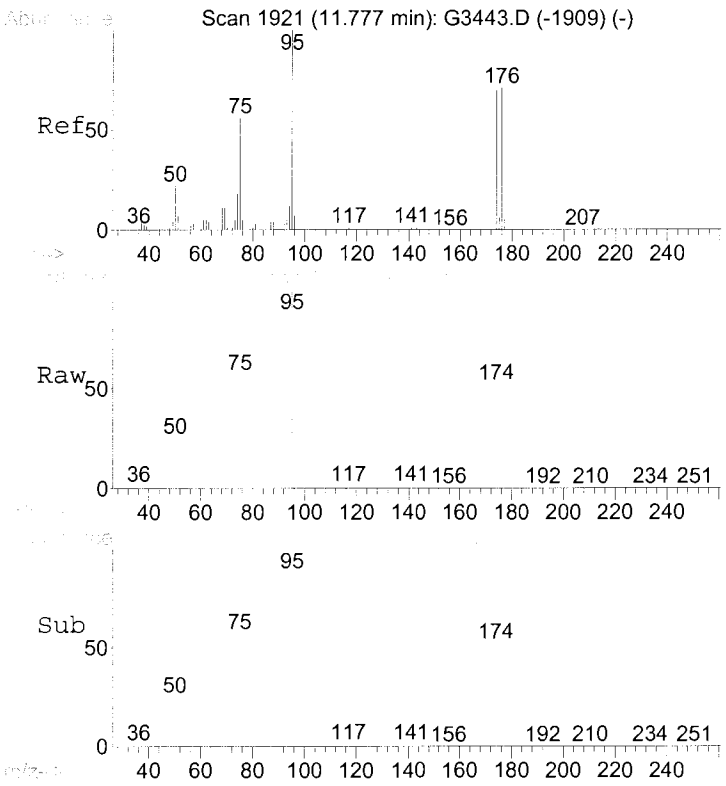


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8289.D
Acq: 14 Nov 2015 4:38

Tgt Ion:117 Resp: 789761

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

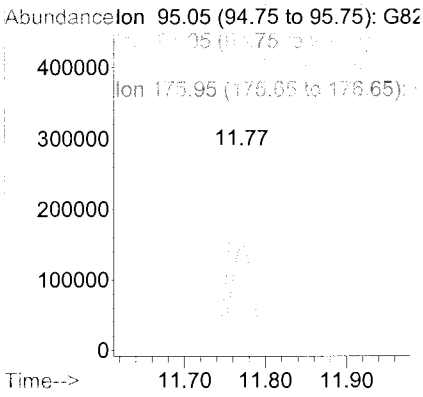




#59
Bromofluorobenzene
Concen: 50.31 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8289.D
Acq: 14 Nov 2015 4:38

Tgt Ion: 95 Resp: 546312

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.0	62.9	94.3#
176	52.2	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8289.D
Acq On : 14 Nov 2015 4:38
Operator : Sylvia
Sample : MW-22,E15-10258-003,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 35 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	841	854	875	rBV	730830	1680268	56.63%	12.309%
2	6.515	900	915	938	rBV	533492	1210710	40.81%	8.870%
3	7.023	999	1012	1039	rBV	1041275	2257071	76.07%	16.535%
4	8.696	1321	1332	1363	rBV	1474432	2945940	99.29%	21.582%
5	9.256	1427	1439	1455	rBV2	15391	40980	1.38%	0.300%
6	10.365	1641	1651	1675	rBV	1540859	2967025	100.00%	21.736%
7	11.767	1909	1919	1949	rBV2	1250496	2412339	81.30%	17.673%
8	12.044	1965	1972	1992	rVB9	10822	31960	1.08%	0.234%
9	13.534	2247	2257	2270	rVB	55192	103921	3.50%	0.761%

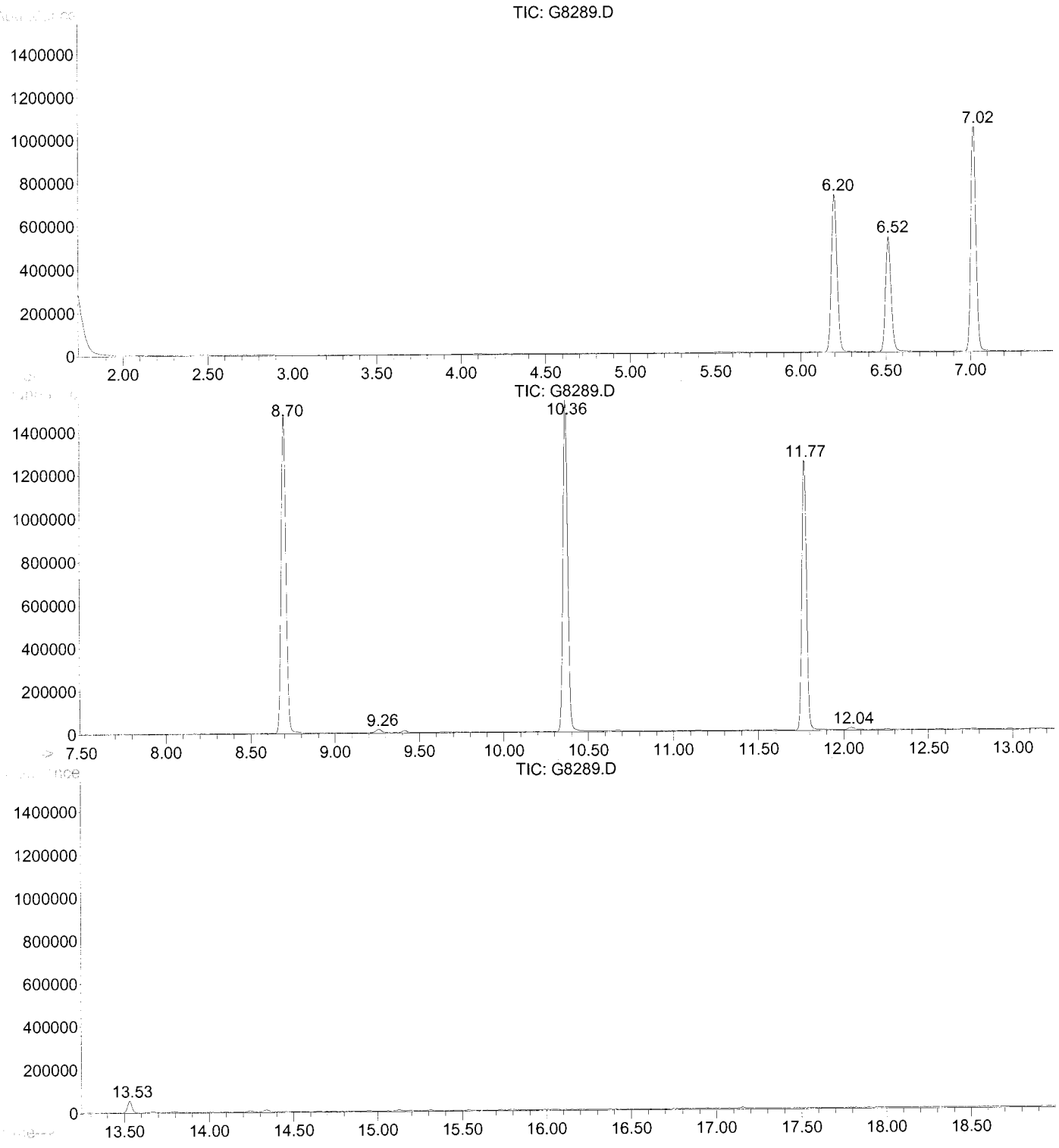
Sum of corrected areas: 13650214

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8289.D
Acq On : 14 Nov 2015 4:38
Operator : Sylvia
Sample : MW-22,E15-10258-003,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 35 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8290.D
Acq On : 14 Nov 2015 5:06
Operator : Sylvia
Sample : MW-20,E15-10258-004,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Nov 14 14:26:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	439730	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	752599	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	742733	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	473649	49.98	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 99.96%			
41) Toluene-d8	8.70	98	973473	49.52	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.04%			
59) Bromofluorobenzene	11.77	95	512313	50.17	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 100.34%			

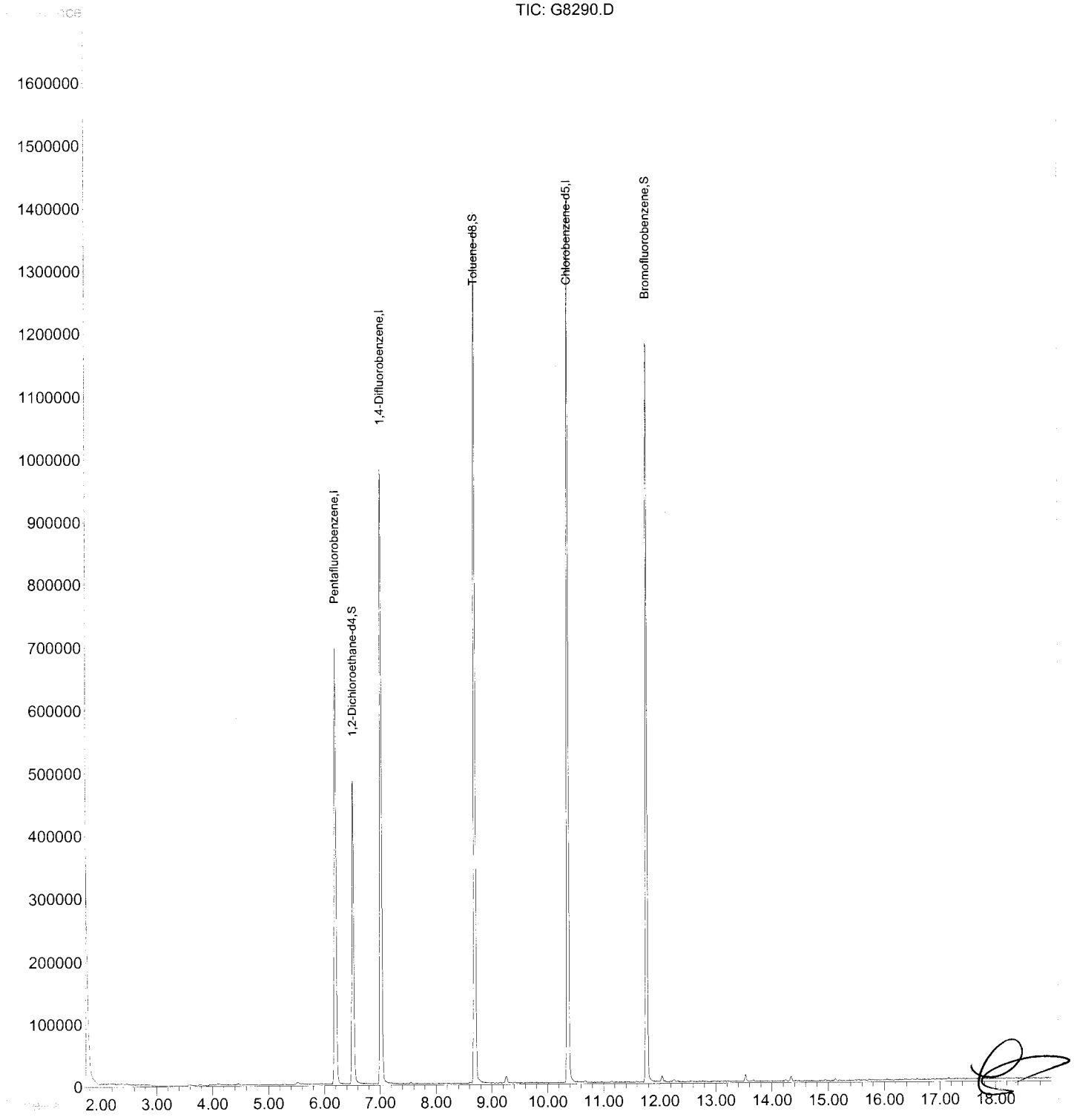
Target Compounds	Qvalue

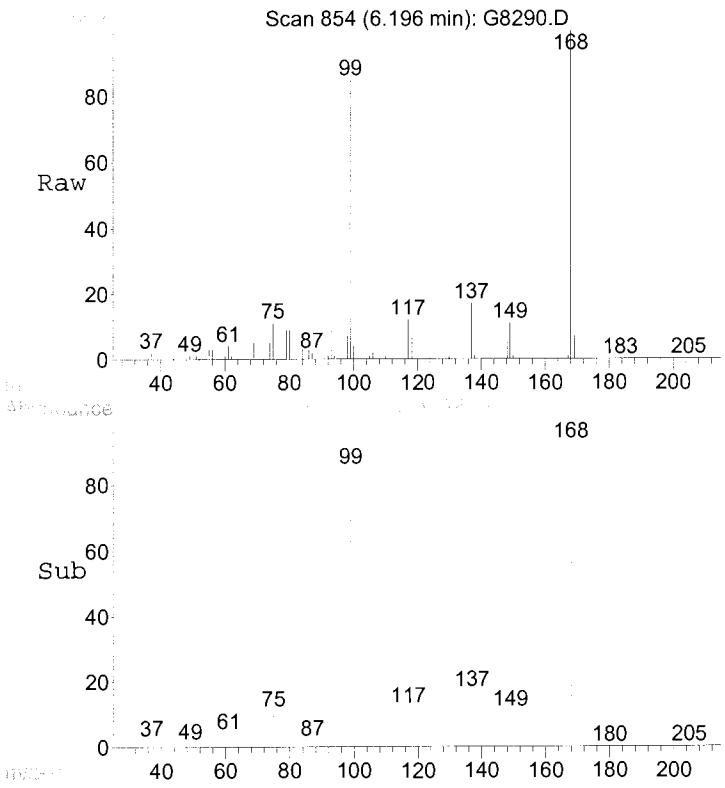
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8290.D
Acq On : 14 Nov 2015 5:06
Operator : Sylvia
Sample : MW-20,E15-10258-004,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Nov 14 14:26:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

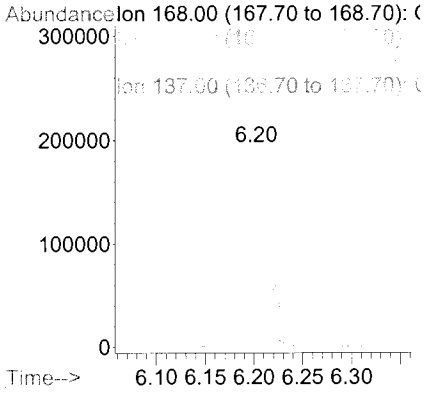


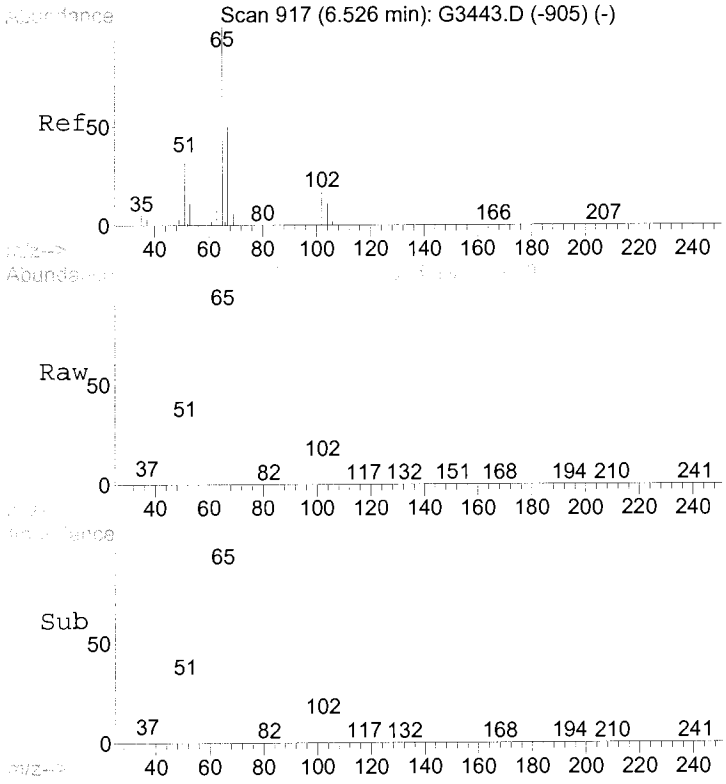


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8290.D
Acq: 14 Nov 2015 5:06

Tgt Ion:168 Resp: 439730

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

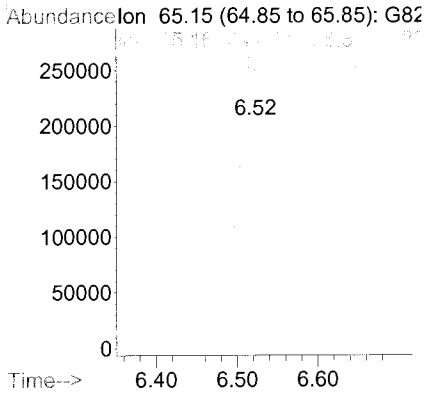


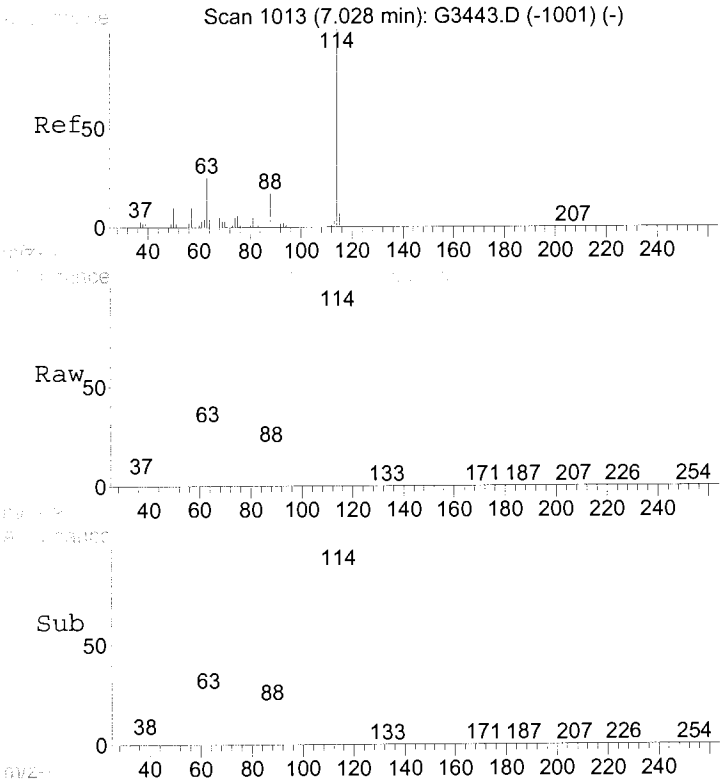


#30
1,2-Dichloroethane-d4
Concen: 49.98 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8290.D
Acq: 14 Nov 2015 5:06

Tgt Ion: 65 Resp: 473649

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.9	43.2	64.8

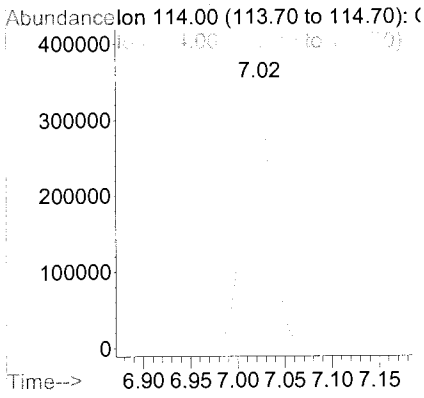


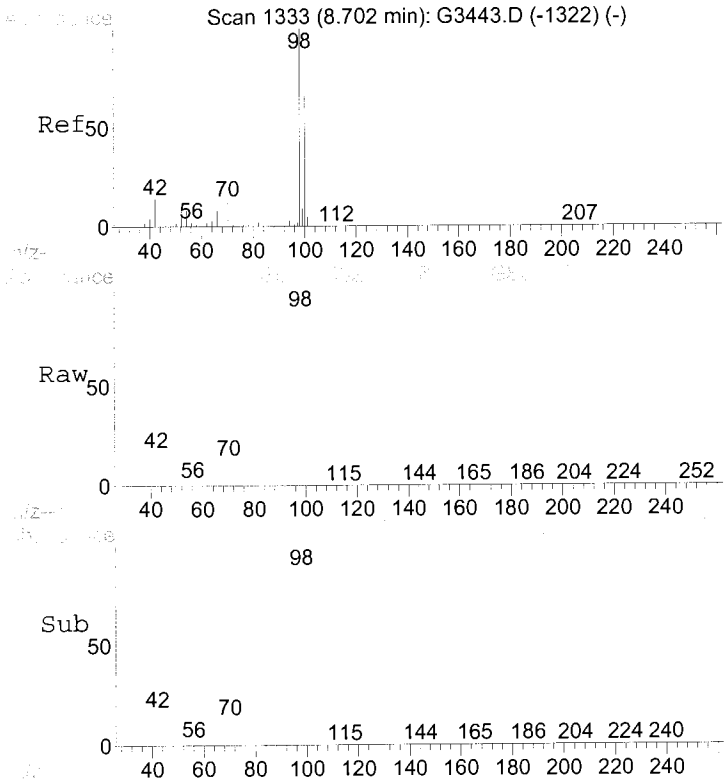


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. -0.00 min
Lab File: G8290.D
Acq: 14 Nov 2015 5:06

Tgt Ion:114 Resp: 752599

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

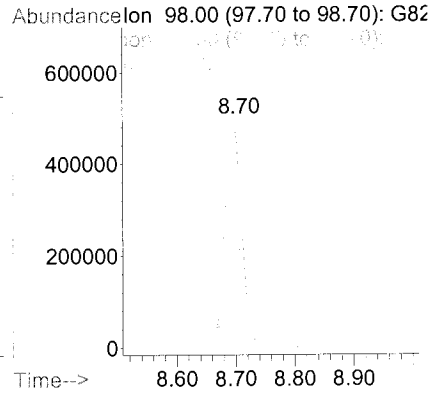


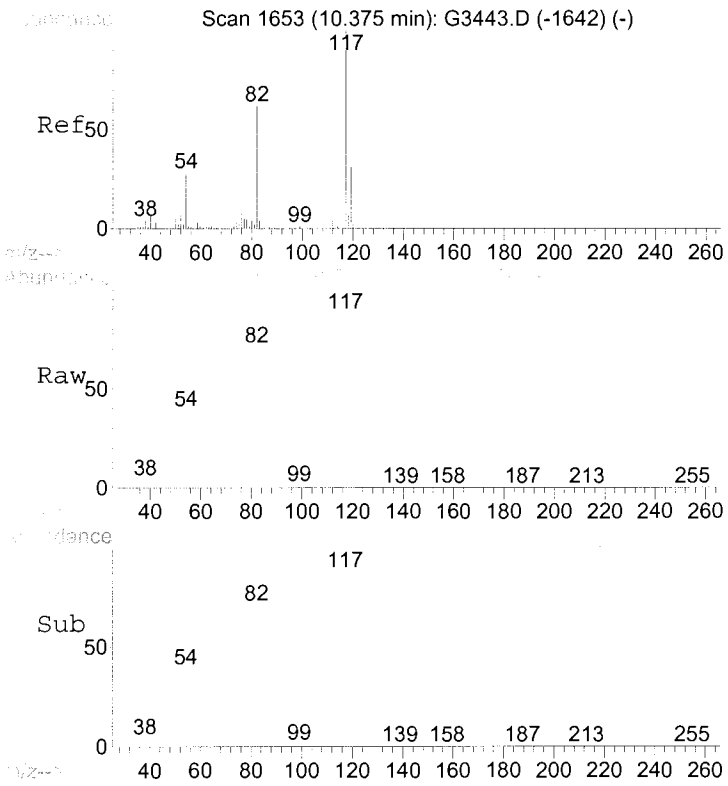


#41
Toluene-d8
Concen: 49.52 UG
RT: 8.70 min Scan# 1332
Delta R.T. -0.00 min
Lab File: G8290.D
Acq: 14 Nov 2015 5:06

Tgt Ion: 98 Resp: 973473

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.4	53.4	80.0

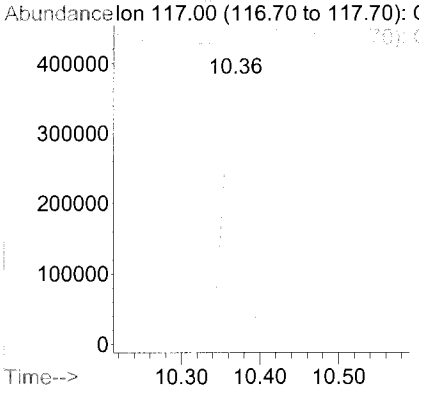


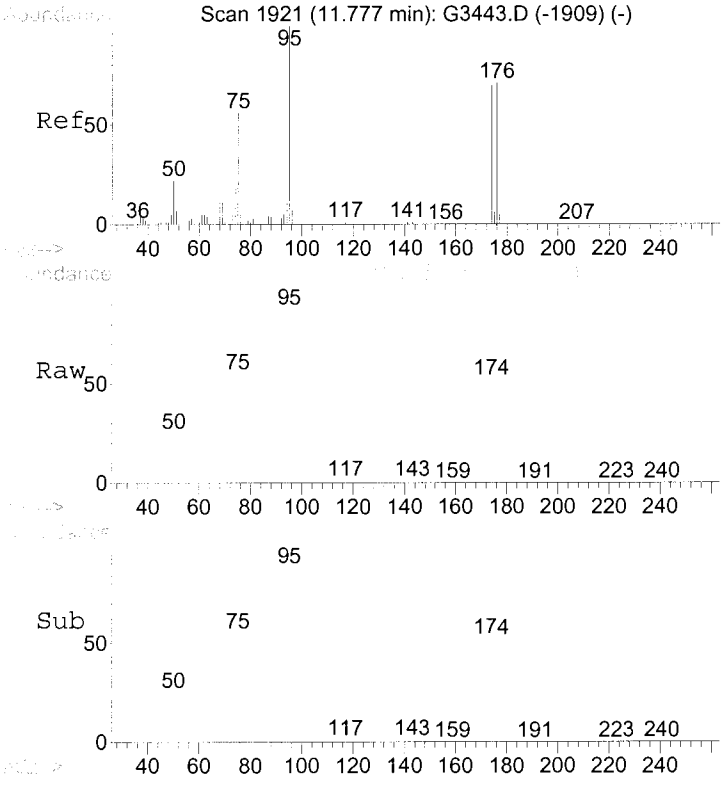


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8290.D
Acq: 14 Nov 2015 5:06

Tgt Ion:117 Resp: 742733

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

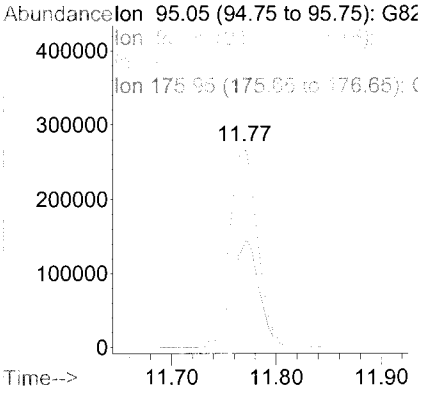




#59
Bromofluorobenzene
Concen: 50.17 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8290.D
Acq: 14 Nov 2015 5:06

Tgt Ion: 95 Resp: 512313

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.1	62.9	94.3#
176	52.6	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8290.D
Acq On : 14 Nov 2015 5:06
Operator : Sylvia
Sample : MW-20,E15-10258-004,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	838	854	873	rBV	695103	1583695	56.96%	12.504%
2	6.515	903	915	937	rBV	483857	1144350	41.16%	9.035%
3	7.017	1000	1011	1037	rBV	980732	2098516	75.48%	16.569%
4	8.696	1321	1332	1366	rBV	1389615	2762891	99.37%	21.814%
5	9.256	1426	1439	1449	rBV2	10871	30455	1.10%	0.240%
6	10.365	1637	1651	1677	rBV	1414297	2780304	100.00%	21.952%
7	11.766	1908	1919	1950	rBV2	1178979	2265244	81.47%	17.885%

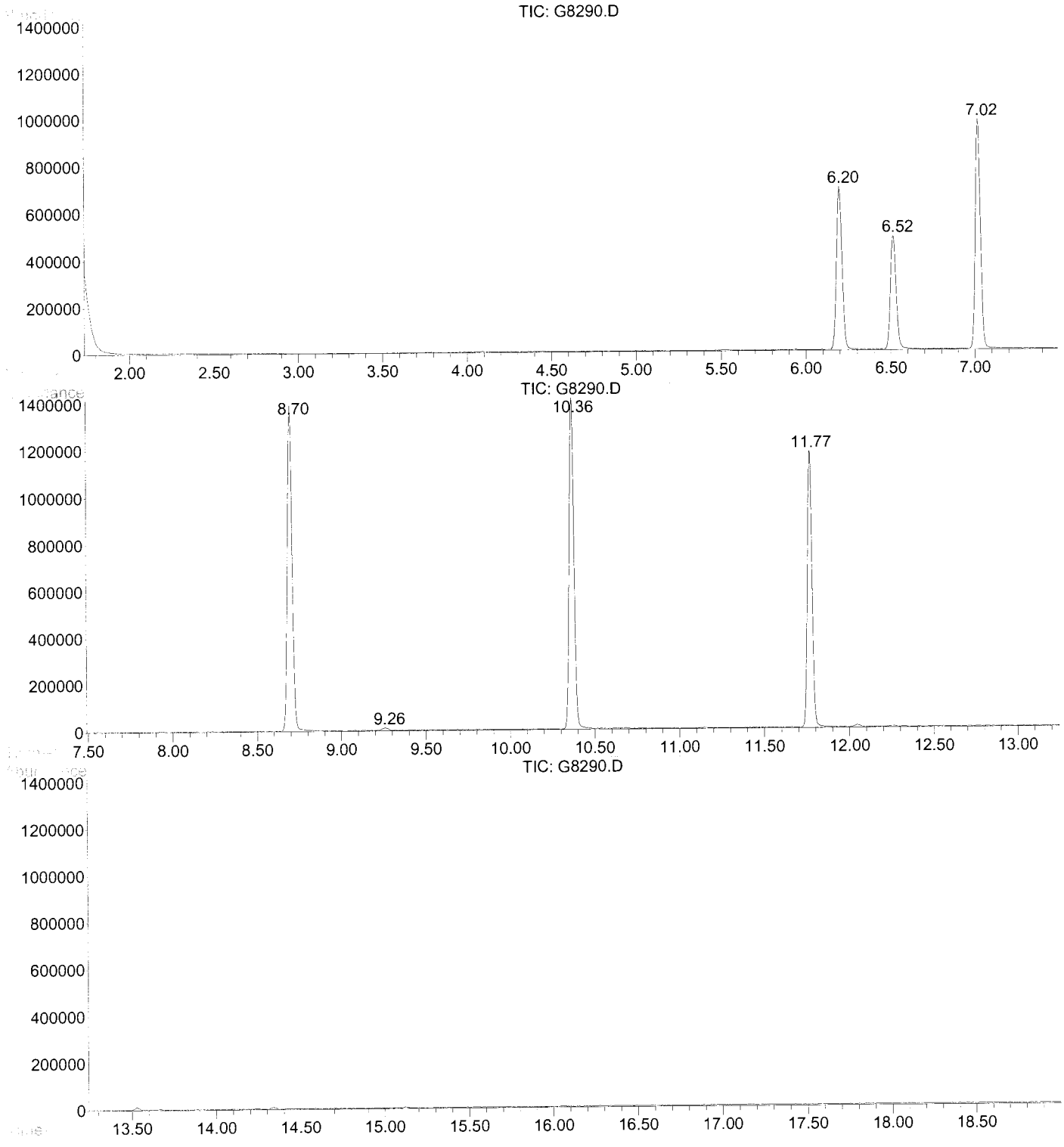
Sum of corrected areas: 12665455

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8290.D
Acq On : 14 Nov 2015 5:06
Operator : Sylvia
Sample : MW-20,E15-10258-004,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 36 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8291.D
Acq On : 14 Nov 2015 5:34
Operator : Sylvia
Sample : MW-18,E15-10258-005,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Nov 14 14:30:26 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

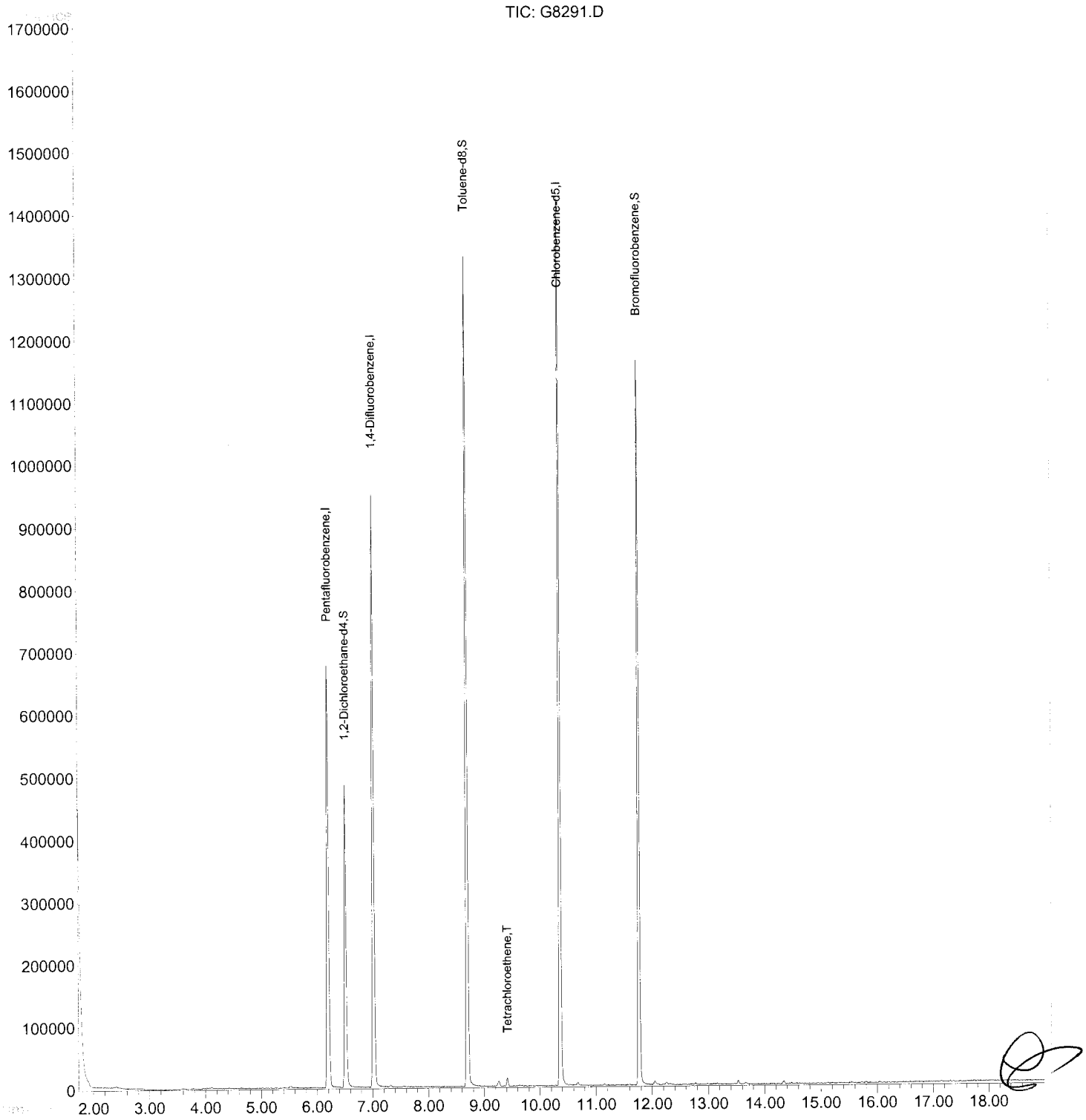
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	430258	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	735646	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	721294	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	468218	50.50	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 101.00%			
41) Toluene-d8	8.70	98	944364	49.14	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.28%			
59) Bromofluorobenzene	11.77	95	495881	50.00	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 100.00%			
Target Compounds						Qvalue
45) Tetrachloroethene	9.41	166	3349m	0.82	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

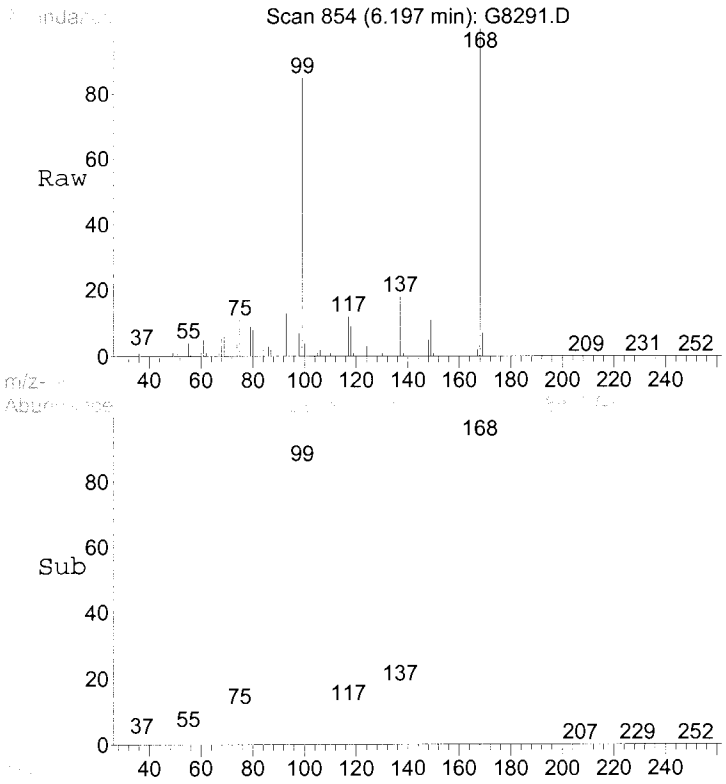
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8291.D
Acq On : 14 Nov 2015 5:34
Operator : Sylvia
Sample : MW-18,E15-10258-005,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Nov 14 14:30:26 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration



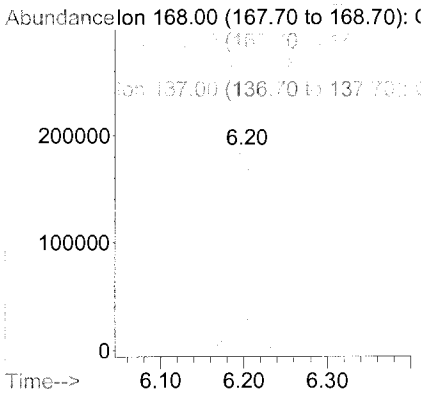
E15-10258 0136

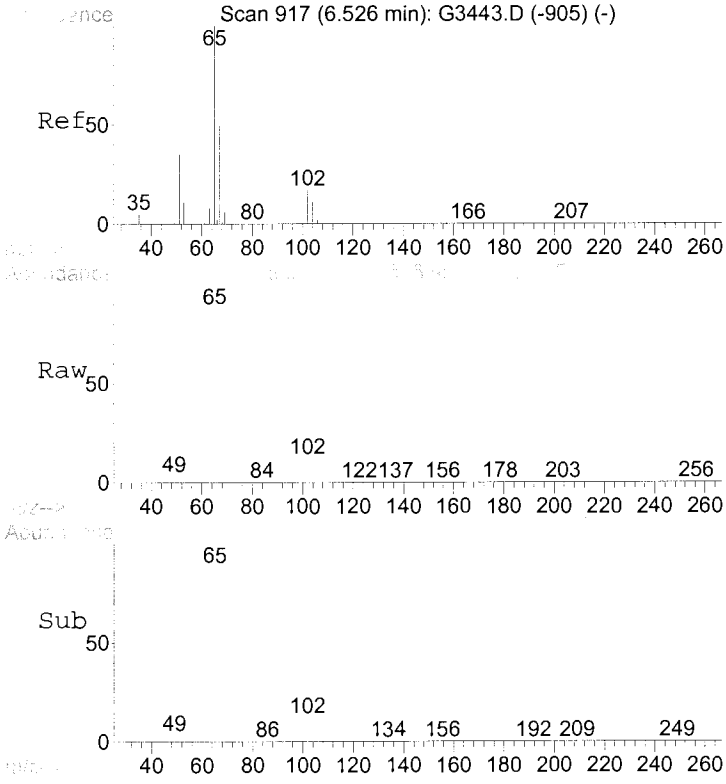


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8291.D
Acq: 14 Nov 2015 5:34

Tgt Ion:168 Resp: 430258

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

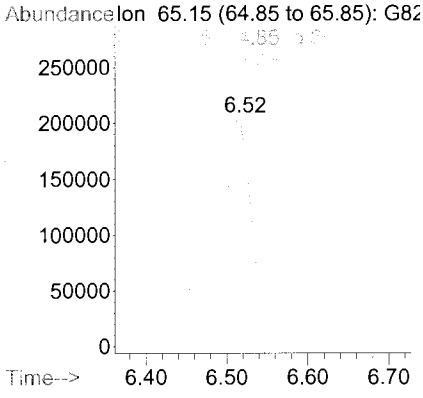


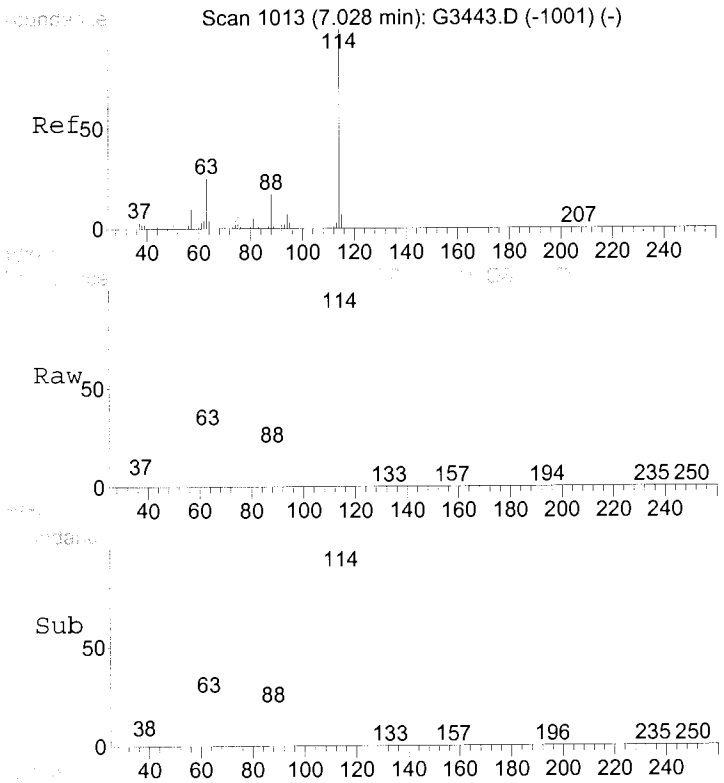


#30
1,2-Dichloroethane-d4
Concen: 50.50 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8291.D
Acq: 14 Nov 2015 5:34

Tgt Ion: 65 Resp: 468218

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.2	43.2	64.8

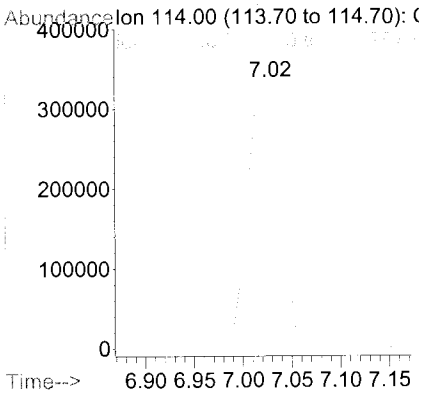


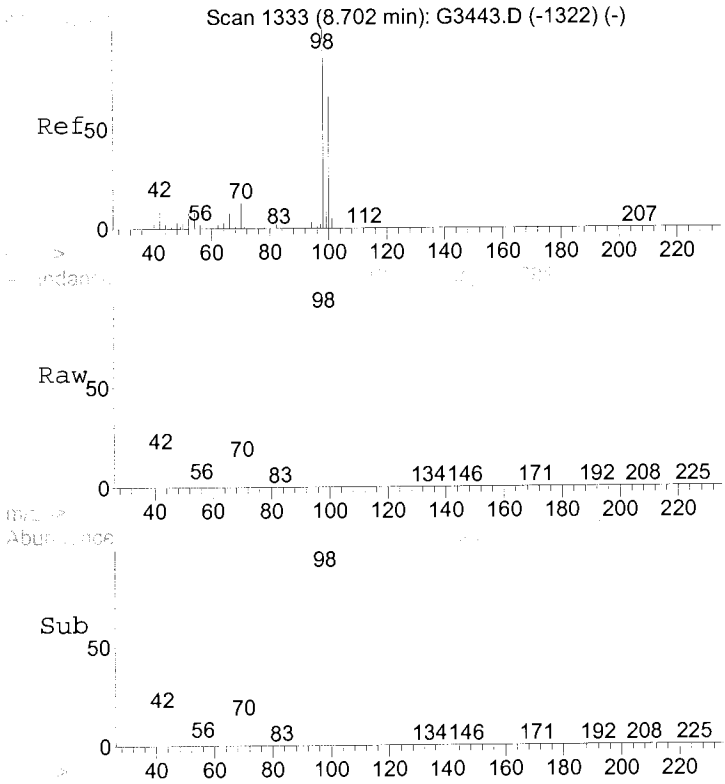


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8291.D
Acq: 14 Nov 2015 5:34

Tgt Ion:114 Resp: 735646

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

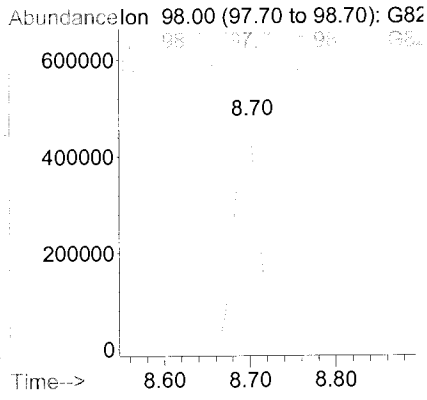


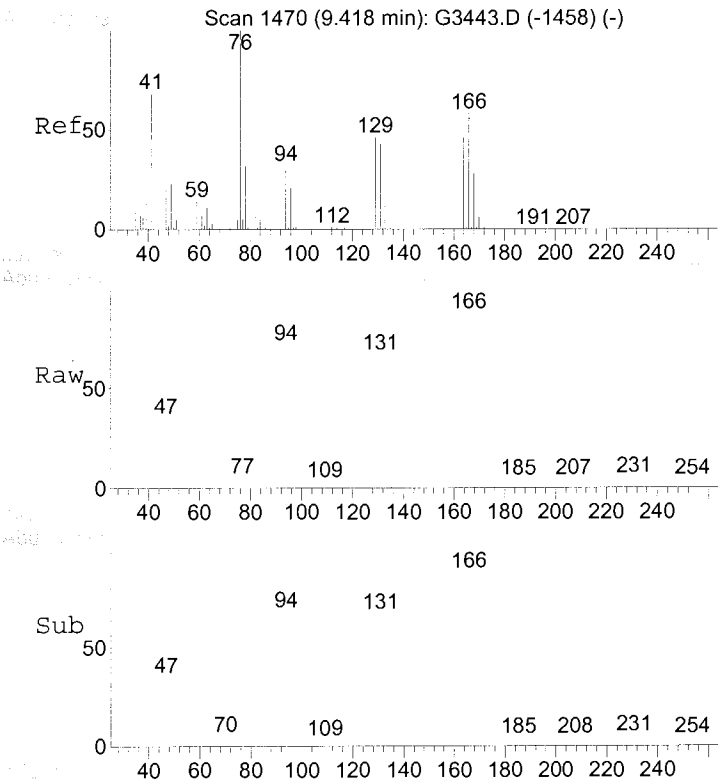


#41
Toluene-d8
Concen: 49.14 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8291.D
Acq: 14 Nov 2015 5:34

Tgt Ion: 98 Resp: 944364

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.2	53.4	80.0

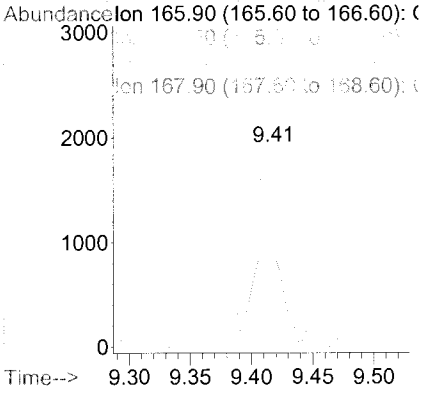


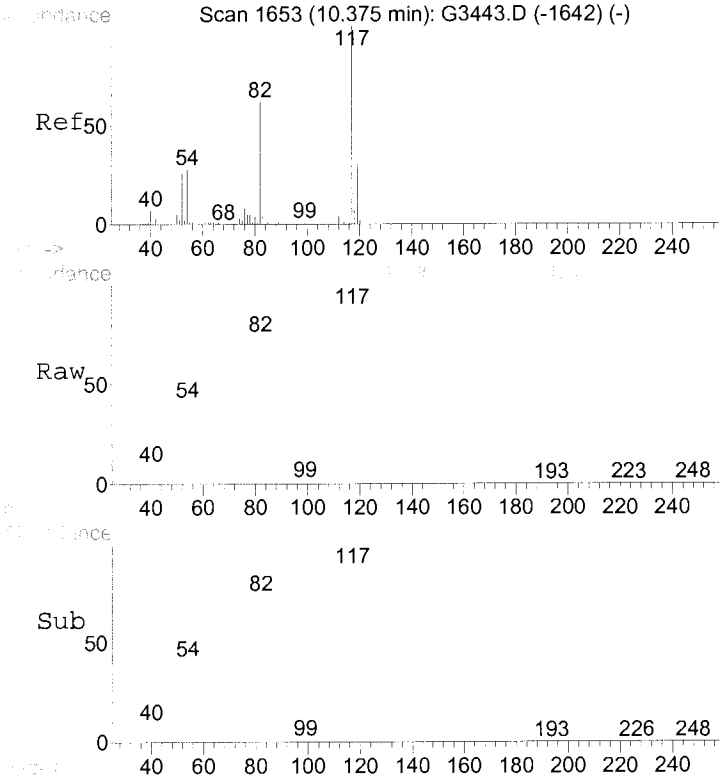


#45
Tetrachloroethene
Concen: 0.82 UG m
RT: 9.41 min Scan# 1469
Delta R.T. 0.00 min
Lab File: G8291.D
Acq: 14 Nov 2015 5:34

Tgt Ion:166 Resp: 3349

Ion	Ratio	Lower	Upper
166	100		
166	0.0	80.0	120.0#
129	0.0	0.0	0.0
168	0.0	38.3	57.5#

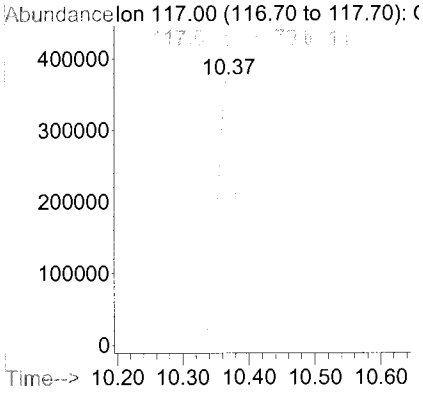


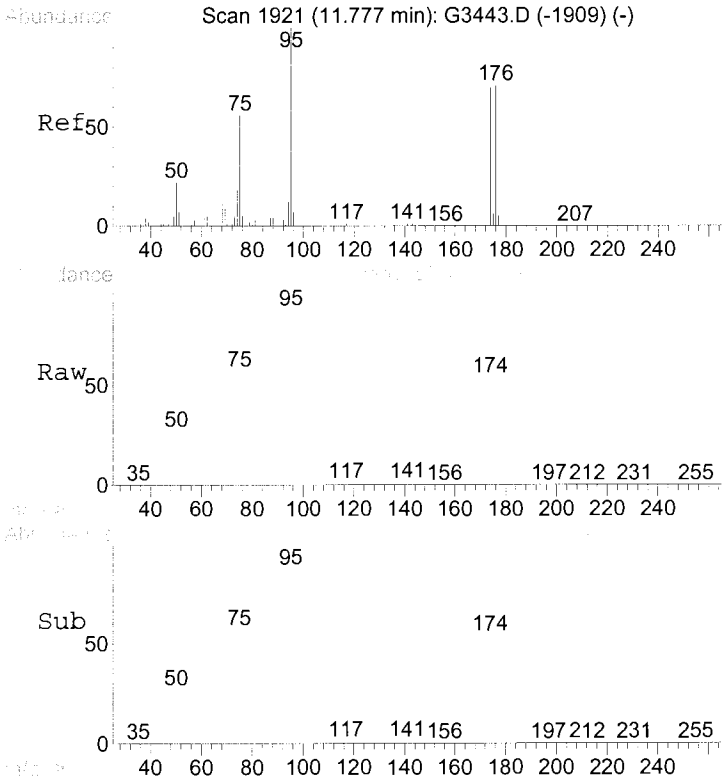


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.37 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8291.D
Acq: 14 Nov 2015 5:34

Tgt Ion:117 Resp: 721294

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

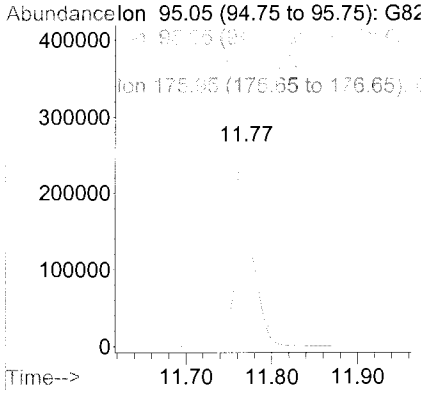




#59
Bromofluorobenzene
Concen: 50.00 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8291.D
Acq: 14 Nov 2015 5:34

Tgt Ion: 95 Resp: 495881

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.2	62.9	94.3#
176	52.7	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8291.D
Acq On : 14 Nov 2015 5:34
Operator : Sylvia
Sample : MW-18,E15-10258-005,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 37 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.197	840	854	877	rBV	675714	1567580	57.43%	12.637%
2	6.516	903	915	939	rBV	484654	1127406	41.31%	9.088%
3	7.018	1001	1011	1038	rBV	950921	2062571	75.57%	16.627%
4	8.697	1318	1332	1365	rBV	1329313	2698798	98.88%	21.756%
5	10.365	1639	1651	1680	rBV	1421179	2729376	100.00%	22.002%
6	11.767	1907	1919	1949	rBV	1161786	2219185	81.31%	17.890%

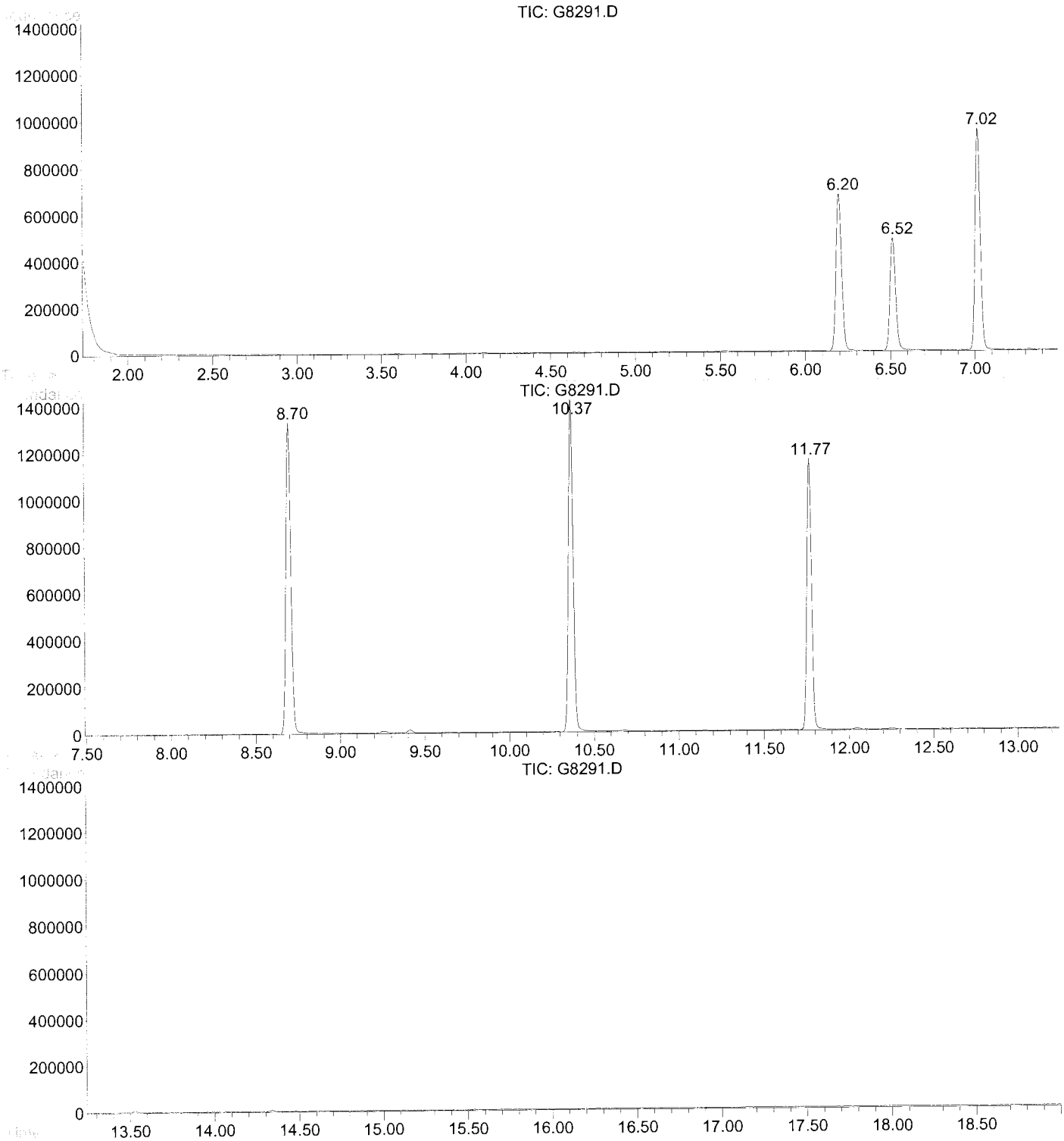
Sum of corrected areas: 12404916

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8291.D
Acq On : 14 Nov 2015 5:34
Operator : Sylvia
Sample : MW-18,E15-10258-005,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 37 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8292.D
Acq On : 14 Nov 2015 6:03
Operator : Sylvia
Sample : MW-11,E15-10258-006,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Nov 14 14:27:15 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	415435	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	726783	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	716719	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.51	65	469176	52.41	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 104.82%			
41) Toluene-d8	8.70	98	932040	49.09	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.18%			
59) Bromofluorobenzene	11.77	95	503888	51.14	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 102.28%			

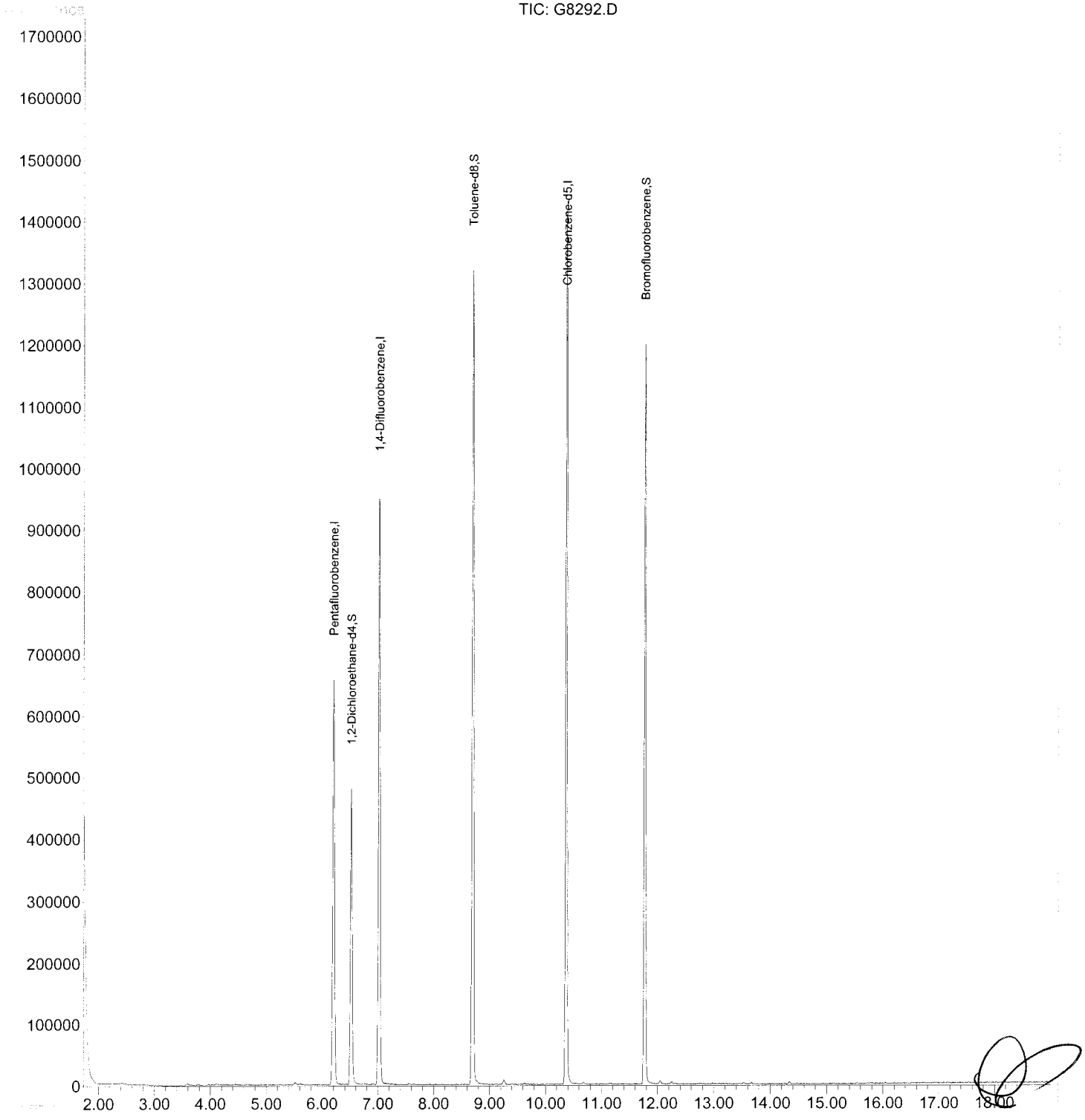
Target Compounds	Qvalue

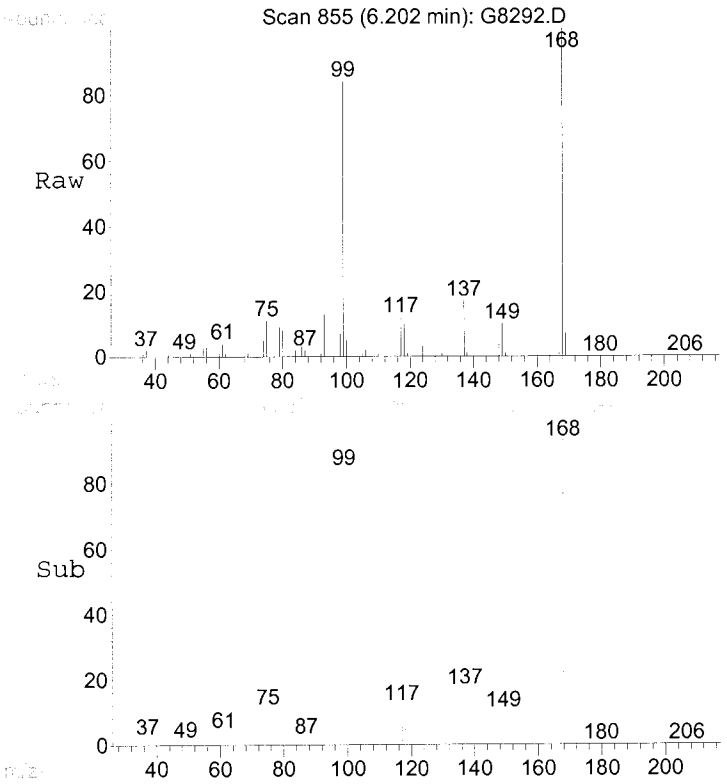
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8292.D
Acq On : 14 Nov 2015 6:03
Operator : Sylvia
Sample : MW-11,E15-10258-006,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Nov 14 14:27:15 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

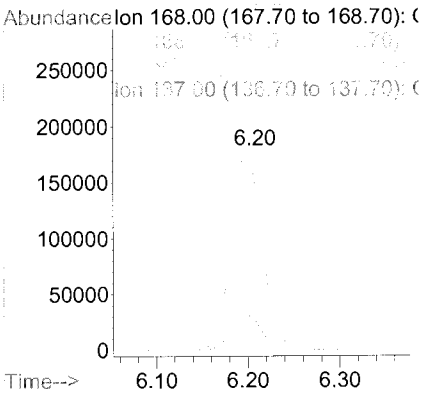


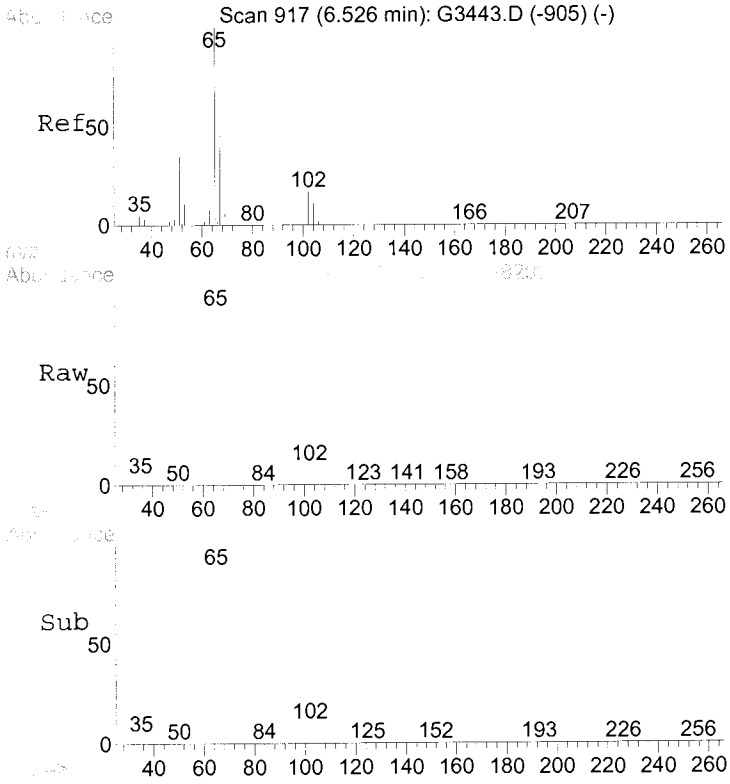


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8292.D
Acq: 14 Nov 2015 6:03

Tgt Ion:168 Resp: 415435

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	88.6	0.0	0.0#
137	17.8	0.0	0.0#

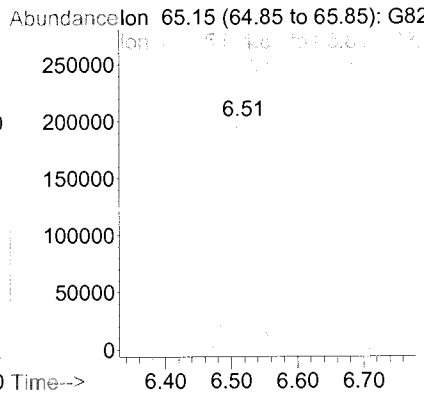




#30
1,2-Dichloroethane-d4
Concen: 52.41 UG
RT: 6.51 min Scan# 914
Delta R.T. 0.00 min
Lab File: G8292.D
Acq: 14 Nov 2015 6:03

Tgt Ion: 65 Resp: 469176

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	43.7	43.2	64.8



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8292.D
Acq On : 14 Nov 2015 6:03
Operator : Sylvia
Sample : MW-11,E15-10258-006,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 38 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	841	854	874	rBV2	656446	1526783	55.69%	12.351%
2	6.515	903	915	943	rBV	480015	1126155	41.08%	9.110%
3	7.018	1000	1011	1034	rBV	954644	2045114	74.60%	16.544%
4	8.697	1317	1332	1356	rBV	1320028	2678980	97.72%	21.671%
5	10.365	1638	1651	1680	rBV	1439114	2741401	100.00%	22.176%
6	11.767	1909	1919	1949	rBV	1199128	2243371	81.83%	18.148%

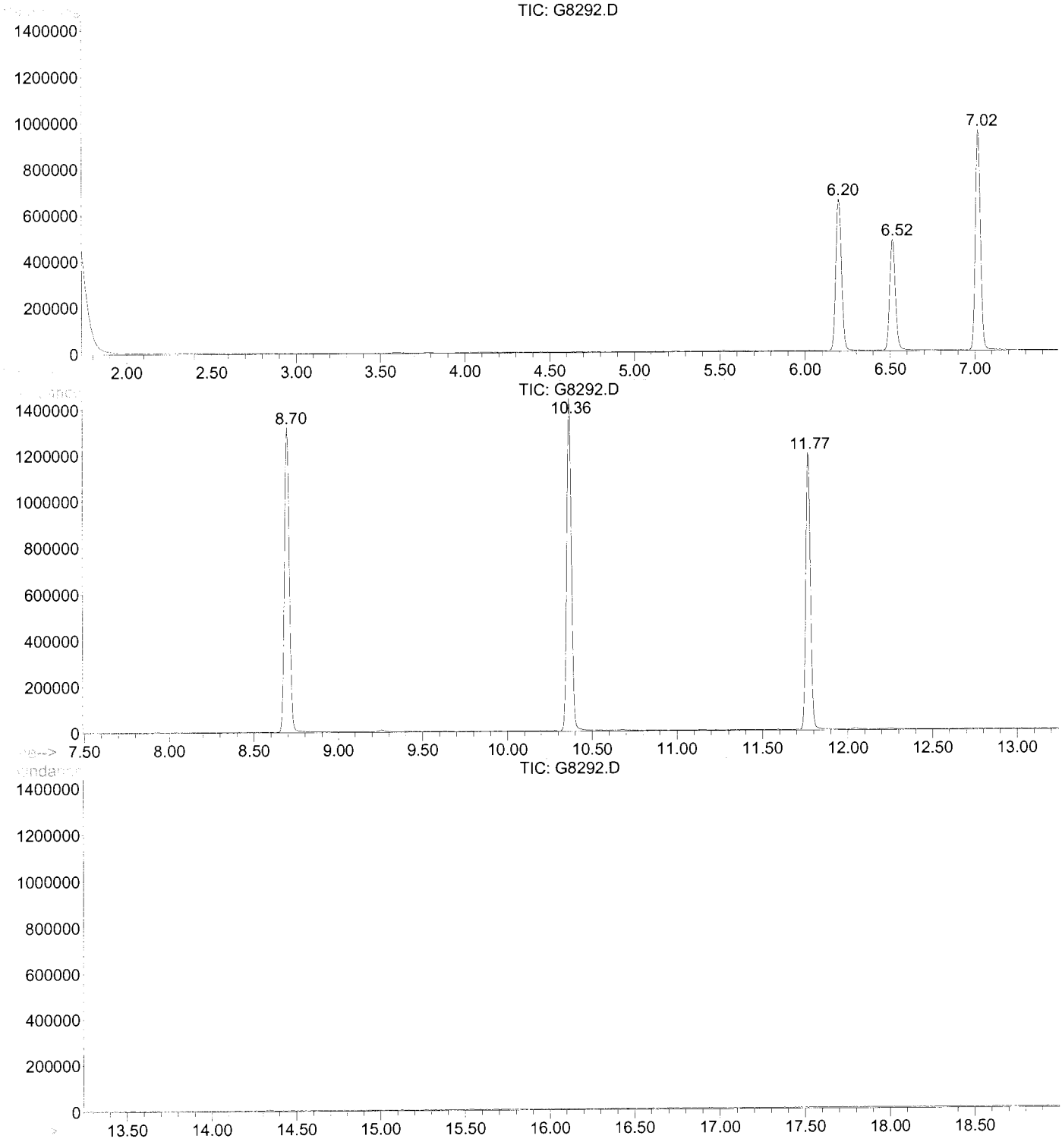
Sum of corrected areas: 12361804

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8292.D
Acq On : 14 Nov 2015 6:03
Operator : Sylvia
Sample : MW-11,E15-10258-006,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 38 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8293.D
Acq On : 14 Nov 2015 6:31
Operator : Sylvia
Sample : MW-23,E15-10258-007,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Nov 14 14:27:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	416736	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	717612	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	708505	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	468097	52.12	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 104.24%			
41) Toluene-d8	8.70	98	925726	49.38	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.76%			
59) Bromofluorobenzene	11.77	95	495791	50.90	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 101.80%			

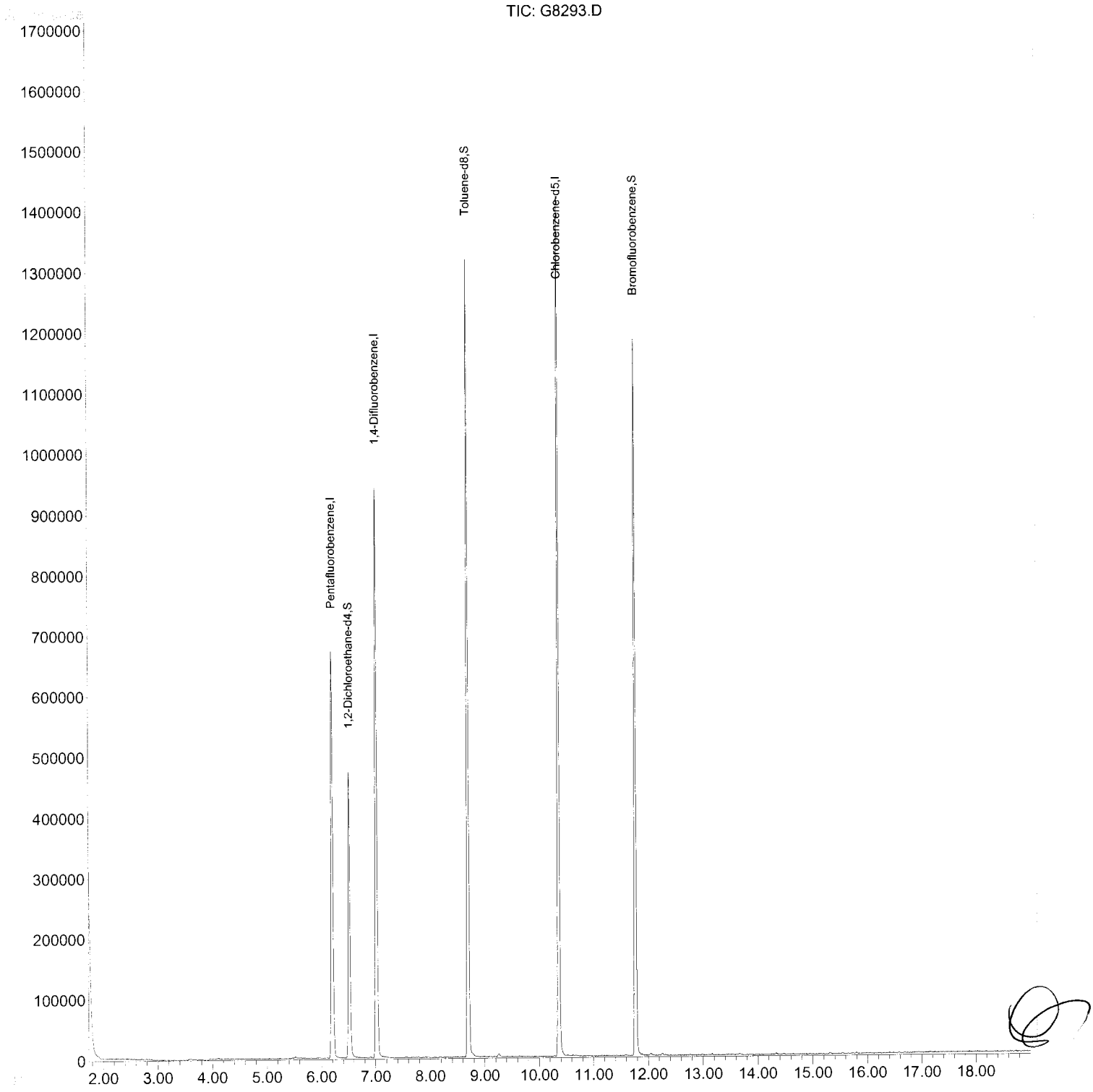
Target Compounds	Qvalue

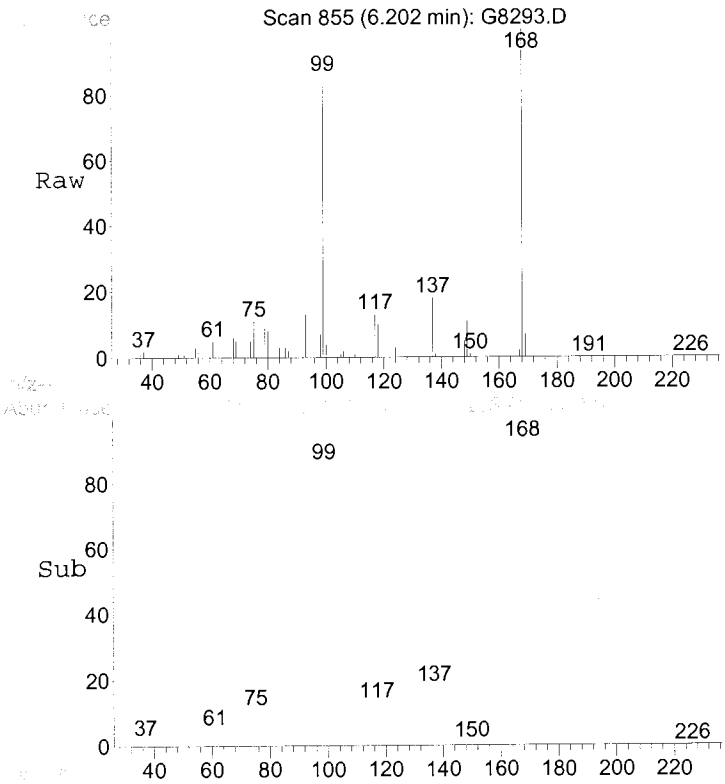
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8293.D
Acq On : 14 Nov 2015 6:31
Operator : Sylvia
Sample : MW-23,E15-10258-007,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Nov 14 14:27:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

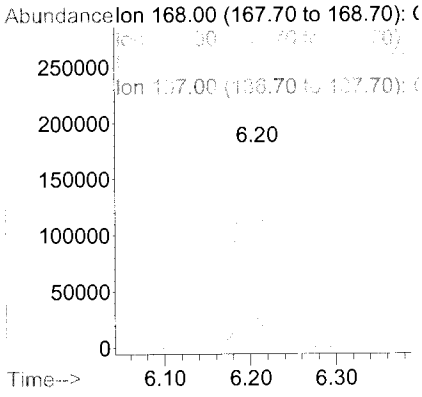


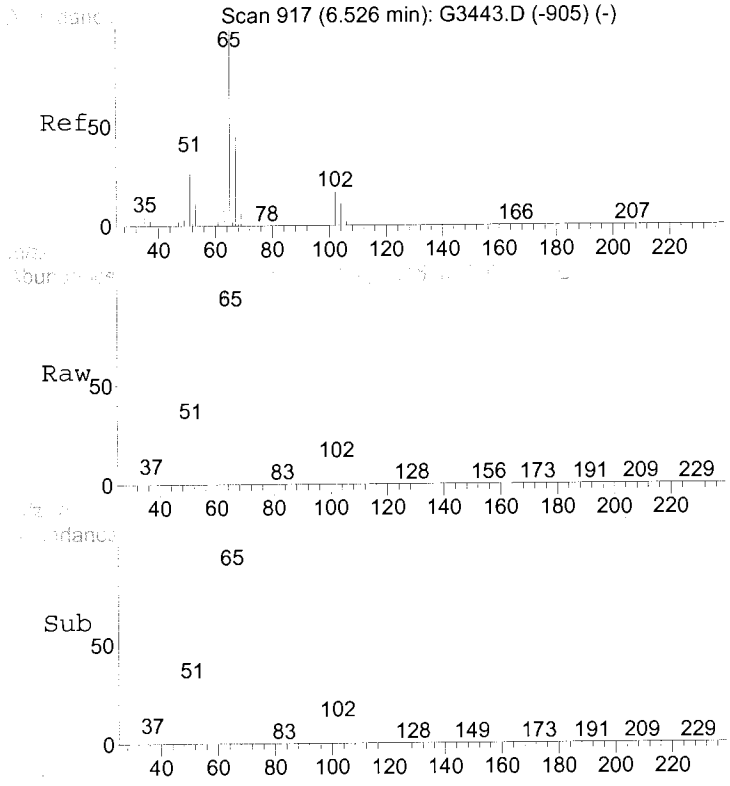


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8293.D
Acq: 14 Nov 2015 6:31

Tgt Ion:168 Resp: 416736

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	87.8	0.0	0.0#
137	18.0	0.0	0.0#

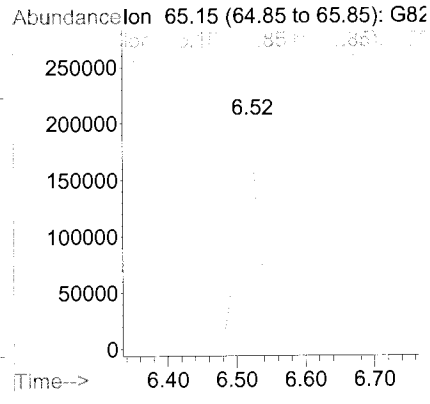


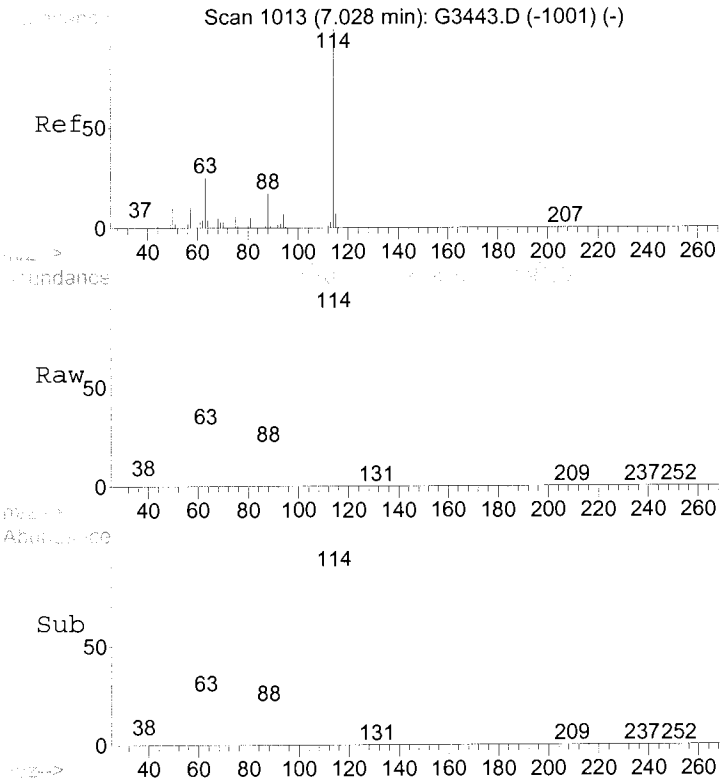


#30
1,2-Dichloroethane-d4
Concen: 52.12 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8293.D
Acq: 14 Nov 2015 6:31

Tgt Ion: 65 Resp: 468097

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.0	43.2	64.8

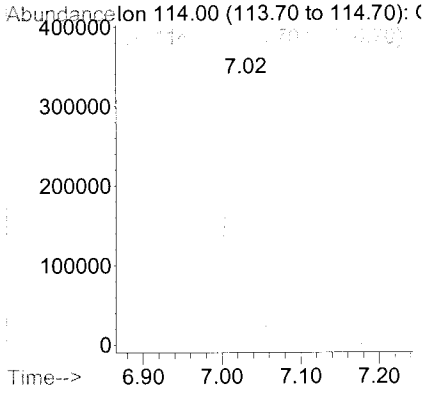


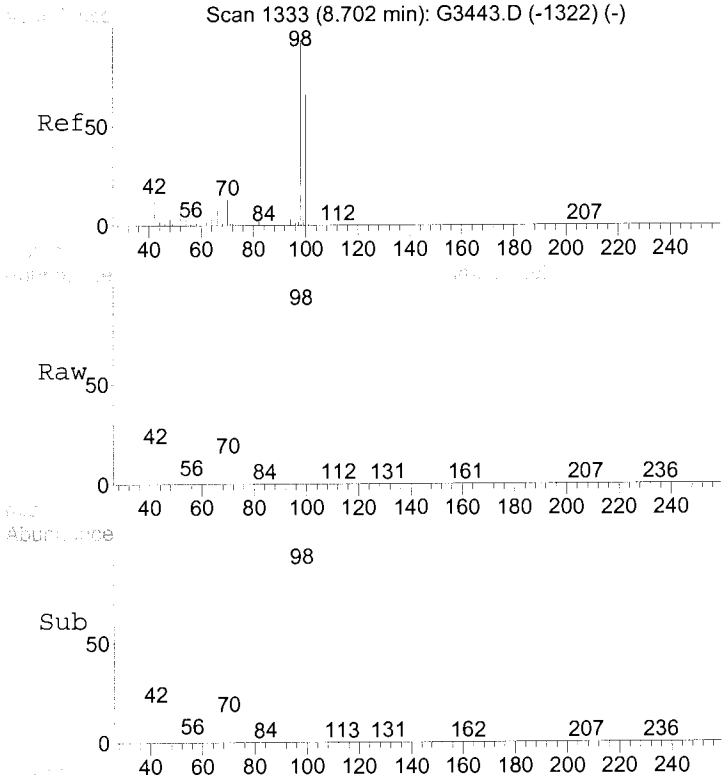


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8293.D
Acq: 14 Nov 2015 6:31

Tgt Ion:114 Resp: 717612

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

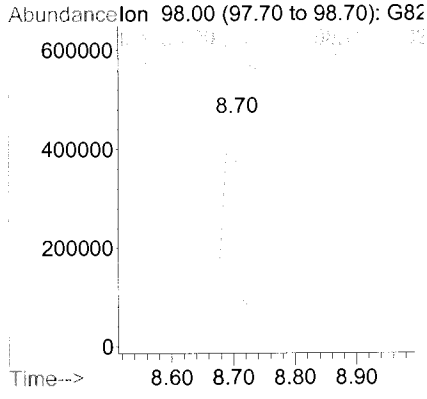


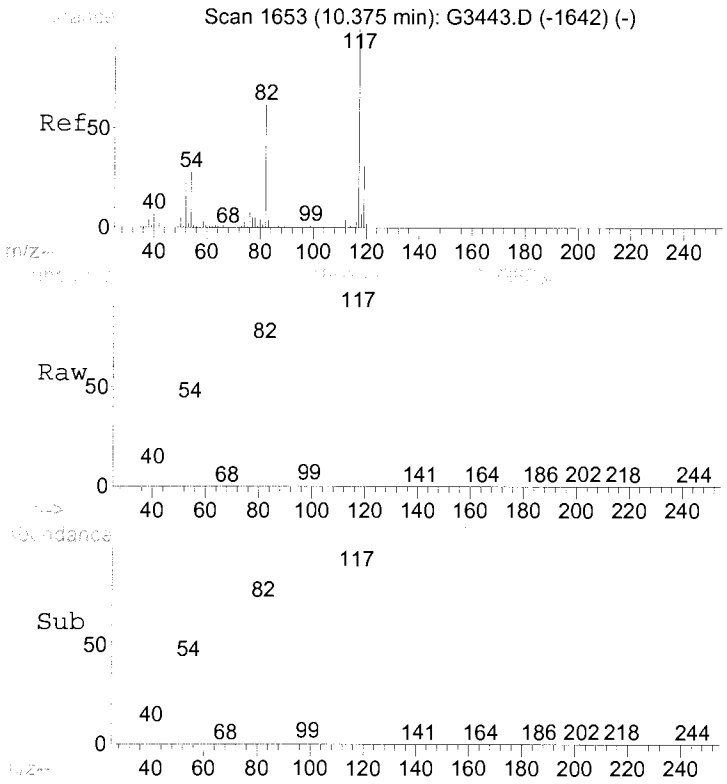


#41
Toluene-d8
Concen: 49.38 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8293.D
Acq: 14 Nov 2015 6:31

Tgt Ion: 98 Resp: 925726

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.2	53.4	80.0

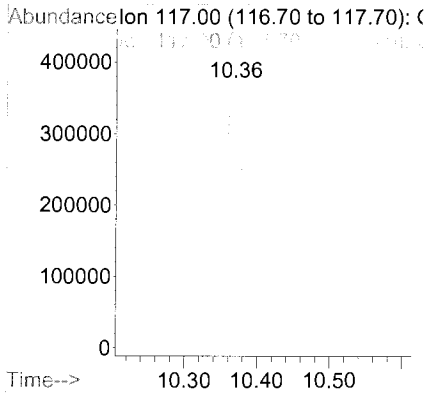


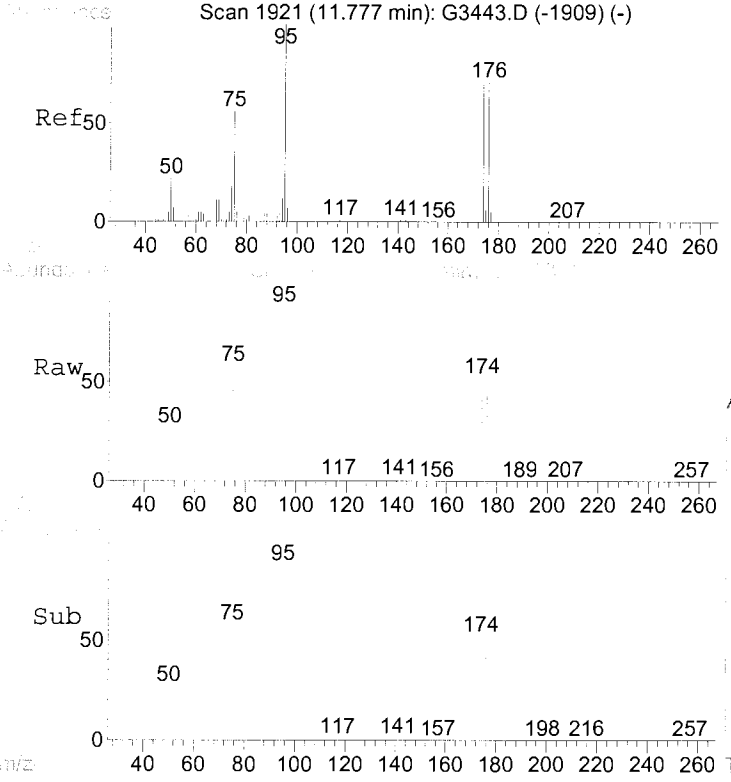


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8293.D
Acq: 14 Nov 2015 6:31

Tgt Ion:117 Resp: 708505

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

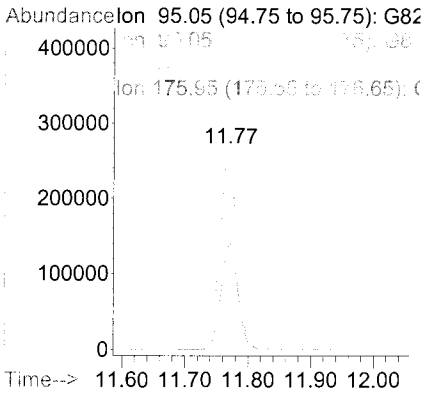




#59
Bromofluorobenzene
Concen: 50.90 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8293.D
Acq: 14 Nov 2015 6:31

Tgt Ion: 95 Resp: 495791

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.5	62.9	94.3#
176	52.4	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8293.D
Acq On : 14 Nov 2015 6:31
Operator : Sylvia
Sample : MW-23,E15-10258-007,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 39 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	842	854	876	rBV	671401	1538648	56.77%	12.536%
2	6.515	904	915	947	rBV	471963	1117882	41.24%	9.108%
3	7.023	999	1012	1041	rBV	940136	2033606	75.03%	16.568%
4	8.696	1319	1332	1359	rBV	1316518	2654825	97.95%	21.629%
5	10.365	1639	1651	1679	rBV	1425748	2710506	100.00%	22.083%
6	11.767	1908	1919	1938	rBV	1184258	2218719	81.86%	18.076%

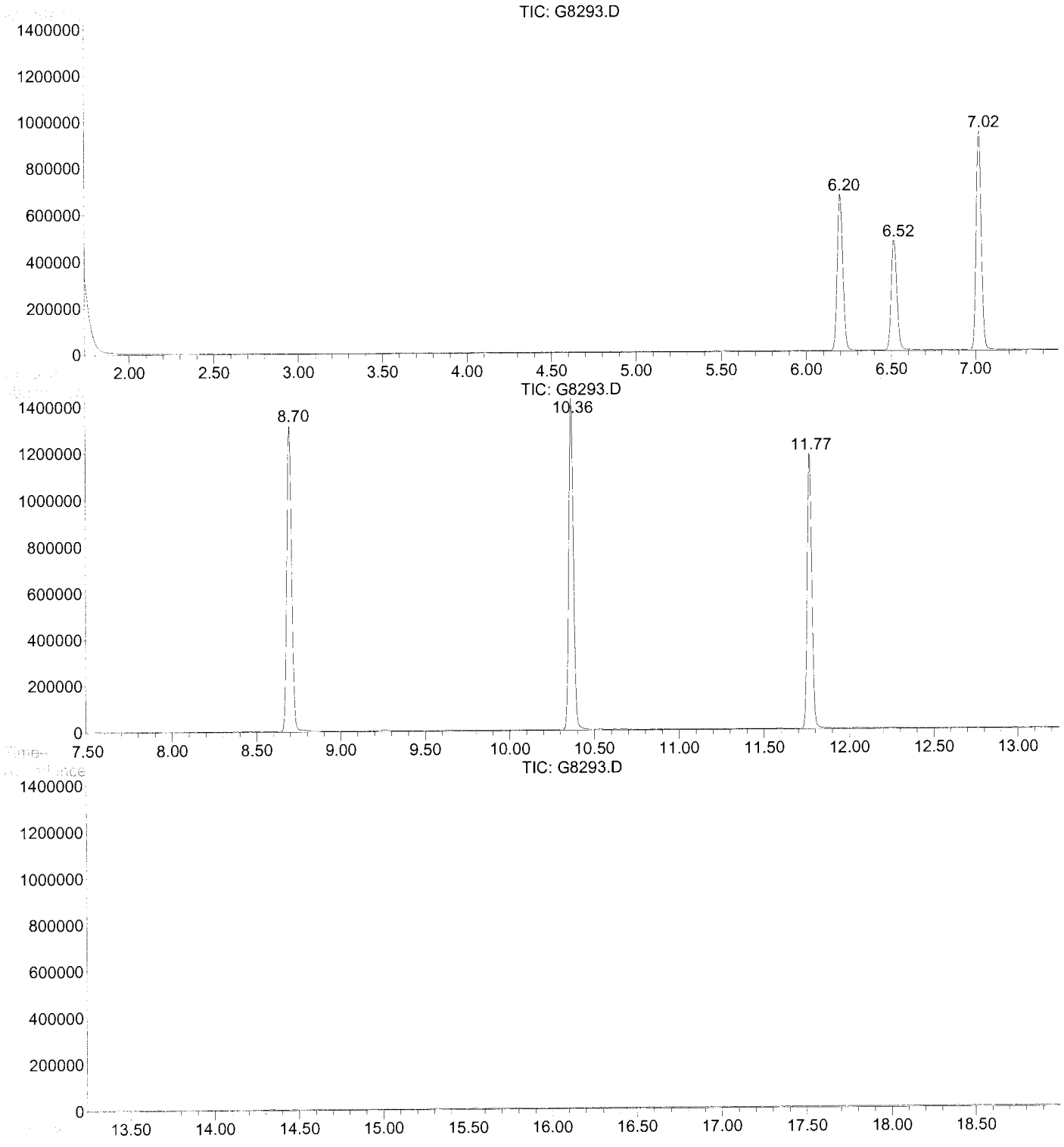
Sum of corrected areas: 12274186

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8293.D
Acq On : 14 Nov 2015 6:31
Operator : Sylvia
Sample : MW-23,E15-10258-007,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 39 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



E15-10258

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8294.D
Acq On : 14 Nov 2015 6:59
Operator : Sylvia
Sample : MW-16,E15-10258-008,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Nov 14 14:28:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	392087	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	665500	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	666033	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	440074	52.08	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 104.16%			
41) Toluene-d8	8.70	98	862971	49.64	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.28%			
59) Bromofluorobenzene	11.77	95	468557	51.17	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 102.34%			

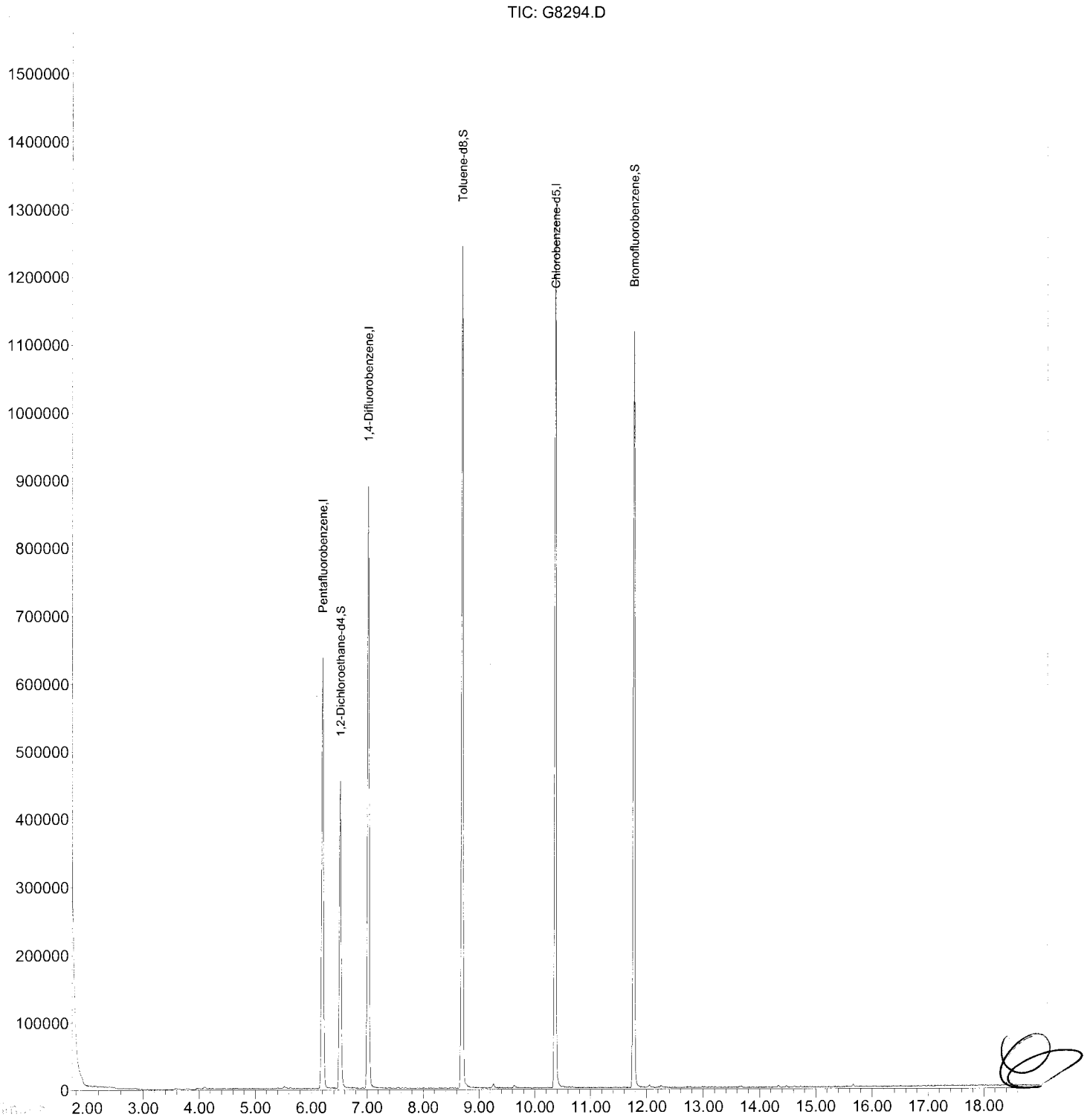
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

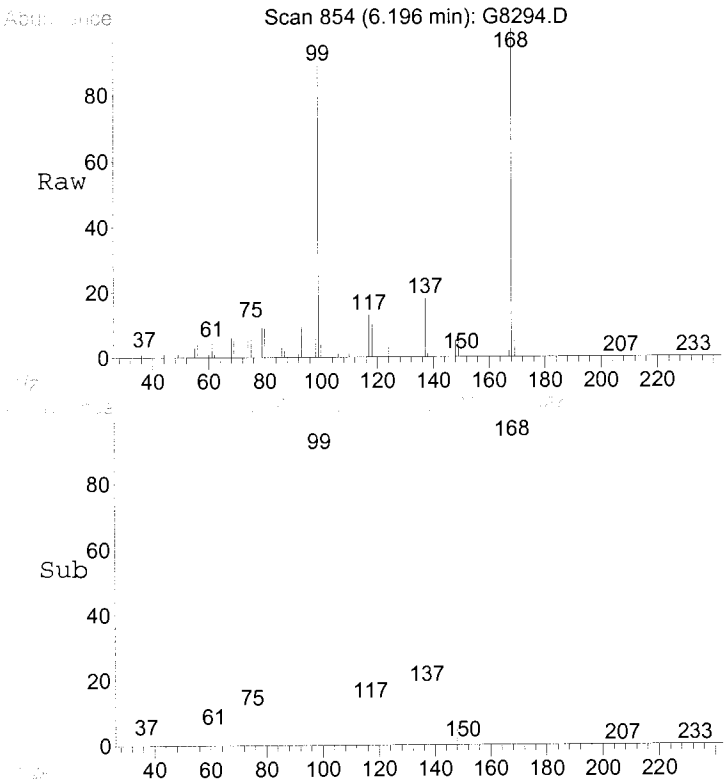
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8294.D
Acq On : 14 Nov 2015 6:59
Operator : Sylvia
Sample : MW-16,E15-10258-008,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 40 Sample Multiplier: 1

Quant Time: Nov 14 14:28:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration



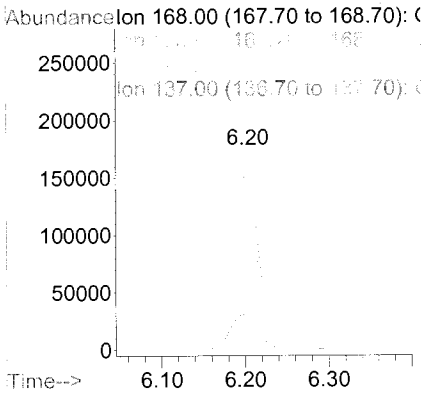
E15-10258

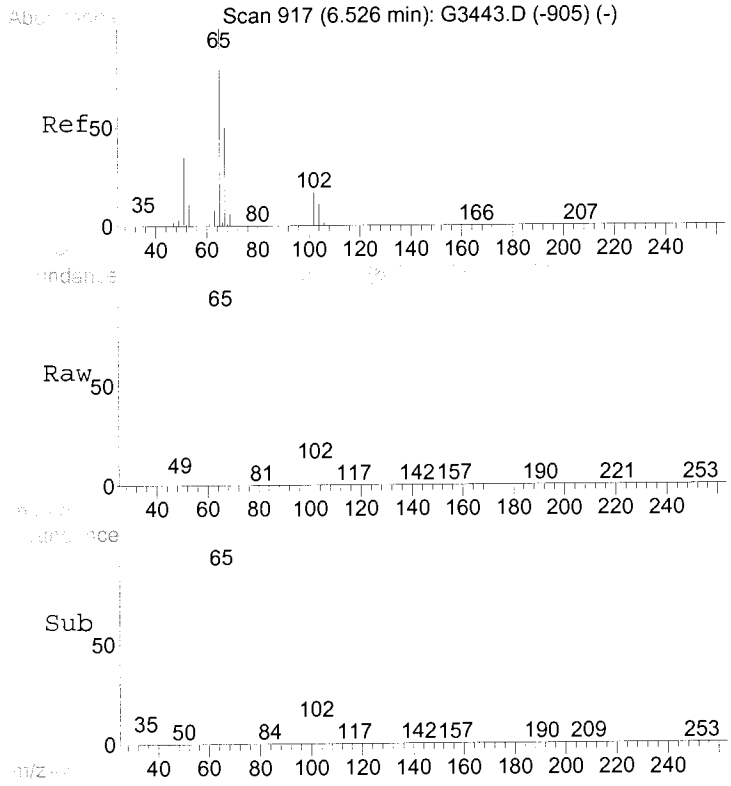


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8294.D
Acq: 14 Nov 2015 6:59

Tgt Ion:168 Resp: 392087

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

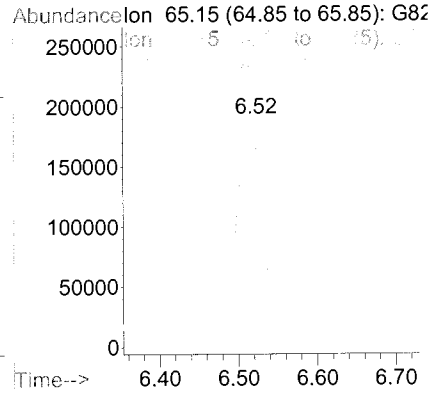


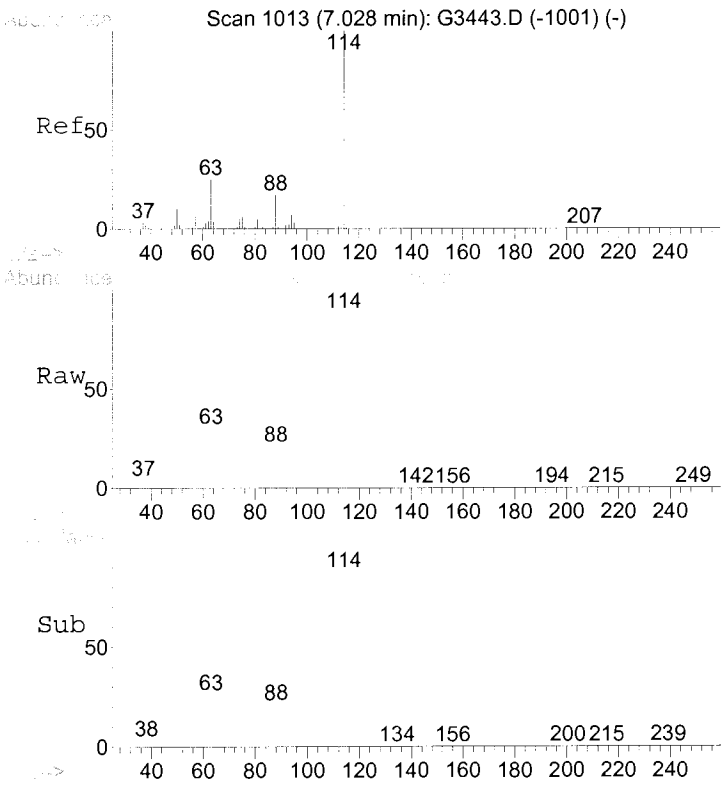


#30
1,2-Dichloroethane-d4
Concen: 52.08 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8294.D
Acq: 14 Nov 2015 6:59

Tgt Ion: 65 Resp: 440074

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.1	43.2	64.8

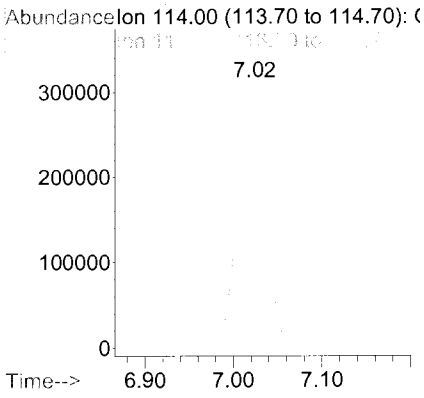


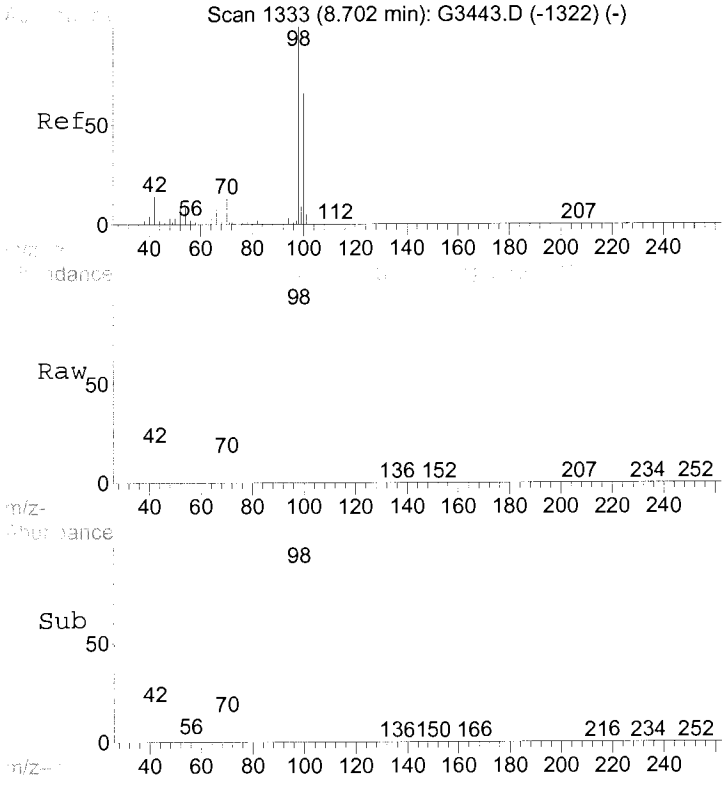


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. 0.00 min
Lab File: G8294.D
Acq: 14 Nov 2015 6:59

Tgt Ion:114 Resp: 665500

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

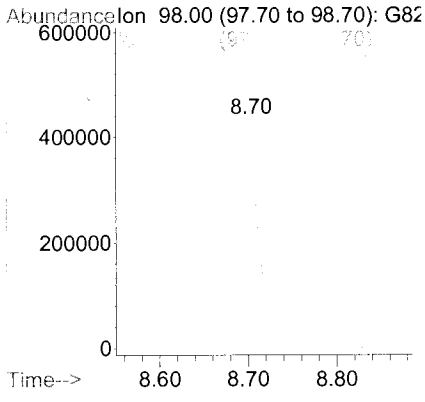


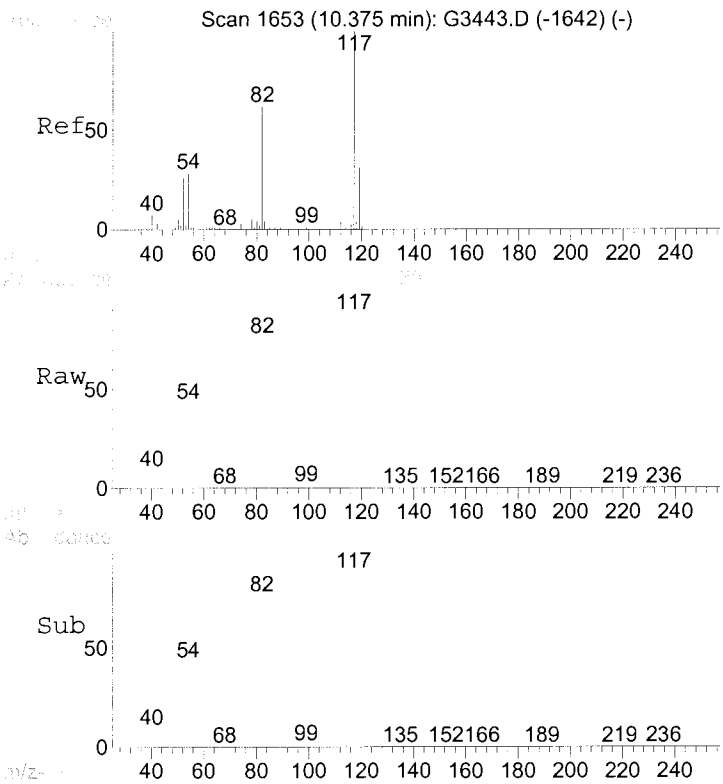


#41
Toluene-d8
Concen: 49.64 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8294.D
Acq: 14 Nov 2015 6:59

Tgt Ion: 98 Resp: 862971

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.7	53.4	80.0

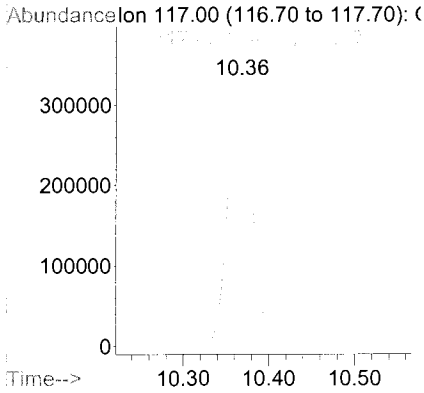


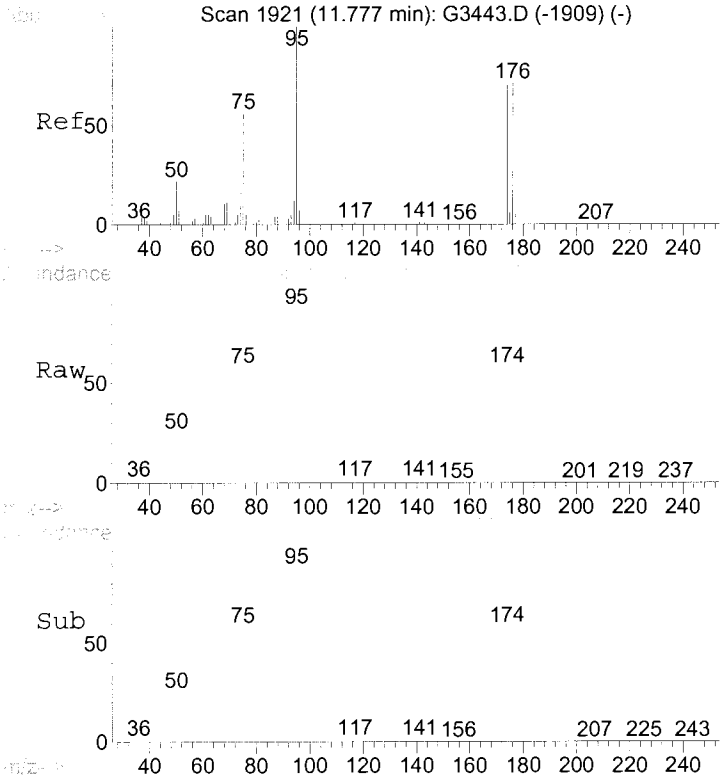


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8294.D
Acq: 14 Nov 2015 6:59

Tgt Ion:117 Resp: 666033

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

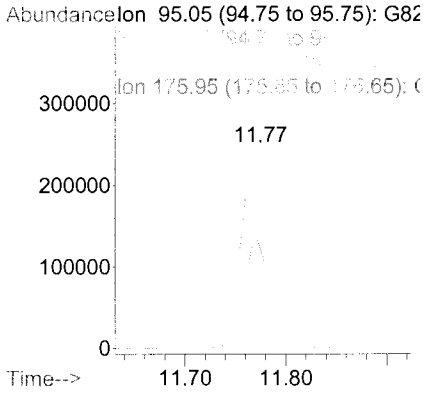




#59
Bromofluorobenzene
Concen: 51.17 UG
RT: 11.77 min Scan# 1920
Delta R.T. 0.00 min
Lab File: G8294.D
Acq: 14 Nov 2015 6:59

Tgt Ion: 95 Resp: 468557

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.6	62.9	94.3#
176	52.5	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8294.D
Acq On : 14 Nov 2015 6:59
Operator : Sylvia
Sample : MW-16,E15-10258-008,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 40 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	840	854	875	rBV	637099	1444034	56.41%	12.485%
2	6.516	904	915	939	rBV	454480	1050429	41.03%	9.082%
3	7.018	998	1011	1036	rBV	890238	1898024	74.14%	16.410%
4	8.697	1320	1332	1356	rBV	1244278	2497406	97.55%	21.592%
5	10.365	1641	1651	1673	rBV	1312712	2560002	100.00%	22.133%
6	11.767	1907	1919	1942	rBV	1117799	2116431	82.67%	18.298%

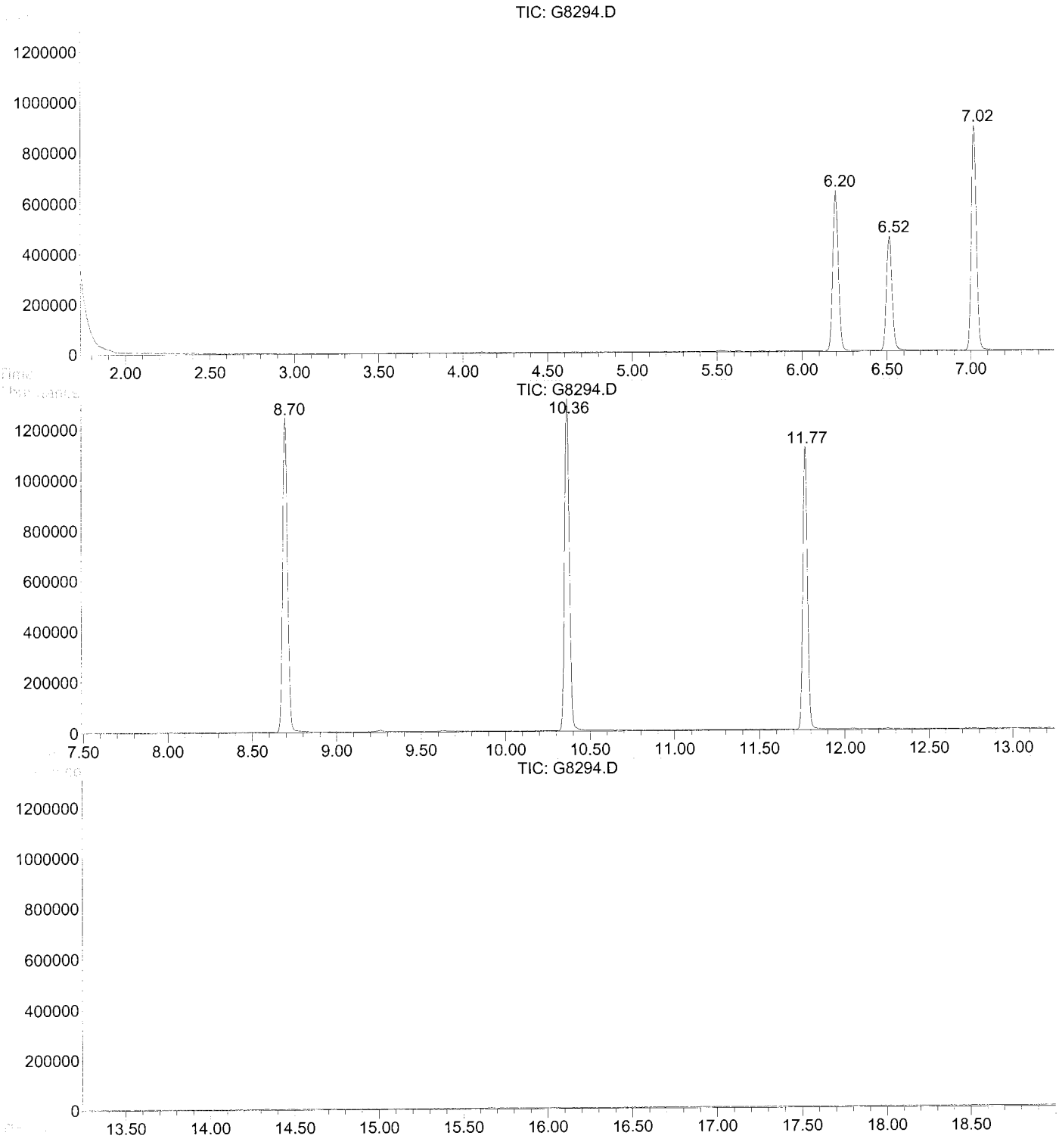
Sum of corrected areas: 11566326

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8294.D
Acq On : 14 Nov 2015 6:59
Operator : Sylvia
Sample : MW-16,E15-10258-008,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 40 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8295.D
Acq On : 14 Nov 2015 7:28
Operator : Sylvia
Sample : MW-13,E15-10258-009,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Nov 14 14:28:31 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	389403	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	672022	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	670732	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	451733	53.83	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 107.66%			
41) Toluene-d8	8.70	98	872828	49.72	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.44%			
59) Bromofluorobenzene	11.77	95	472512	51.24	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 102.48%			

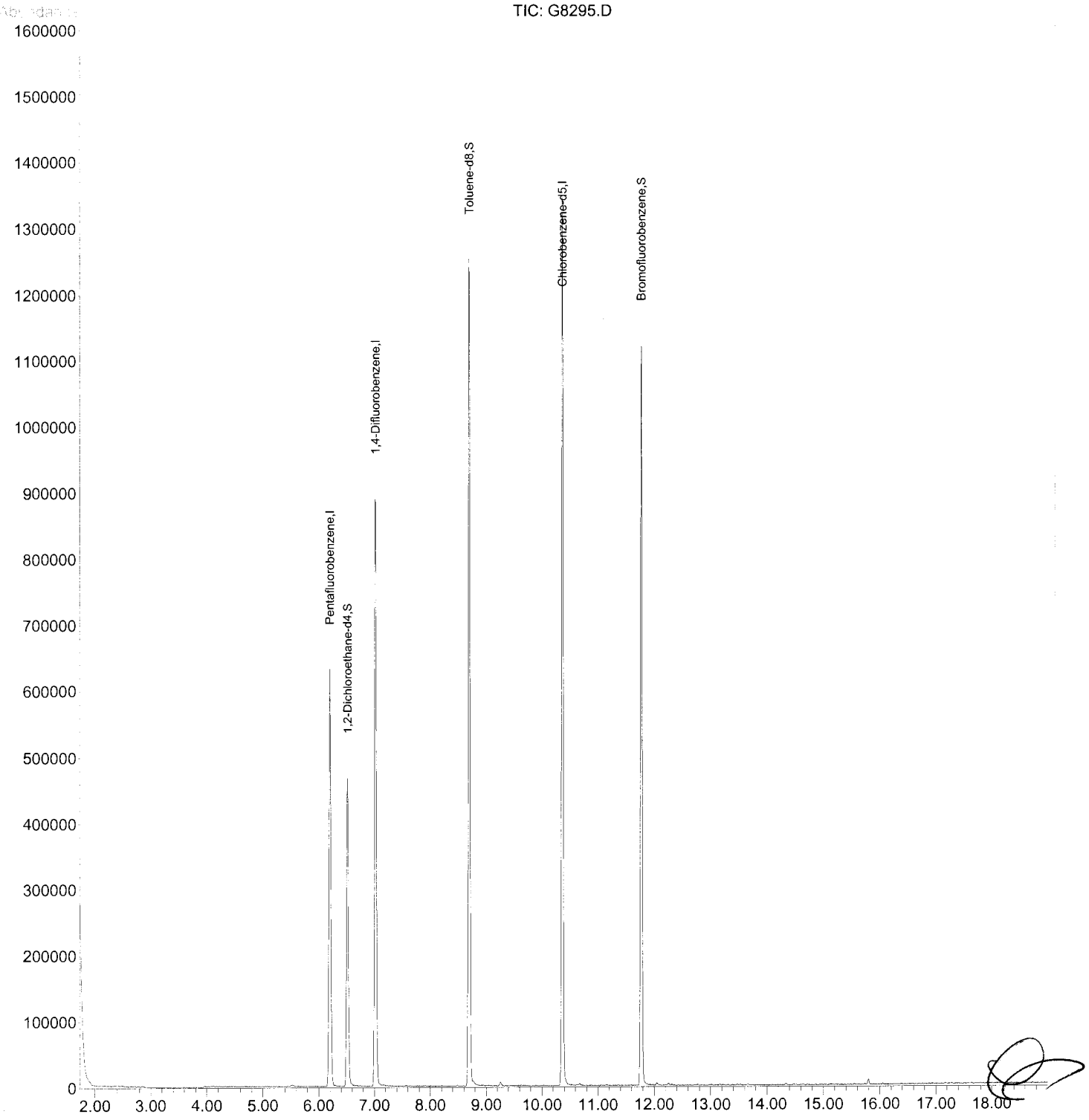
Target Compounds	Qvalue

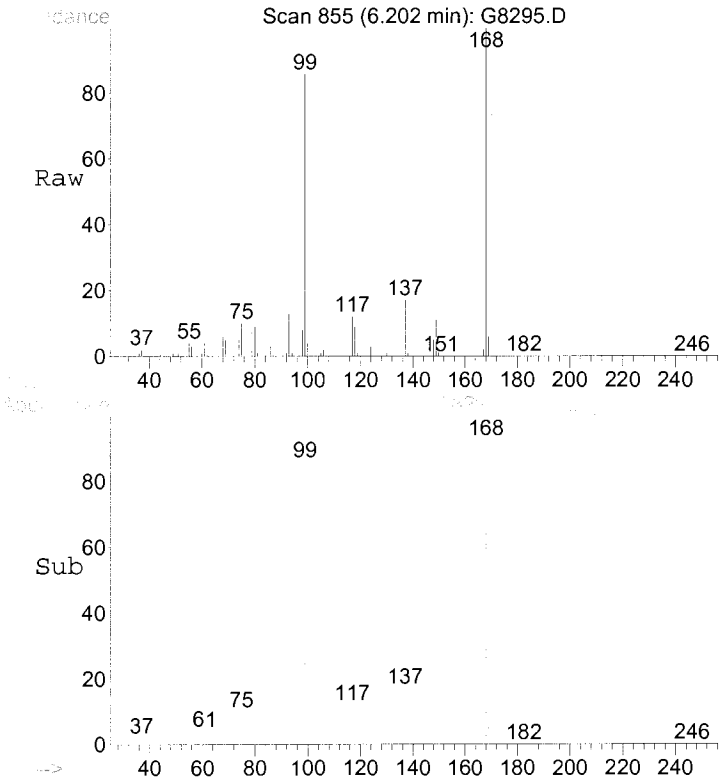
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8295.D
Acq On : 14 Nov 2015 7:28
Operator : Sylvia
Sample : MW-13,E15-10258-009,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 41 Sample Multiplier: 1

Quant Time: Nov 14 14:28:31 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

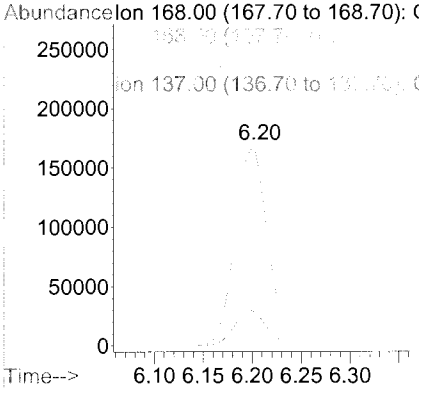


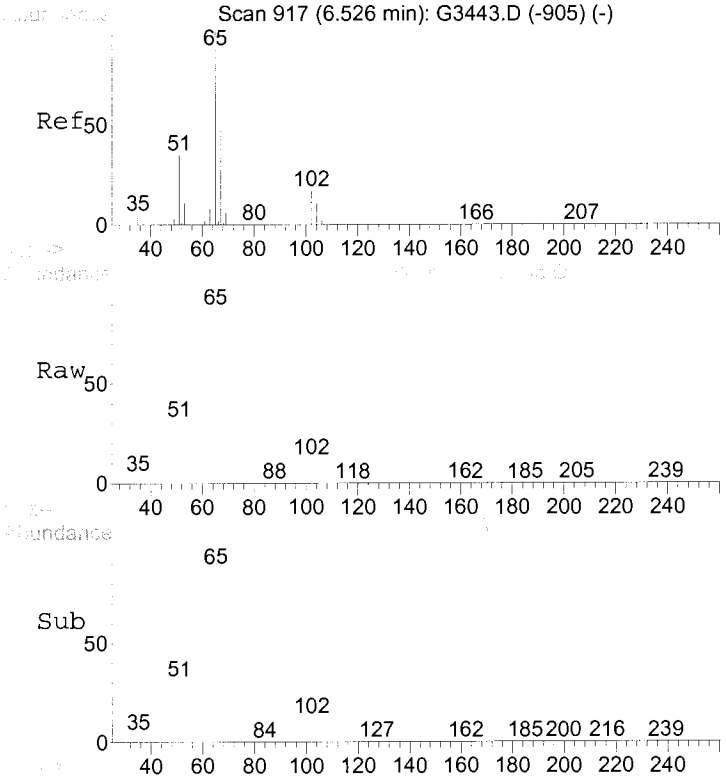


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8295.D
Acq: 14 Nov 2015 7:28

Tgt Ion:168 Resp: 389403

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	88.9	0.0	0.0#
137	17.7	0.0	0.0#

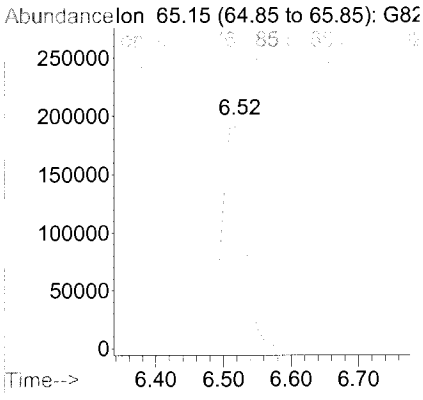


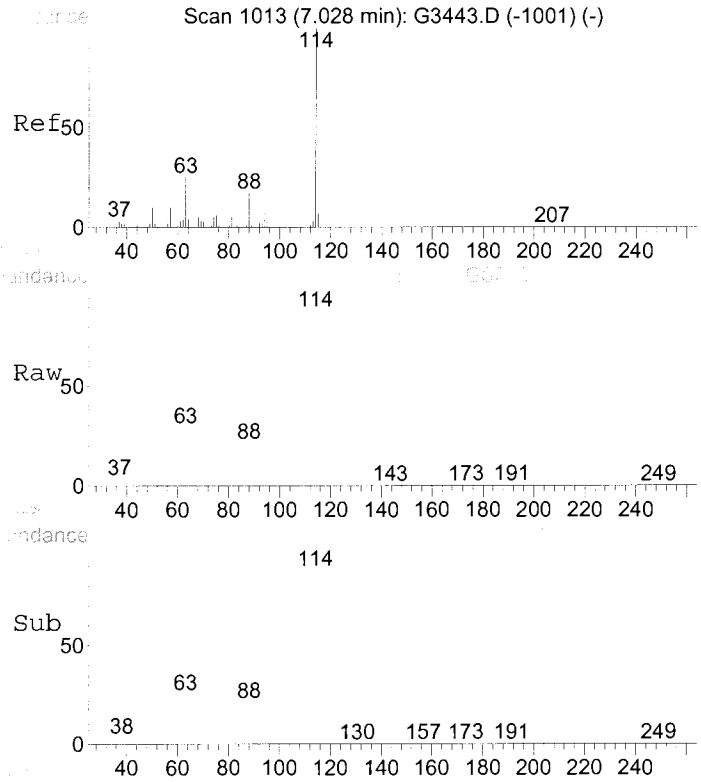


#30
1,2-Dichloroethane-d4
Concen: 53.83 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8295.D
Acq: 14 Nov 2015 7:28

Tgt Ion: 65 Resp: 451733

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	43.6	43.2	64.8

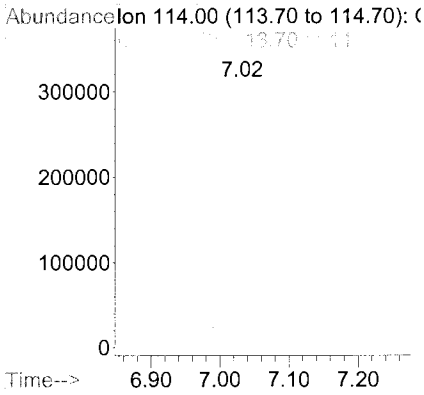


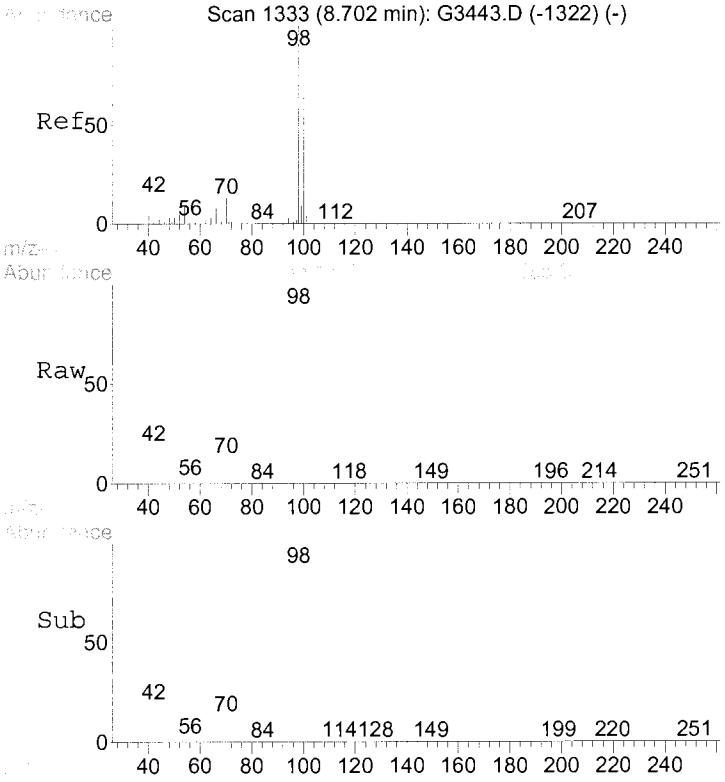


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8295.D
Acq: 14 Nov 2015 7:28

Tgt Ion:114 Resp: 672022

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

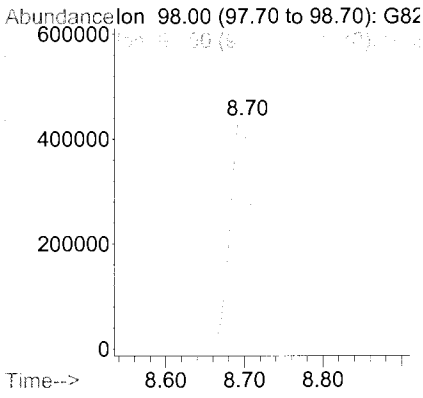


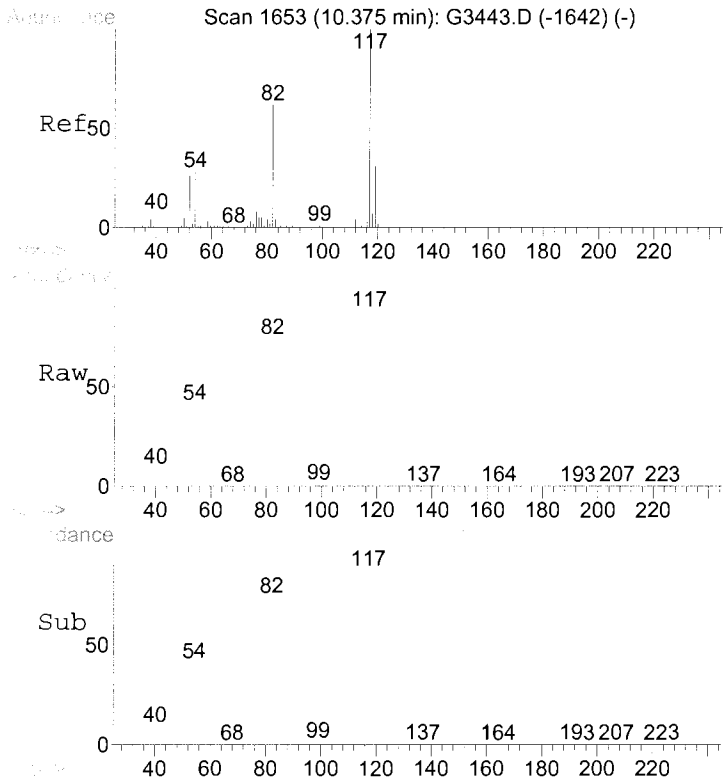


#41
Toluene-d8
Concen: 49.72 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8295.D
Acq: 14 Nov 2015 7:28

Tgt Ion: 98 Resp: 872828

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	58.8	53.4	80.0

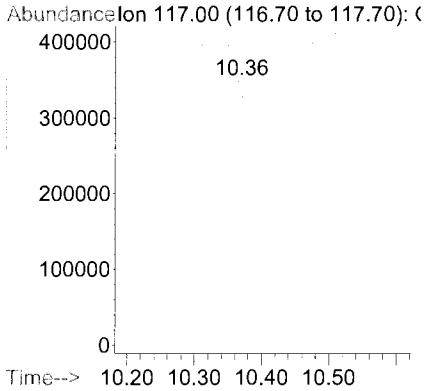


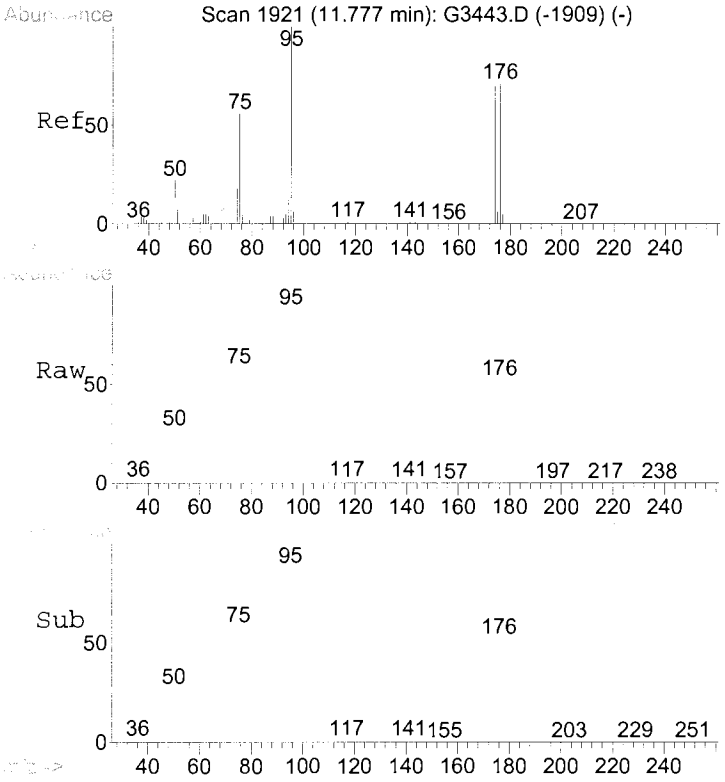


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8295.D
Acq: 14 Nov 2015 7:28

Tgt Ion:117 Resp: 670732

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

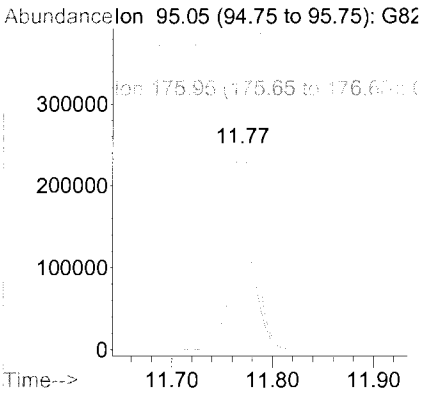




#59
Bromofluorobenzene
Concen: 51.24 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8295.D
Acq: 14 Nov 2015 7:28

Tgt Ion: 95 Resp: 472512

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.5	62.9	94.3#
176	52.8	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8295.D
Acq On : 14 Nov 2015 7:28
Operator : Sylvia
Sample : MW-13,E15-10258-009,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	843	854	871	rBV2	631922	1443484	55.85%	12.378%
2	6.515	902	915	937	rBV	466486	1068420	41.34%	9.162%
3	7.018	996	1011	1037	rBV	888520	1905798	73.73%	16.342%
4	8.696	1318	1332	1367	rBV	1252608	2523464	97.63%	21.639%
5	10.365	1639	1651	1679	rBV	1344747	2584750	100.00%	22.164%
6	11.767	1908	1919	1945	rBV	1121514	2135903	82.63%	18.315%

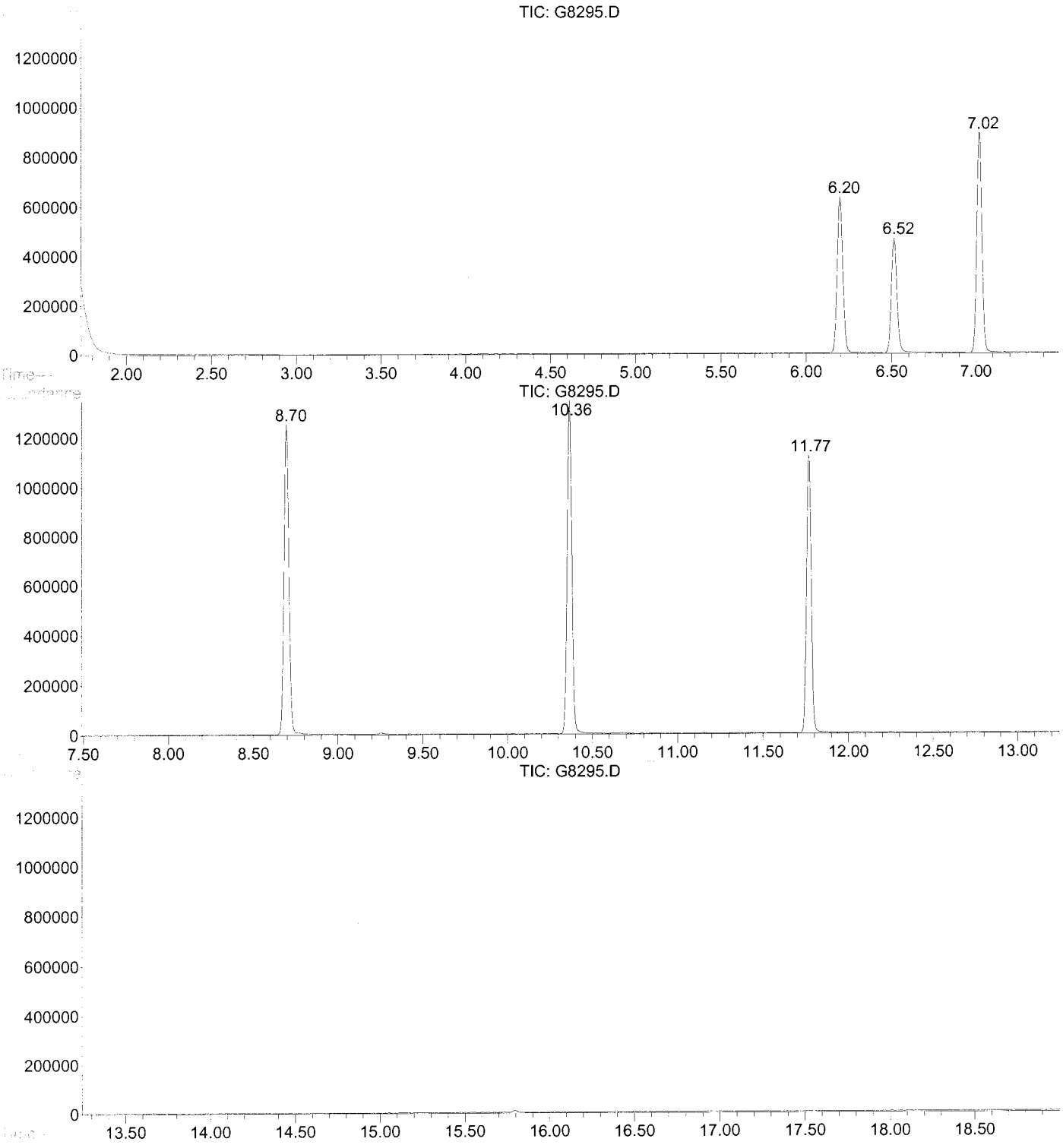
Sum of corrected areas: 11661819

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8295.D
Acq On : 14 Nov 2015 7:28
Operator : Sylvia
Sample : MW-13,E15-10258-009,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



E15-10258-0168

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8283.D
Acq On : 14 Nov 2015 1:48
Operator : Sylvia
Sample : FB-11052015,E15-10258-010,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Nov 14 13:53:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	476055	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	820060	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	804172	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	473389	46.15	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 92.30%			
41) Toluene-d8	8.70	98	1059536	49.46	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.92%			
59) Bromofluorobenzene	11.77	95	543301	49.14	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 98.28%			

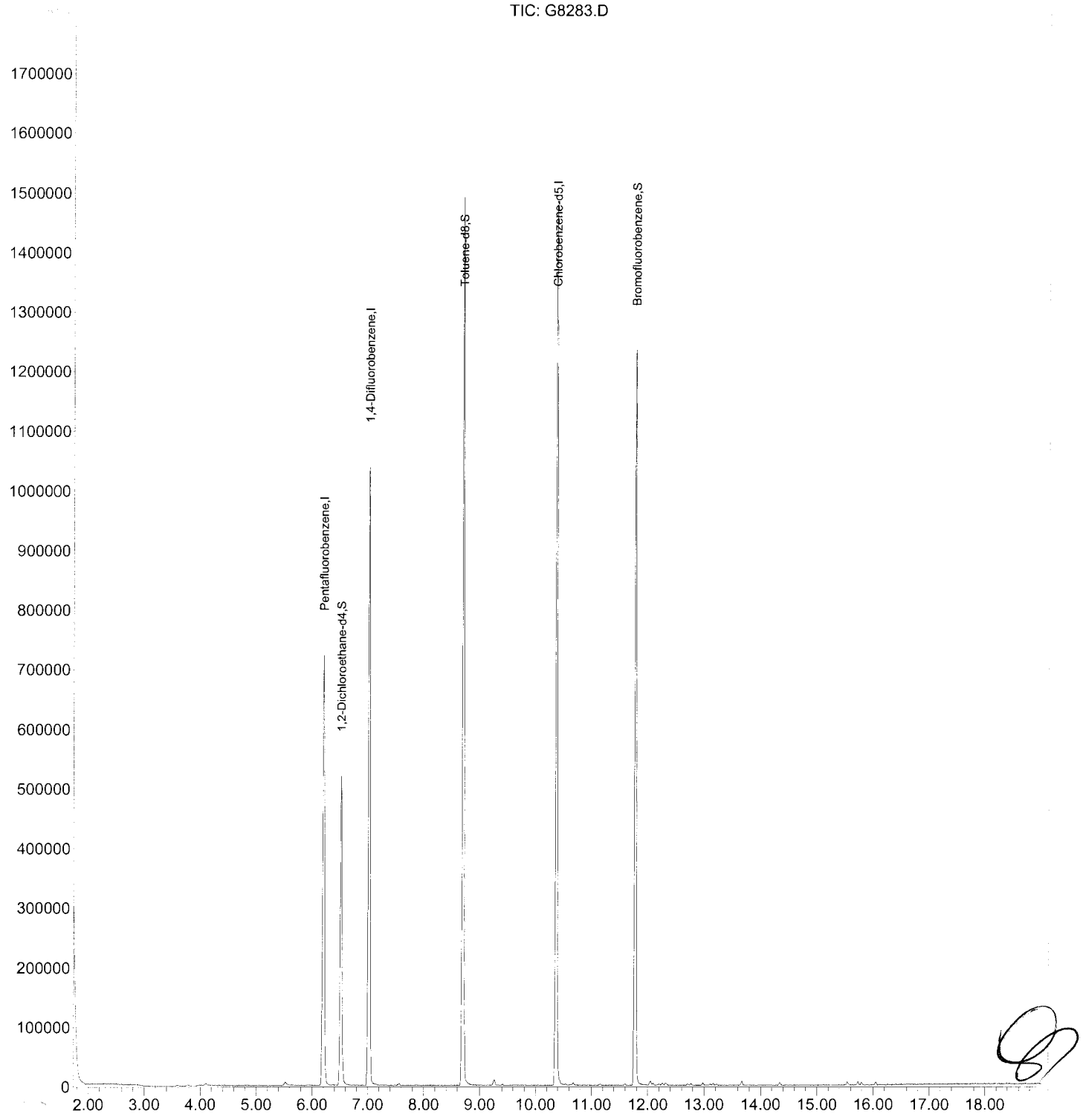
Target Compounds	Qvalue

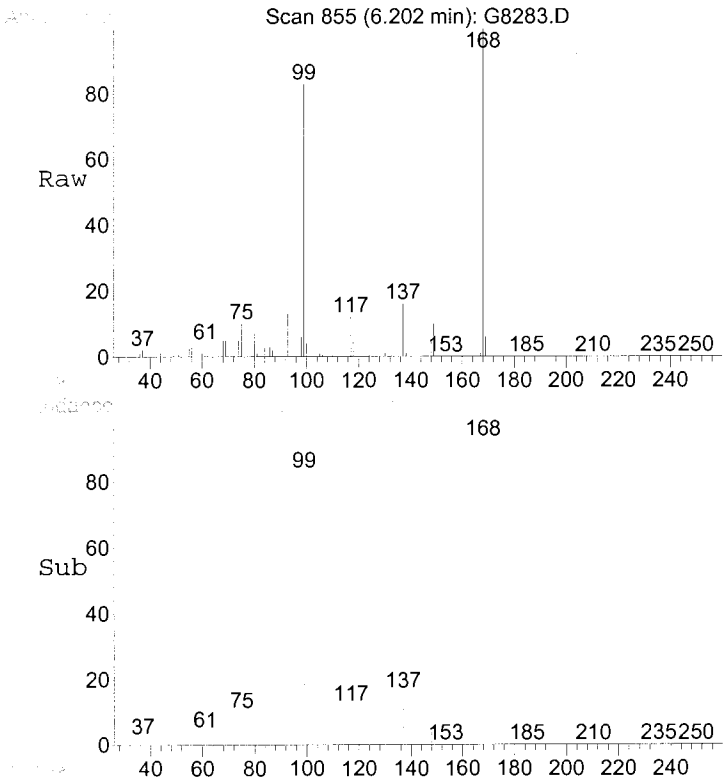
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8283.D
Acq On : 14 Nov 2015 1:48
Operator : Sylvia
Sample : FB-11052015,E15-10258-010,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Nov 14 13:53:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

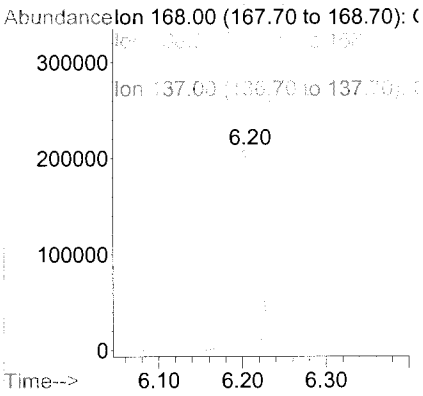


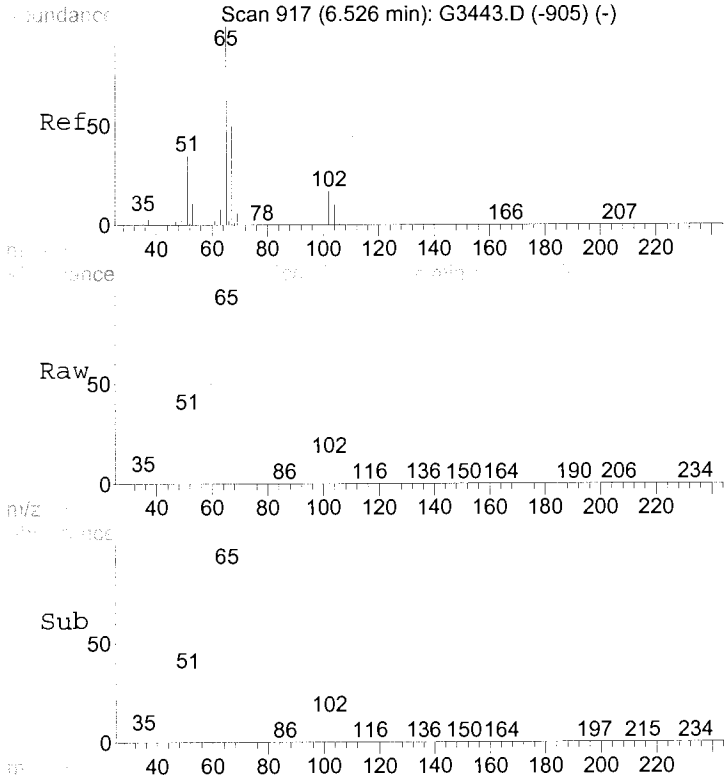


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8283.D
Acq: 14 Nov 2015 1:48

Tgt Ion:168 Resp: 476055

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

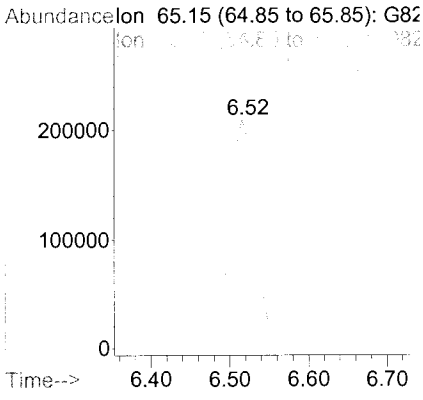


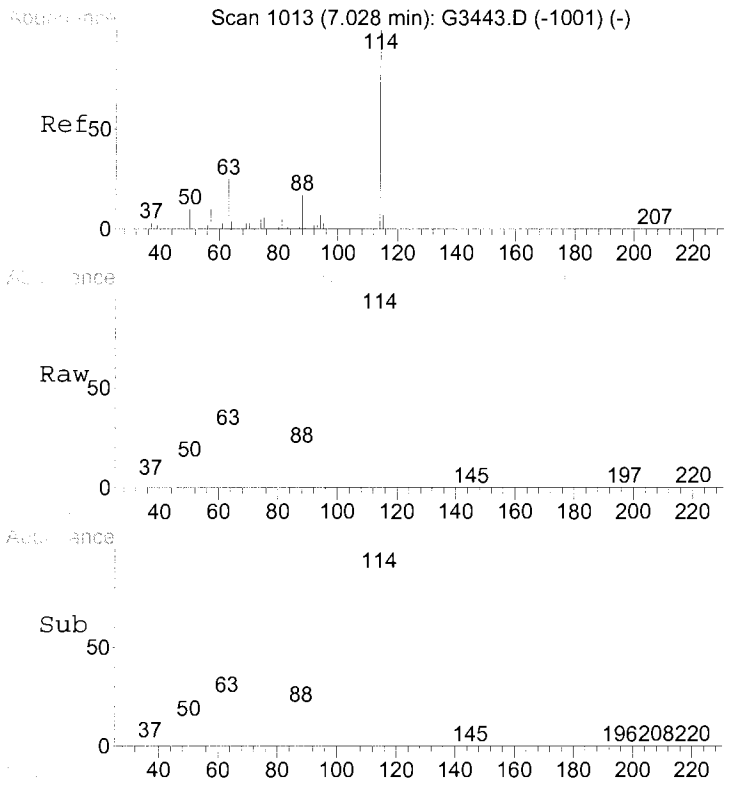


#30
1,2-Dichloroethane-d4
Concen: 46.15 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8283.D
Acq: 14 Nov 2015 1:48

Tgt Ion: 65 Resp: 473389

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	46.1	43.2	64.8

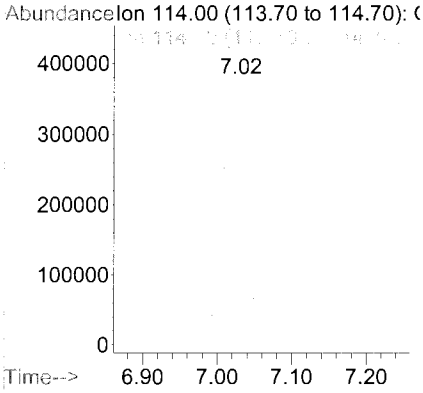


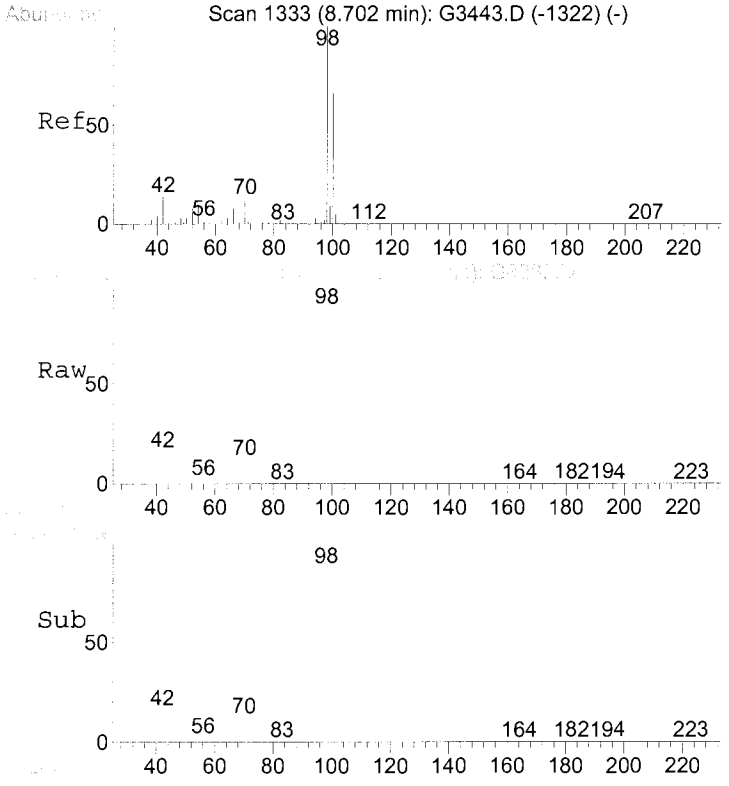


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8283.D
Acq: 14 Nov 2015 1:48

Tgt Ion:114 Resp: 820060

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

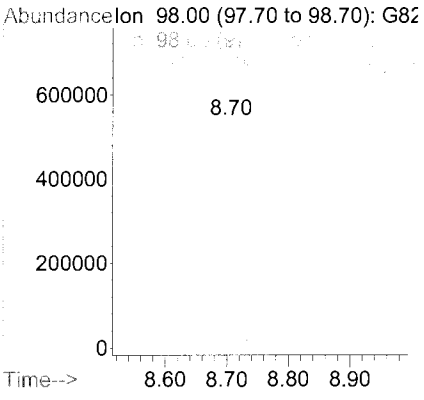


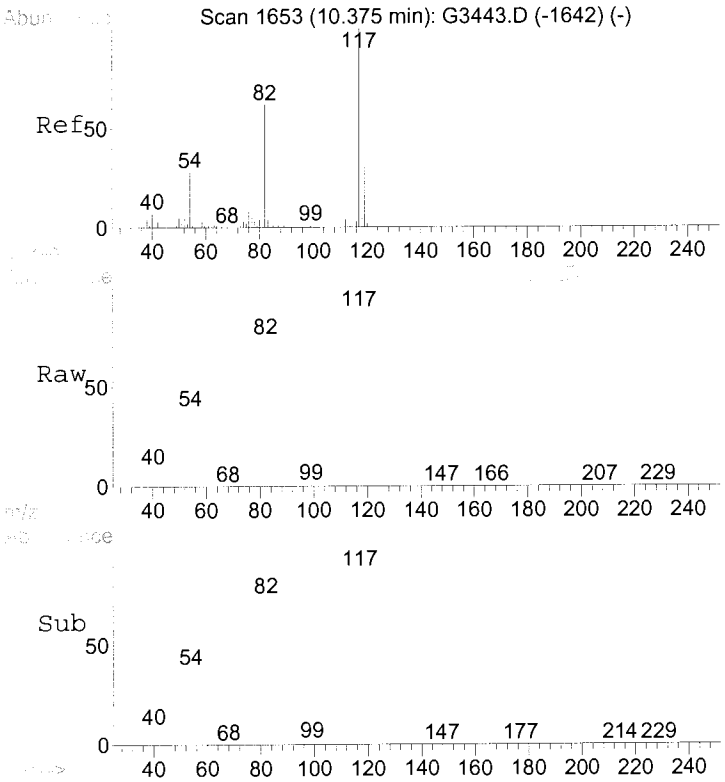


#41
Toluene-d8
Concen: 49.46 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8283.D
Acq: 14 Nov 2015 1:48

Tgt Ion: 98 Resp: 1059536

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.6	53.4	80.0

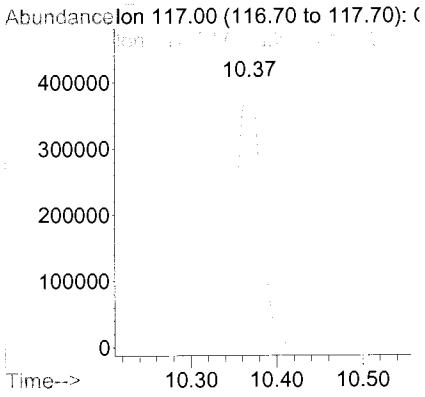


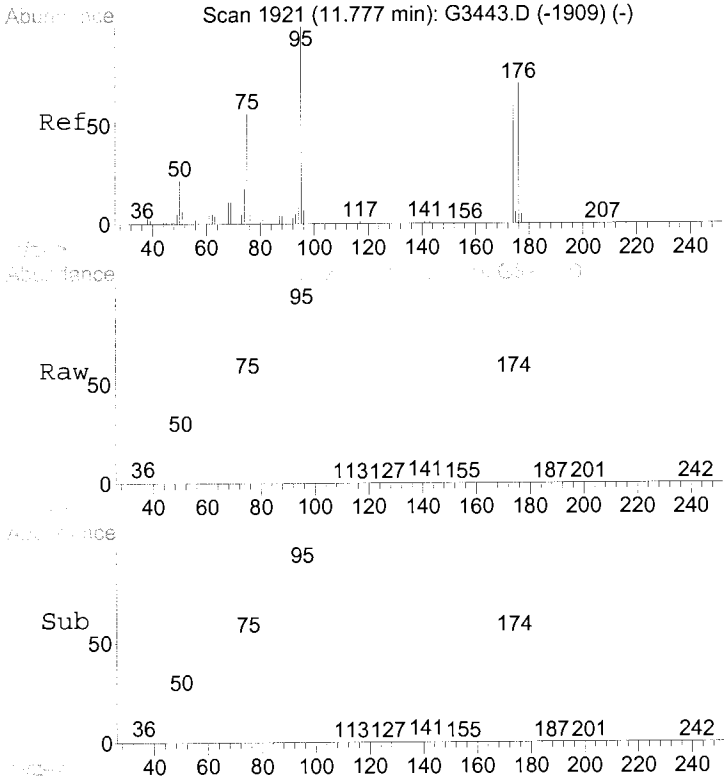


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.37 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8283.D
Acq: 14 Nov 2015 1:48

Tgt Ion:117 Resp: 804172

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

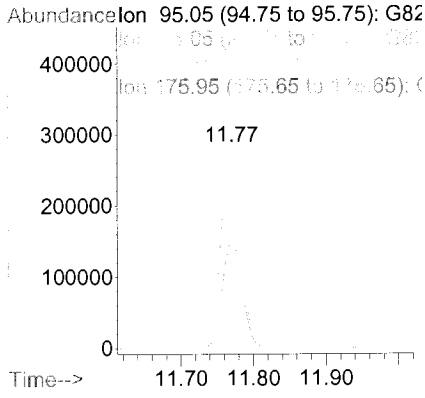




#59
Bromofluorobenzene
Concen: 49.14 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8283.D
Acq: 14 Nov 2015 1:48

Tgt Ion: 95 Resp: 543301

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.5	62.9	94.3#
176	53.0	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8283.D
Acq On : 14 Nov 2015 1:48
Operator : Sylvia
Sample : FB-11052015,E15-10258-010,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 29 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.202	841	855	877	rBV	722455	1667846	56.18%	12.483%
2	6.516	904	915	938	rBV	519803	1177564	39.67%	8.814%
3	7.023	998	1012	1041	rBV	1038364	2245028	75.63%	16.803%
4	8.697	1319	1332	1367	rBV	1491170	2968541	100.00%	22.219%
5	10.365	1639	1651	1675	rBV	1484865	2939318	99.02%	22.000%
6	11.772	1909	1920	1943	rBV	1234654	2362317	79.58%	17.681%

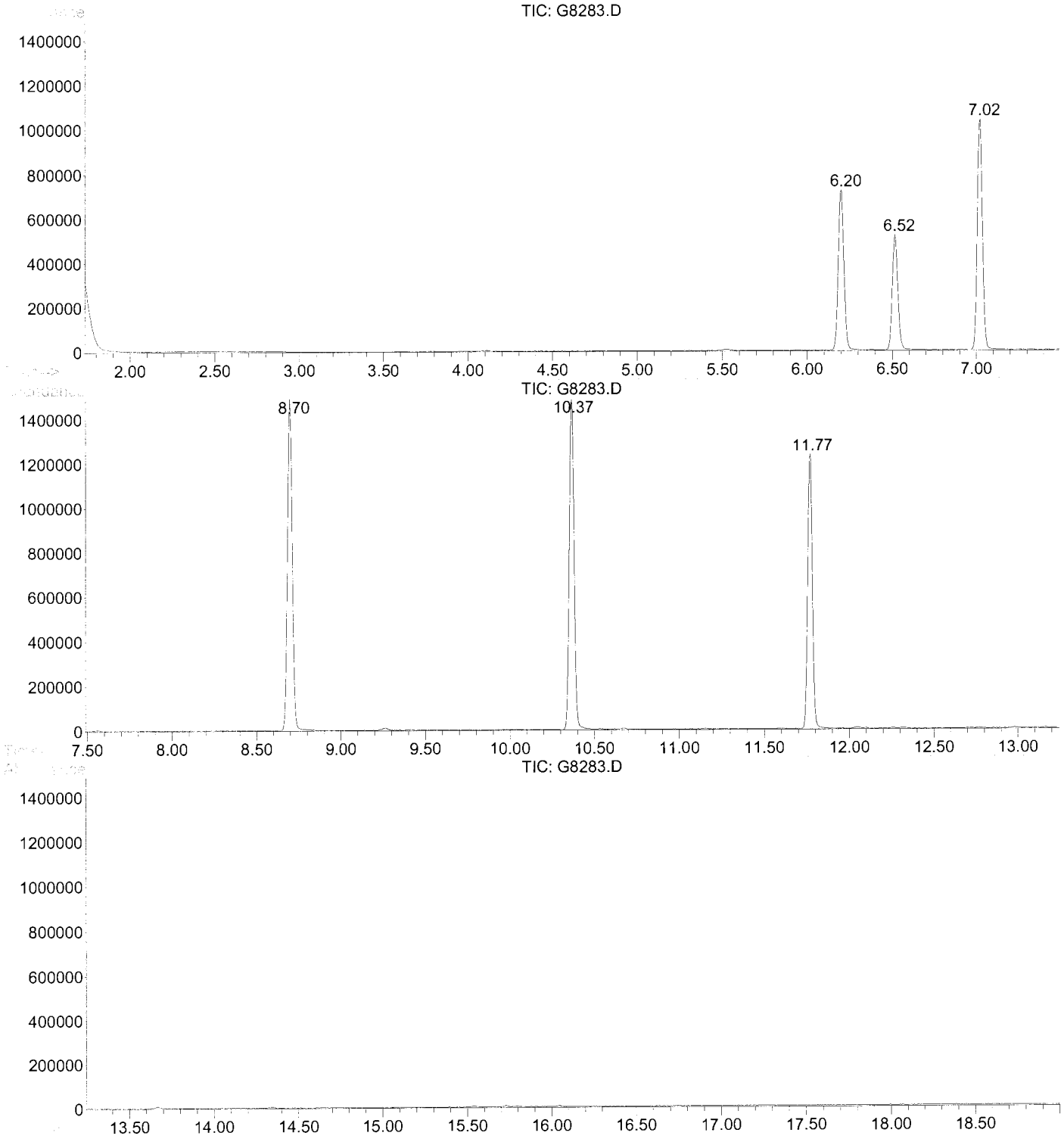
Sum of corrected areas: 13360614

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8283.D
Acq On : 14 Nov 2015 1:48
Operator : Sylvia
Sample : FB-11052015,E15-10258-010,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 29 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8296.D
Acq On : 14 Nov 2015 7:56
Operator : Sylvia
Sample : MW-25,E15-10258-011,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Nov 14 14:29:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

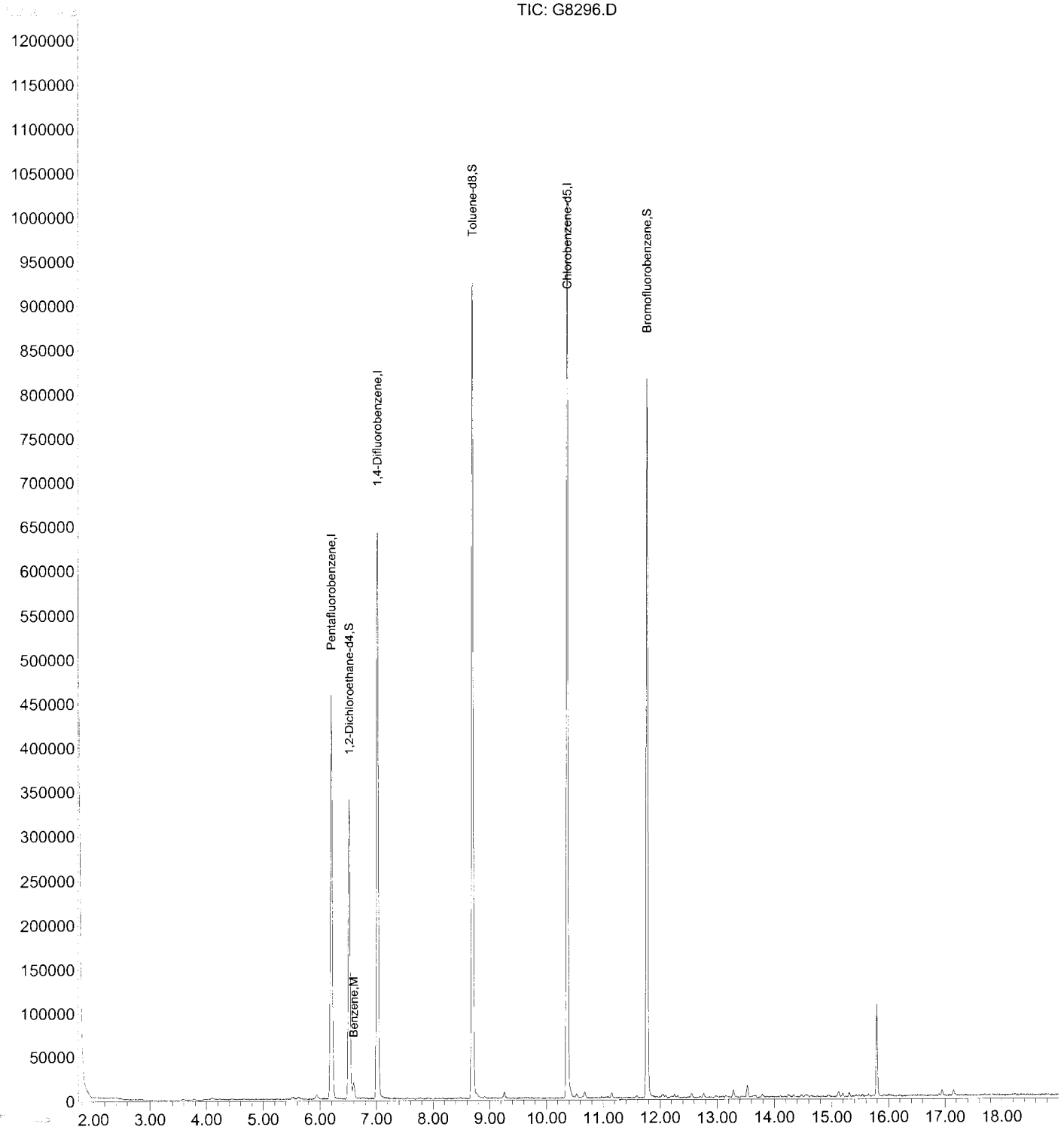
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	280511	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	493304	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	499905	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	331898	54.91	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 109.82%			
41) Toluene-d8	8.70	98	644957	50.05	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.10%			
59) Bromofluorobenzene	11.77	95	348618	50.72	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 101.44%			
Target Compounds						Qvalue
32) Benzene	6.59	78	14719	1.12	UG	100

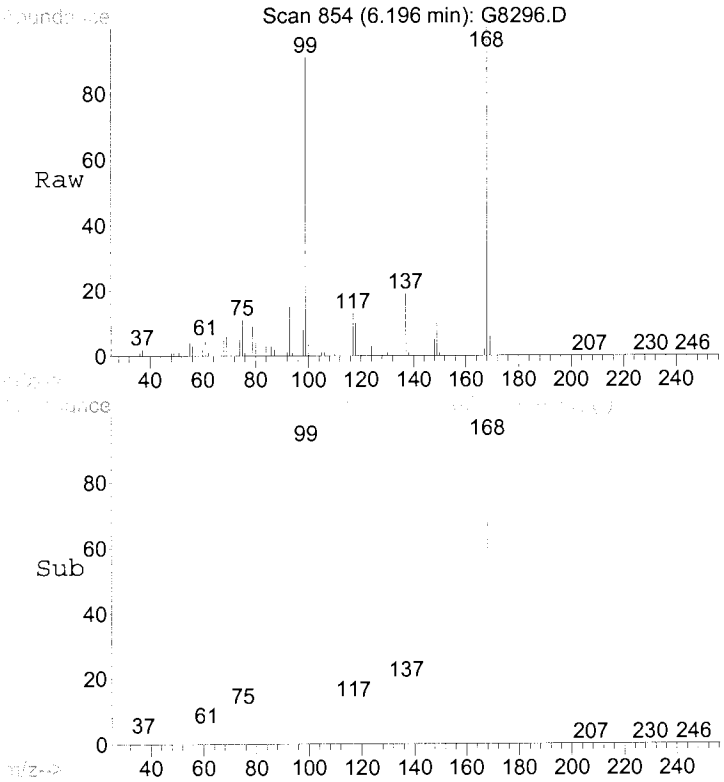
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8296.D
Acq On : 14 Nov 2015 7:56
Operator : Sylvia
Sample : MW-25,E15-10258-011,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 42 Sample Multiplier: 1

Quant Time: Nov 14 14:29:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

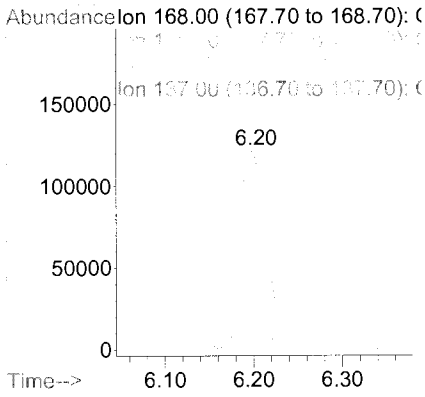


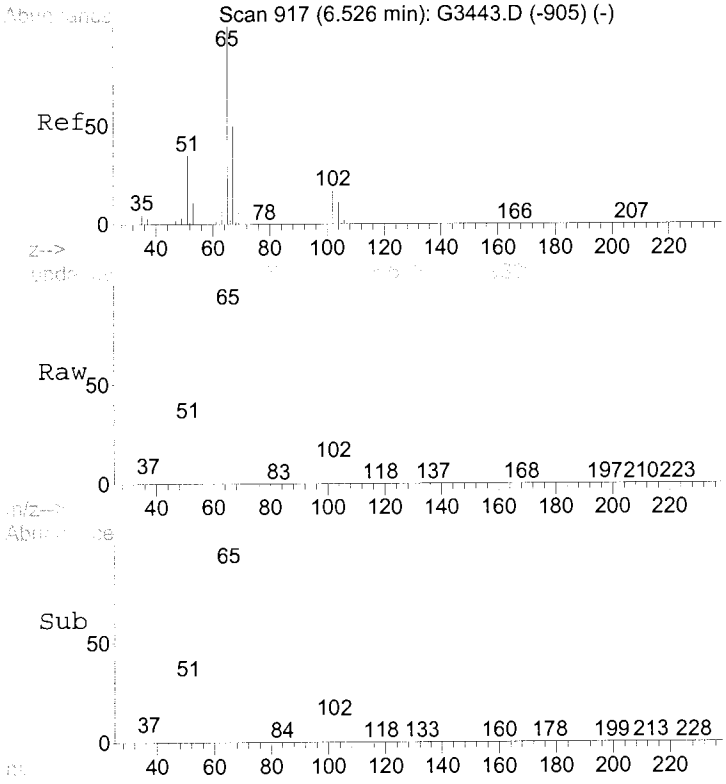


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8296.D
Acq: 14 Nov 2015 7:56

Tgt Ion:168 Resp: 280511

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

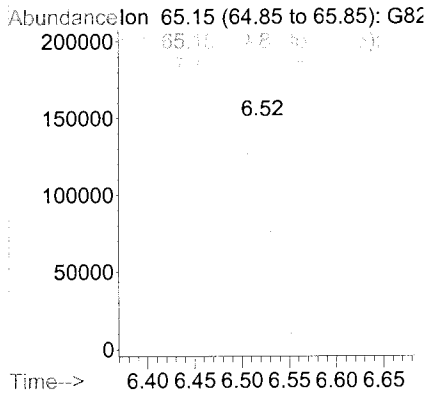


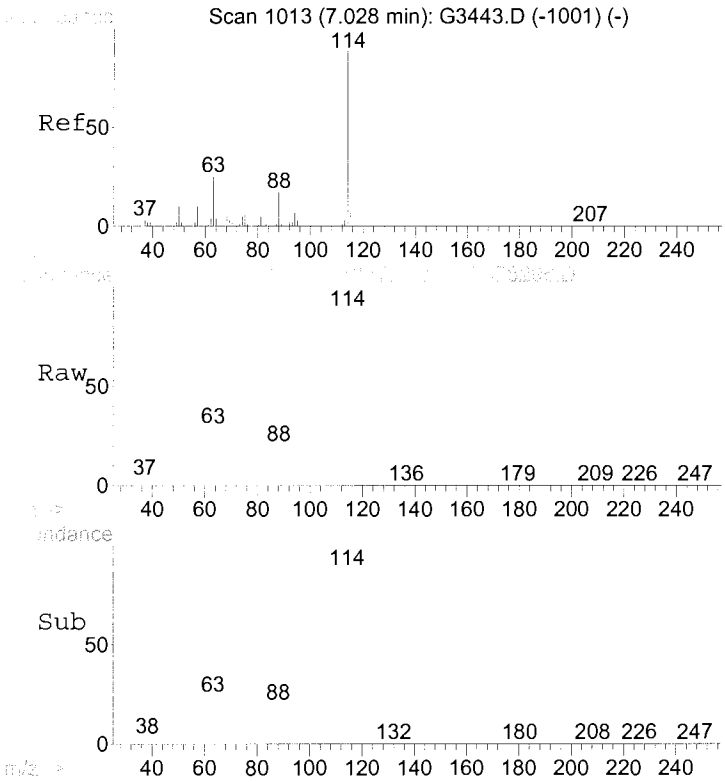


#30
1,2-Dichloroethane-d4
Concen: 54.91 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8296.D
Acq: 14 Nov 2015 7:56

Tgt Ion: 65 Resp: 331898

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.0	43.2	64.8

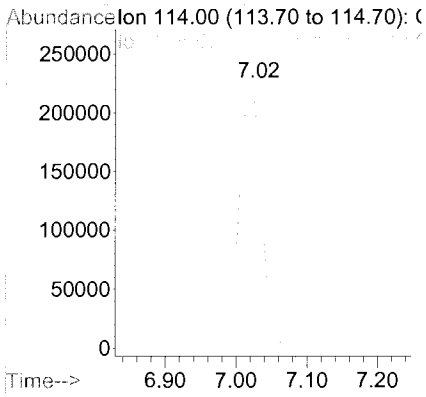


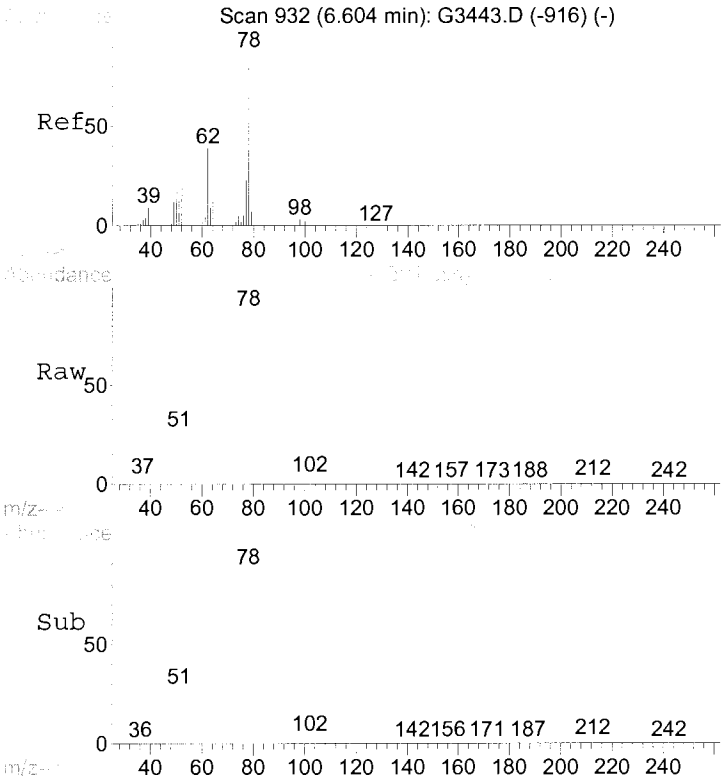


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8296.D
Acq: 14 Nov 2015 7:56

Tgt Ion:114 Resp: 493304

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

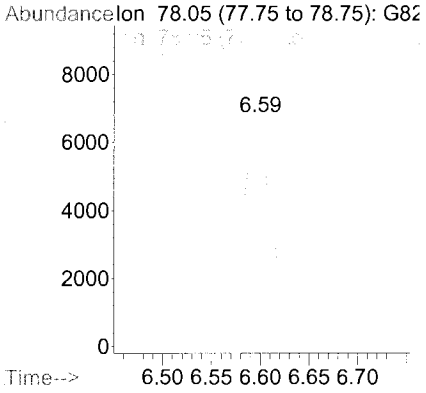




#32
Benzene
Concen: 1.12 UG
RT: 6.59 min Scan# 930
Delta R.T. 0.00 min
Lab File: G8296.D
Acq: 14 Nov 2015 7:56

Tgt Ion: 78 Resp: 14719

Ion	Ratio	Lower	Upper
78	100		
78	100.0	80.0	120.0
77	22.4	18.3	27.5



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8296.D
Acq On : 14 Nov 2015 7:56
Operator : Sylvia
Sample : MW-25,E15-10258-011,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	841	854	874	rBV	458215	1046515	54.52%	11.831%
2	6.516	900	915	926	rBV	339787	788388	41.07%	8.913%
3	6.594	926	930	944	rVB2	18595	42812	2.23%	0.484%
4	7.018	999	1011	1034	rBV	642851	1409303	73.42%	15.932%
5	8.697	1321	1332	1359	rBV	924535	1860549	96.93%	21.033%
6	10.365	1639	1651	1671	rBV	1017750	1919537	100.00%	21.700%
7	11.767	1908	1919	1944	rBV	815421	1579606	82.29%	17.857%
8	13.529	2251	2256	2264	rVB4	14288	26373	1.37%	0.298%
9	15.794	2680	2689	2706	rVB	105901	172727	9.00%	1.953%

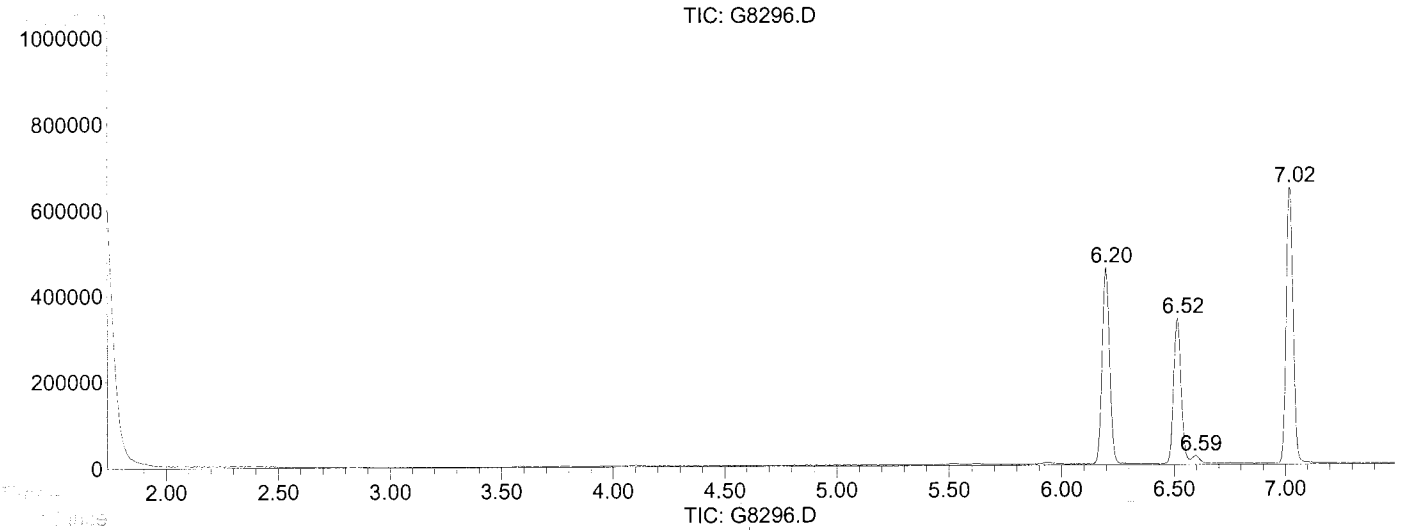
Sum of corrected areas: 8845810

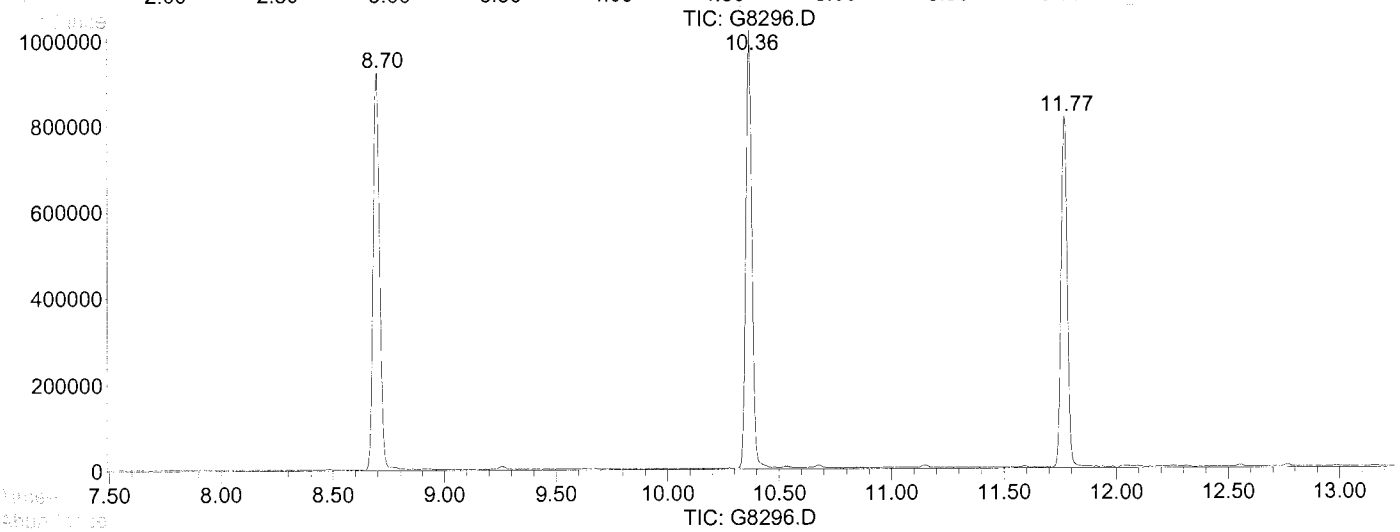
LSC Report - Integrated Chromatogram

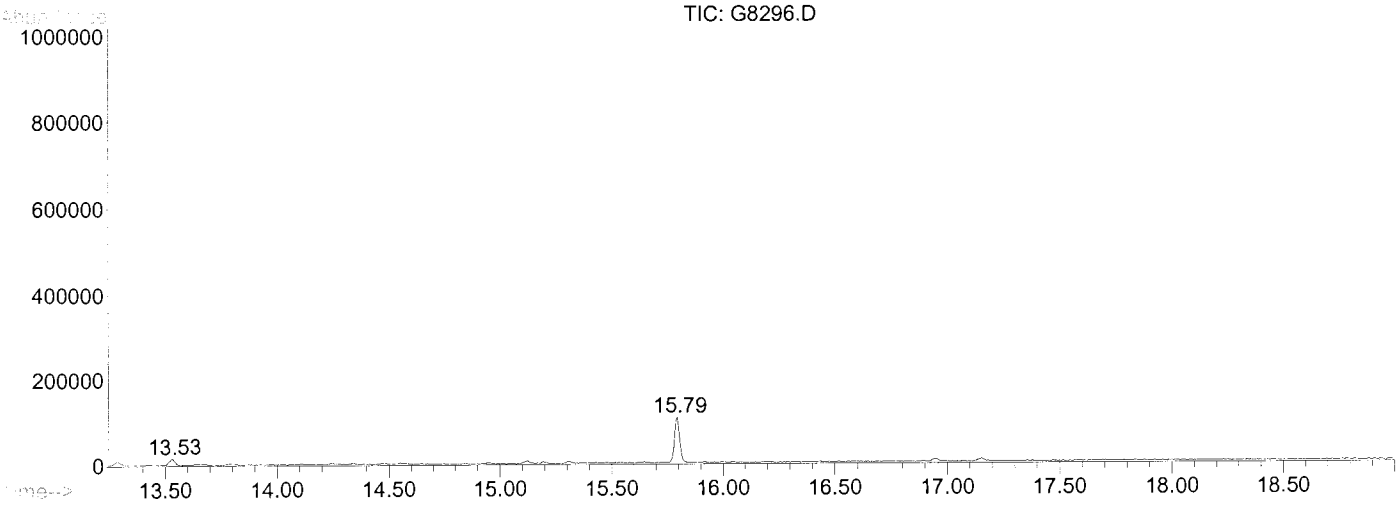
Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8296.D
Acq On : 14 Nov 2015 7:56
Operator : Sylvia
Sample : MW-25,E15-10258-011,A,5mL,100
Misc : GEI/SIC,11/05/15,11/06/15,1
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8297.D
Acq On : 14 Nov 2015 8:24
Operator : Sylvia
Sample : MW-19RR,E15-10258-012,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Nov 14 14:29:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

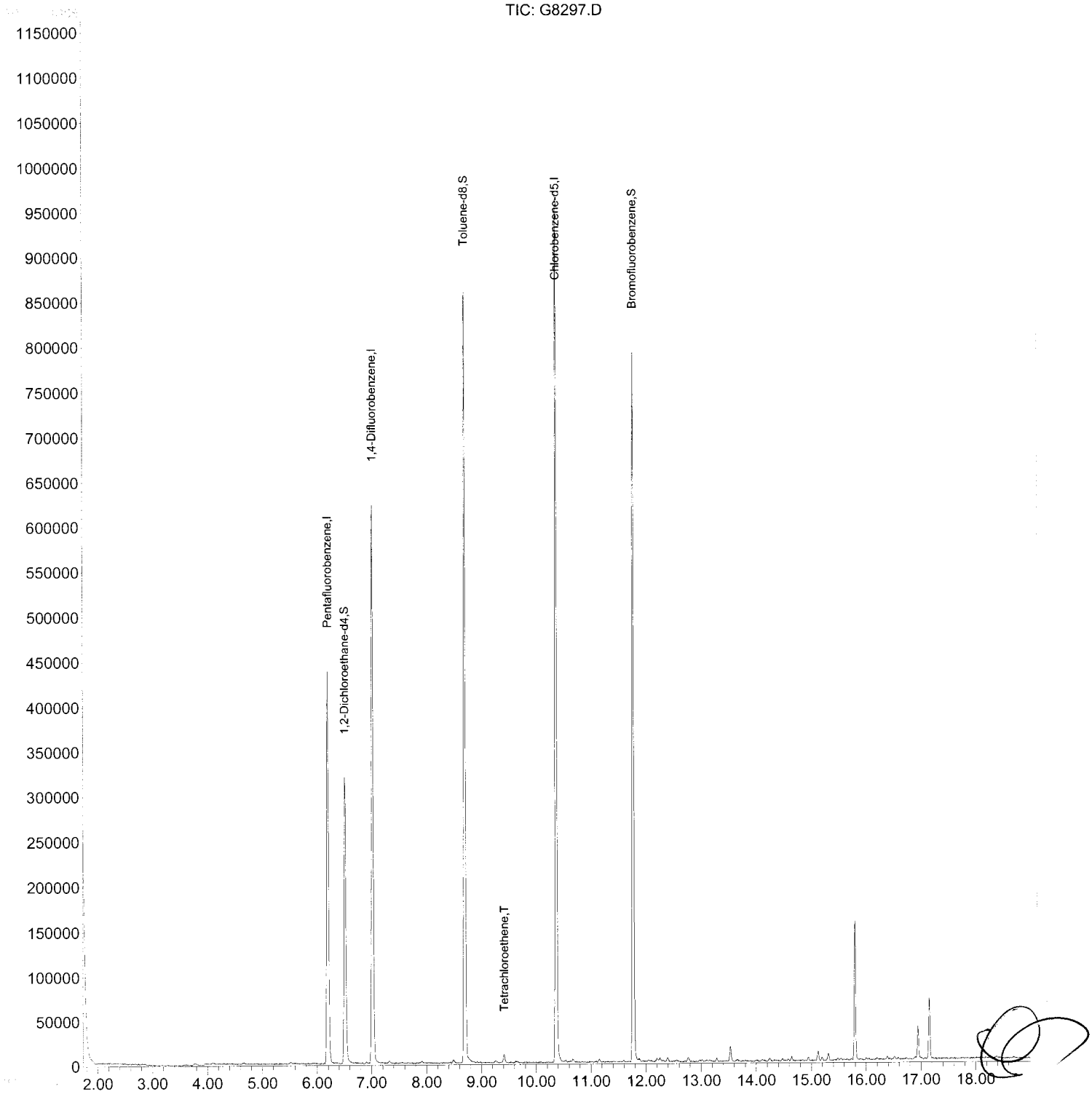
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	268157	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	467682	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	474772	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.51	65	319085	55.22	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 110.44%			
41) Toluene-d8	8.70	98	601722	49.25	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.50%			
59) Bromofluorobenzene	11.77	95	330919	50.70	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 101.40%			
Target Compounds						Qvalue
45) Tetrachloroethene	9.41	166	2719	1.05	UG	# 98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

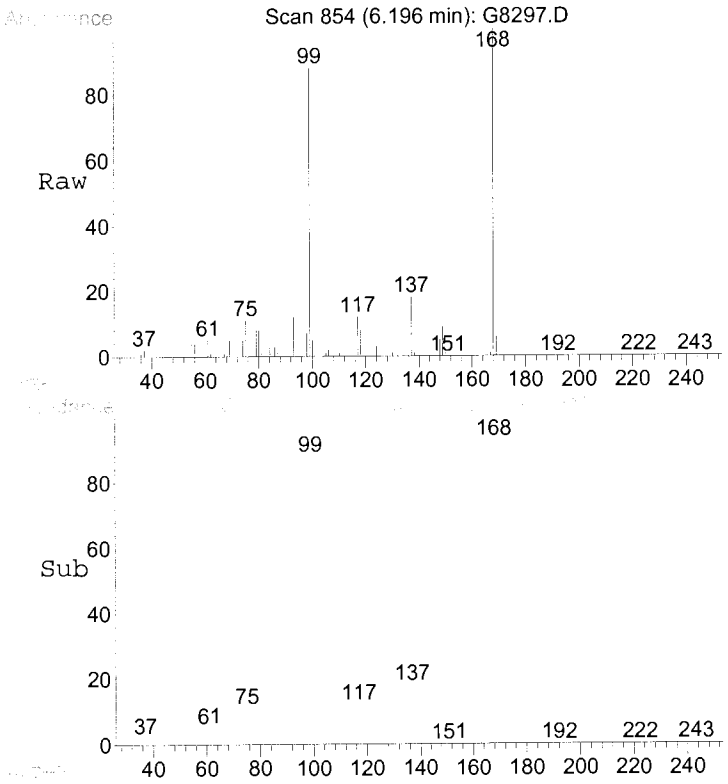
Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8297.D
Acq On : 14 Nov 2015 8:24
Operator : Sylvia
Sample : MW-19RR,E15-10258-012,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: Nov 14 14:29:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration



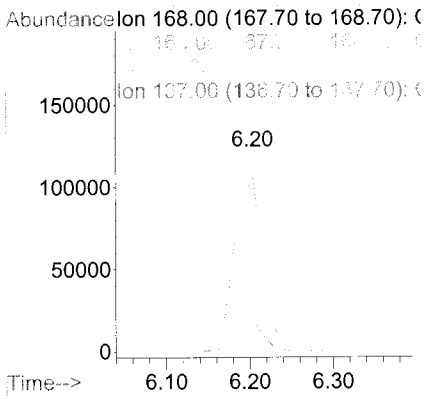
E15-10258 0183

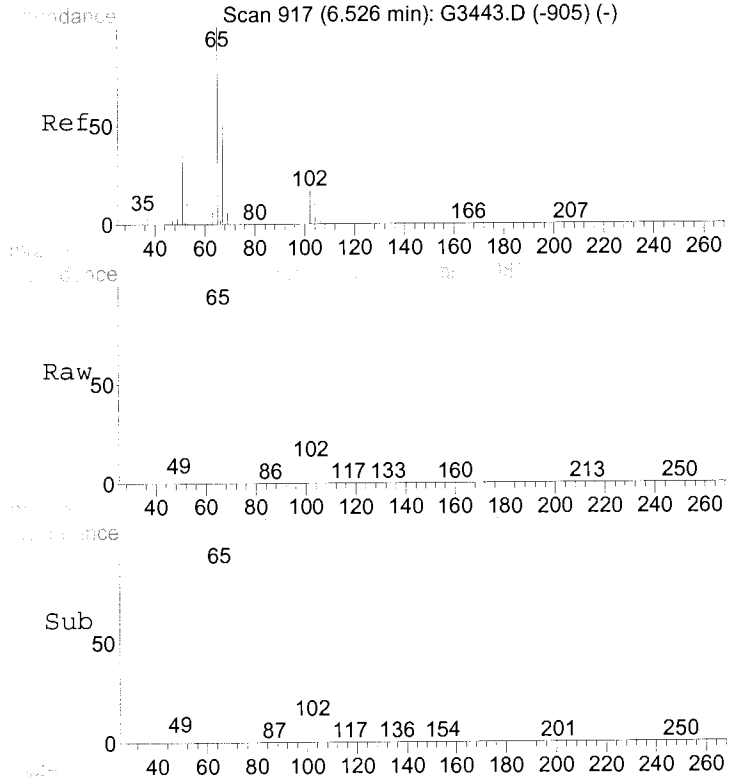


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8297.D
Acq: 14 Nov 2015 8:24

Tgt Ion:168 Resp: 268157

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

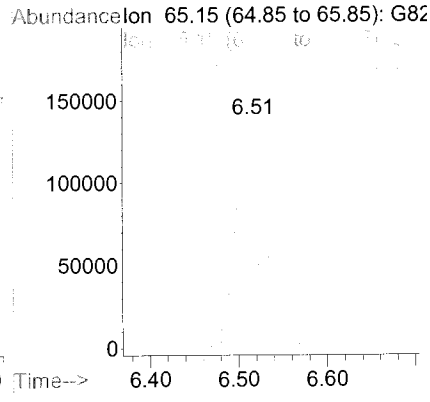


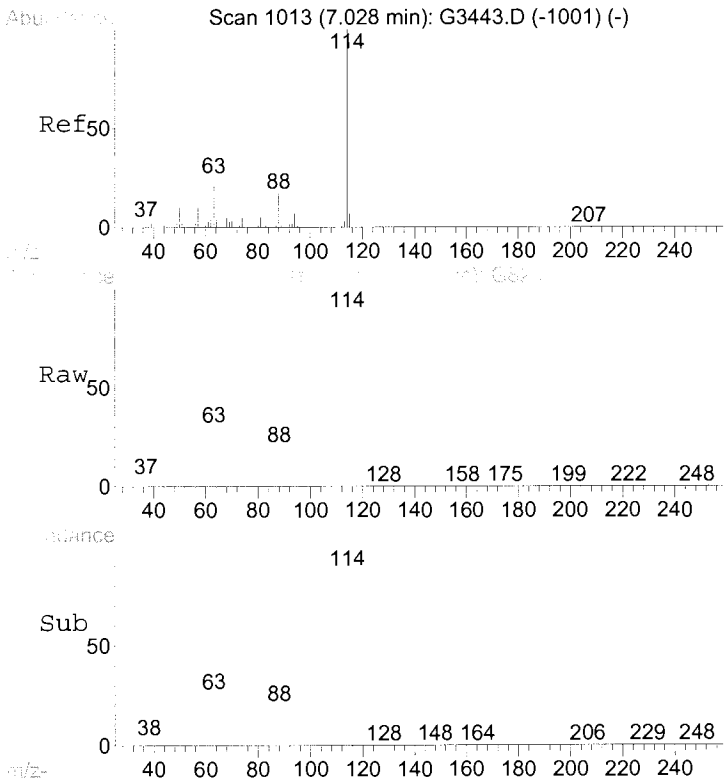


#30
1,2-Dichloroethane-d4
Concen: 55.22 UG
RT: 6.51 min Scan# 914
Delta R.T. 0.00 min
Lab File: G8297.D
Acq: 14 Nov 2015 8:24

Tgt Ion: 65 Resp: 319085

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	43.8	43.2	64.8

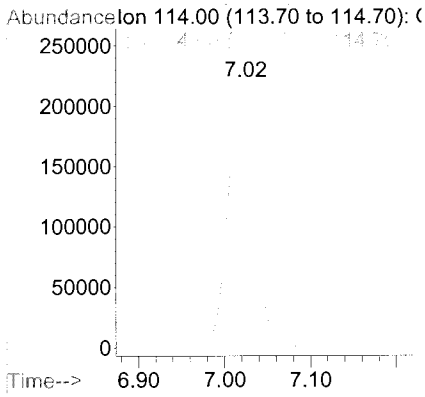


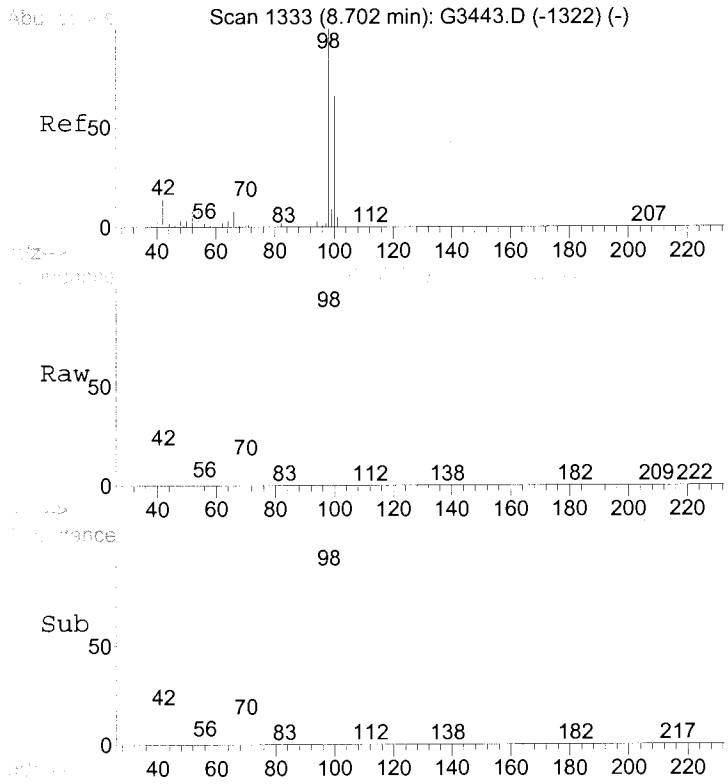


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. 0.00 min
Lab File: G8297.D
Acq: 14 Nov 2015 8:24

Tgt Ion:114 Resp: 467682

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

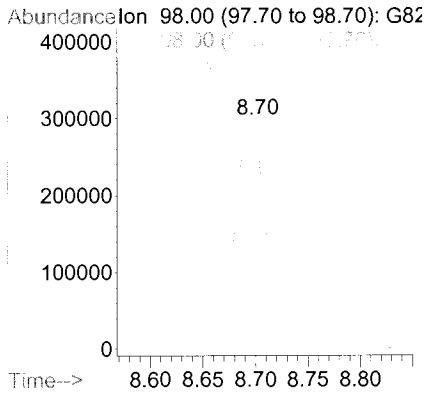


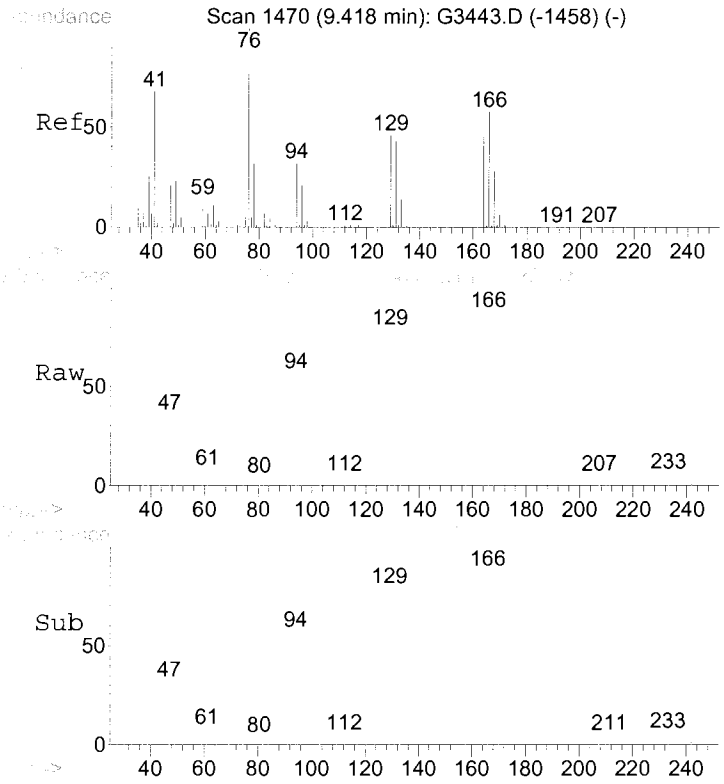


#41
Toluene-d8
Concen: 49.25 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8297.D
Acq: 14 Nov 2015 8:24

Tgt Ion: 98 Resp: 601722

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.6	53.4	80.0

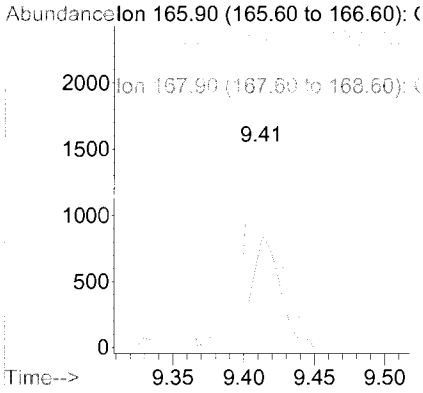


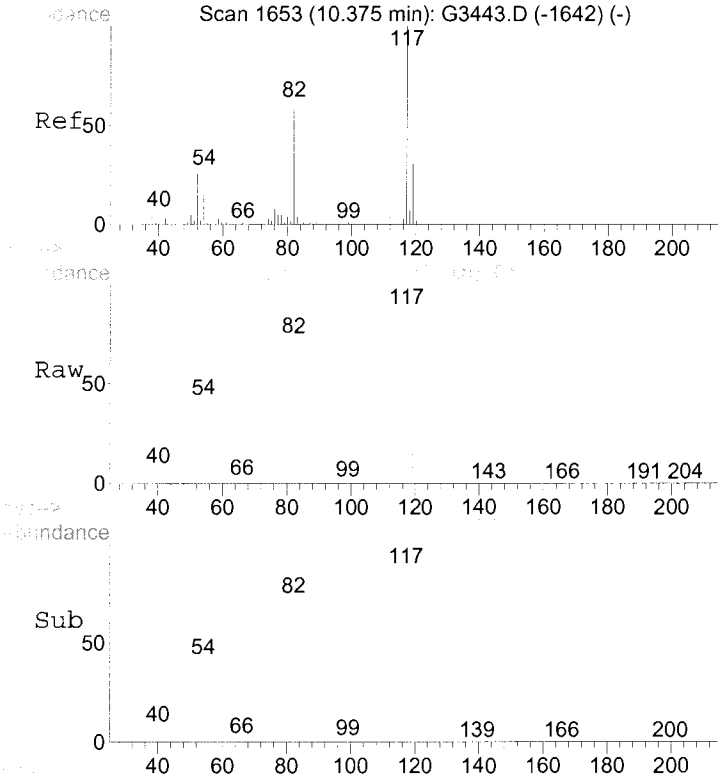


#45
Tetrachloroethene
Concen: 1.05 UG
RT: 9.41 min Scan# 1468
Delta R.T. -0.01 min
Lab File: G8297.D
Acq: 14 Nov 2015 8:24

Tgt Ion:166 Resp: 2719

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
129	0.0	0.0	0.0
168	52.7	38.3	57.5

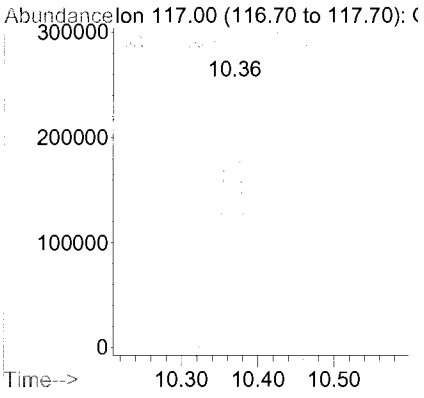


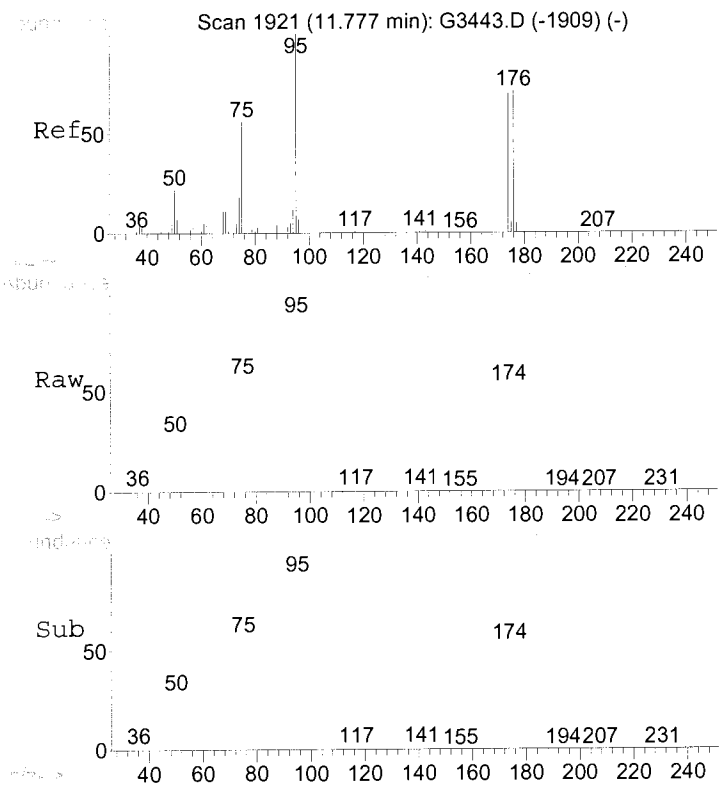


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8297.D
Acq: 14 Nov 2015 8:24

Tgt Ion:117 Resp: 474772

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

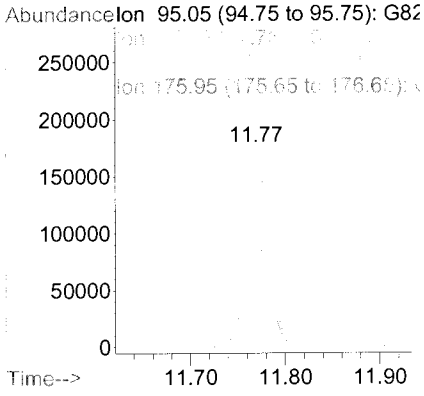




#59
Bromofluorobenzene
Concen: 50.70 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8297.D
Acq: 14 Nov 2015 8:24

Tgt Ion: 95 Resp: 330919

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.8	62.9	94.3#
176	52.2	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8297.D
Acq On : 14 Nov 2015 8:24
Operator : Sylvia
Sample : MW-19RR,E15-10258-012,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 43 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	843	854	873	rBV2	437220	989599	54.40%	11.420%
2	6.510	902	914	946	rBV	318898	760583	41.81%	8.777%
3	7.018	1001	1011	1044	rBV	621965	1330740	73.16%	15.357%
4	8.696	1319	1332	1359	rBV	861484	1757486	96.62%	20.281%
5	9.413	1461	1469	1478	rVB5	9089	19075	1.05%	0.220%
6	10.365	1641	1651	1677	rBV	968270	1819045	100.00%	20.992%
7	11.767	1910	1919	1936	rBV	790644	1492852	82.07%	17.227%
8	13.529	2247	2256	2266	rBV2	16774	32843	1.81%	0.379%
9	15.124	2549	2561	2569	rVB5	10436	20766	1.14%	0.240%
10	15.794	2682	2689	2704	rVB	155952	251417	13.82%	2.901%
11	16.945	2903	2909	2928	rVB	37525	68919	3.79%	0.795%
12	17.148	2938	2948	2957	rBV	68541	122290	6.72%	1.411%

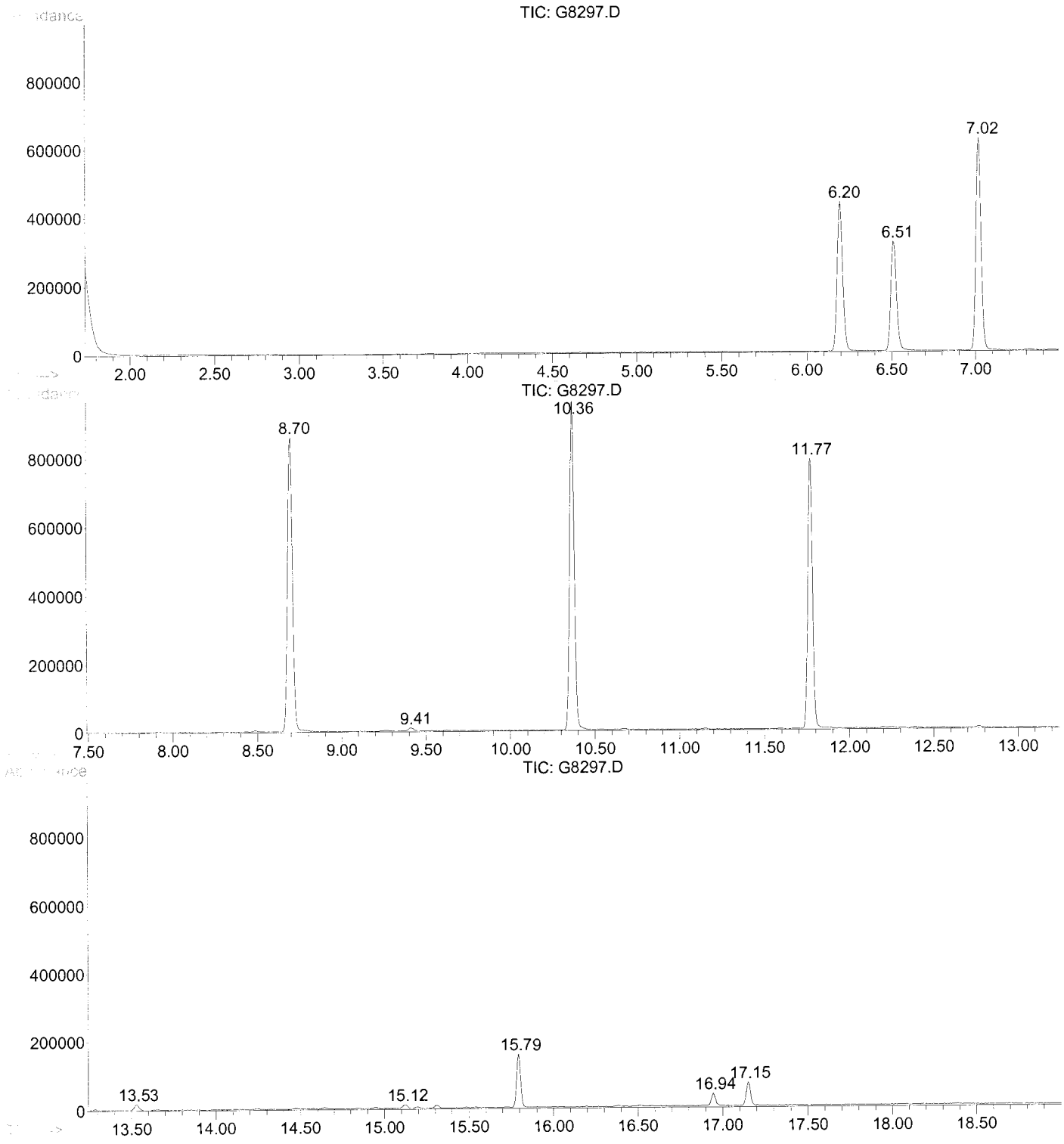
Sum of corrected areas: 8665615

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8297.D
Acq On : 14 Nov 2015 8:24
Operator : Sylvia
Sample : MW-19RR,E15-10258-012,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 43 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8297.D
Acq On : 14 Nov 2015 8:24
Operator : Sylvia
Sample : MW-19RR,E15-10258-012,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 43 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

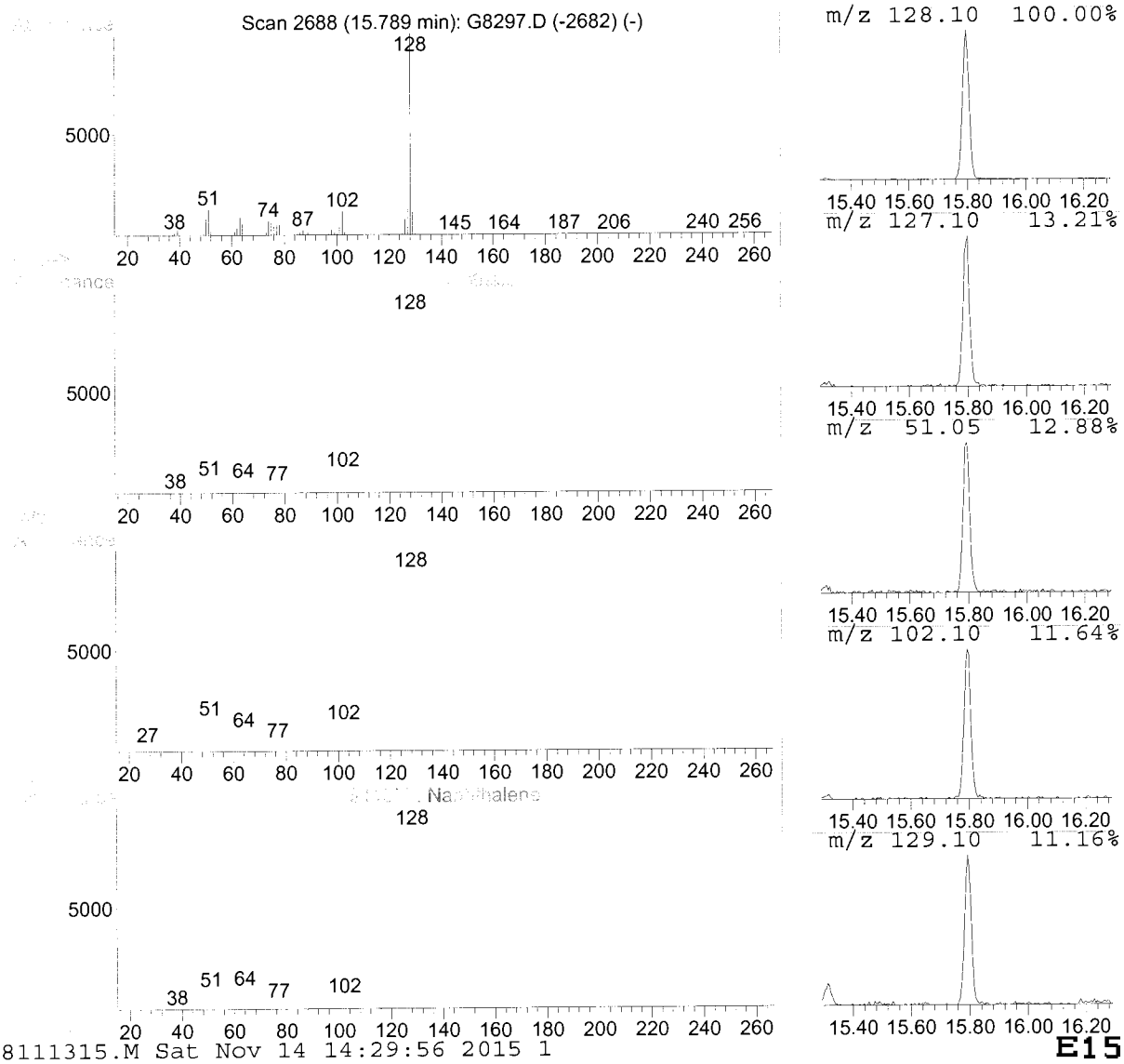
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 1 Naphthalene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.79	6.91 UG	251417	Chlorobenzene-d5	10.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	95
2	Azulene	128	C10H8	000275-51-4	94
3	Naphthalene	128	C10H8	000091-20-3	91
4	Naphthalene	128	C10H8	000091-20-3	91
5	Azulene	128	C10H8	000275-51-4	91



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8284.D
Acq On : 14 Nov 2015 2:17
Operator : Sylvia
Sample : FB-11062015,E15-10258-013,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Nov 14 13:56:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	493459	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	859844	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	827974	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	495678	46.61	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 93.22%			
41) Toluene-d8	8.70	98	1096714	48.83	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.66%			
59) Bromofluorobenzene	11.77	95	564923	49.63	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 99.26%			

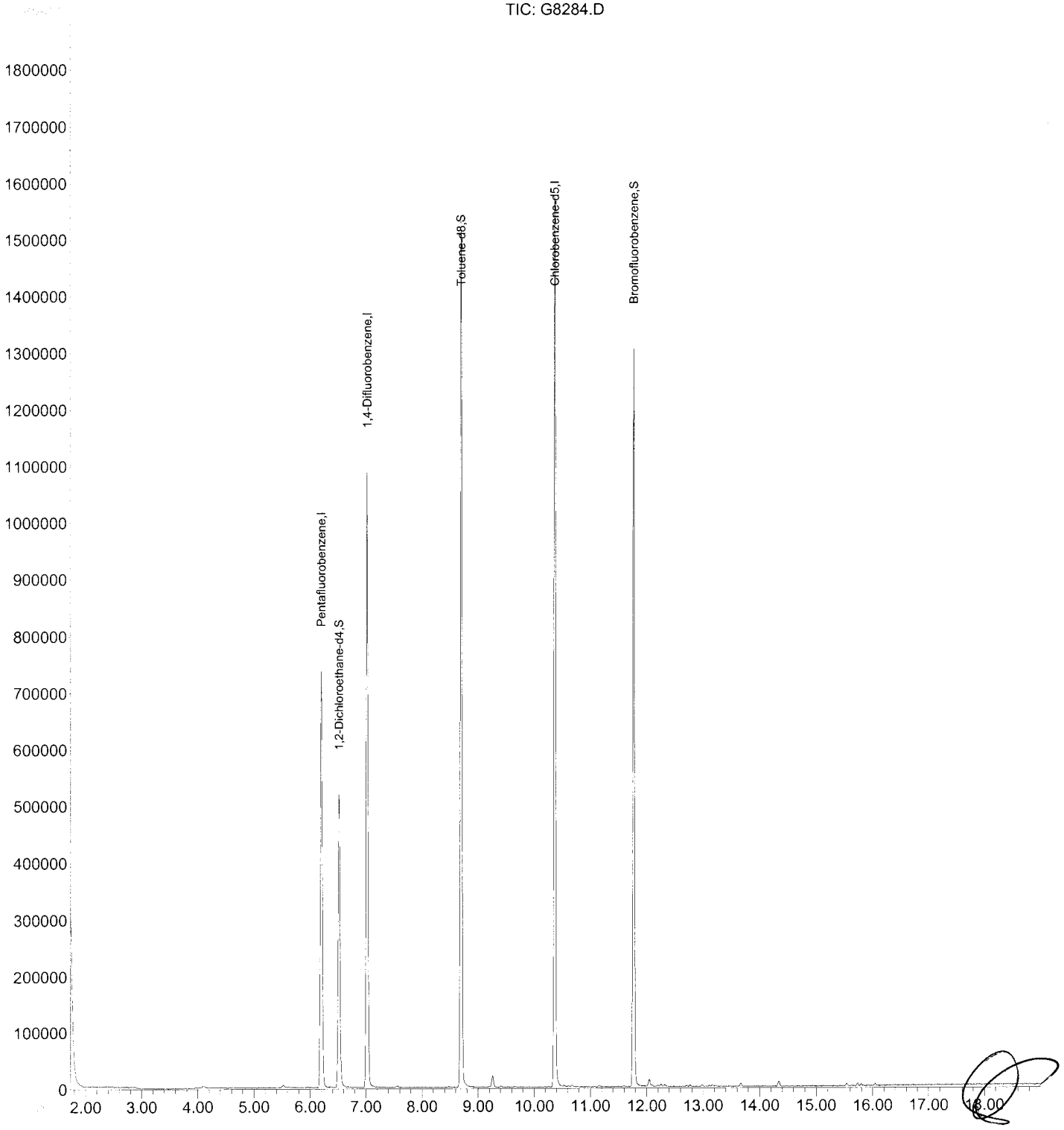
Target Compounds	Qvalue

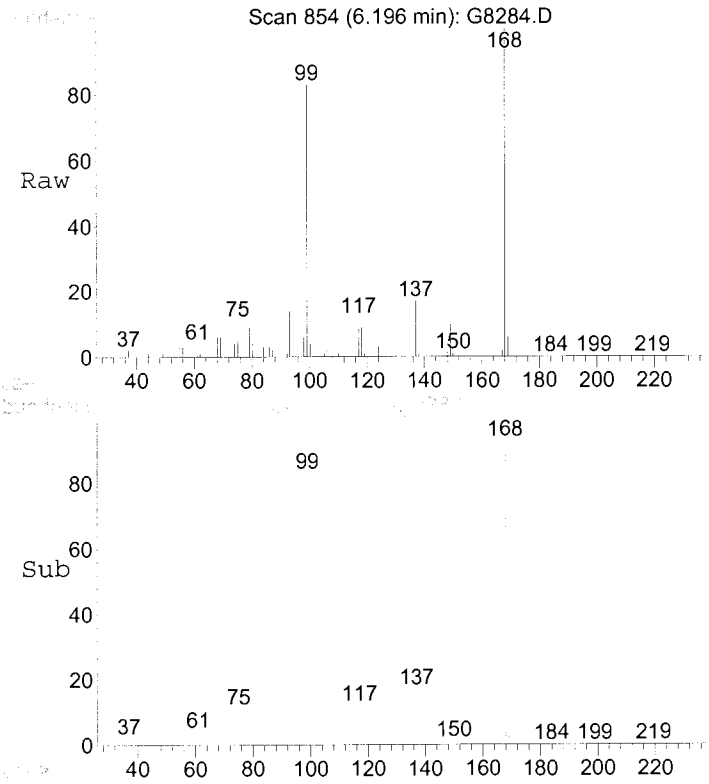
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8284.D
Acq On : 14 Nov 2015 2:17
Operator : Sylvia
Sample : FB-11062015,E15-10258-013,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Nov 14 13:56:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

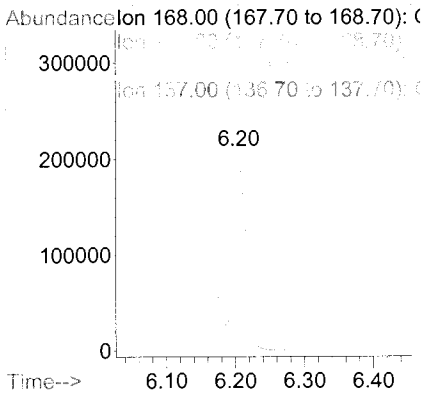


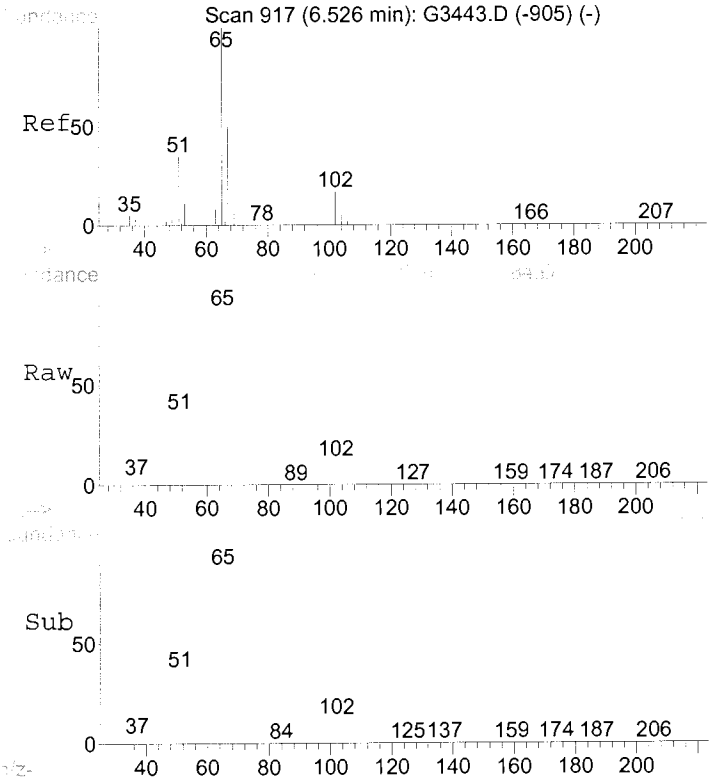


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8284.D
Acq: 14 Nov 2015 2:17

Tgt Ion:168 Resp: 493459

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

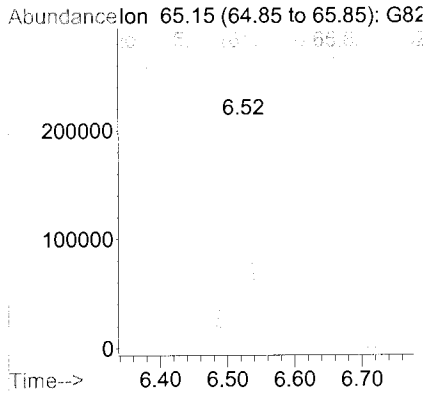


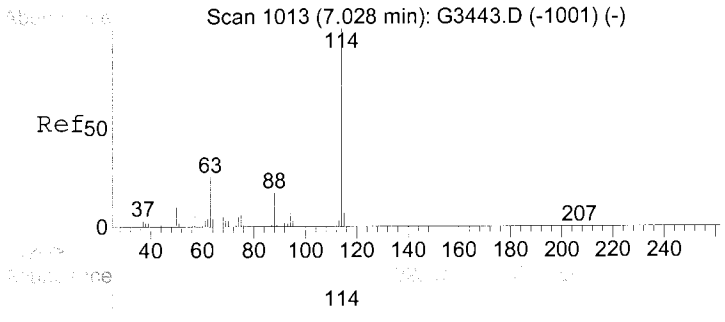


#30
1,2-Dichloroethane-d4
Concen: 46.61 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8284.D
Acq: 14 Nov 2015 2:17

Tgt Ion: 65 Resp: 495678

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	46.0	43.2	64.8

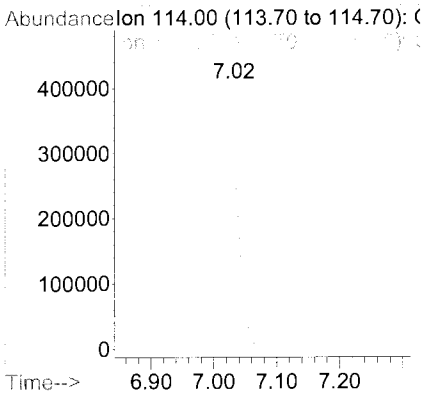


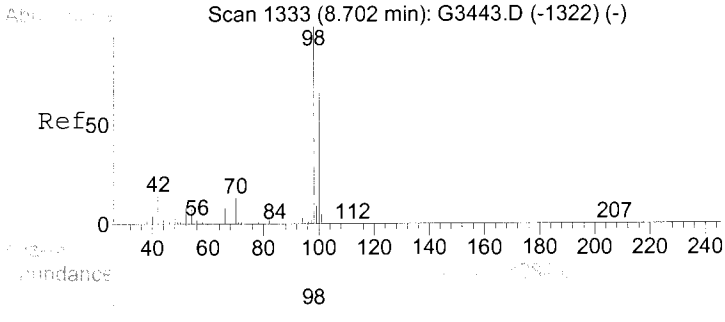


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8284.D
Acq: 14 Nov 2015 2:17

Tgt Ion:114 Resp: 859844

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

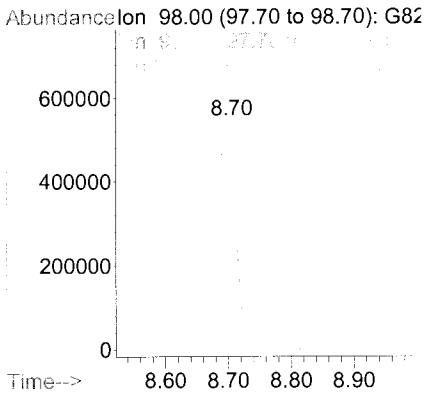


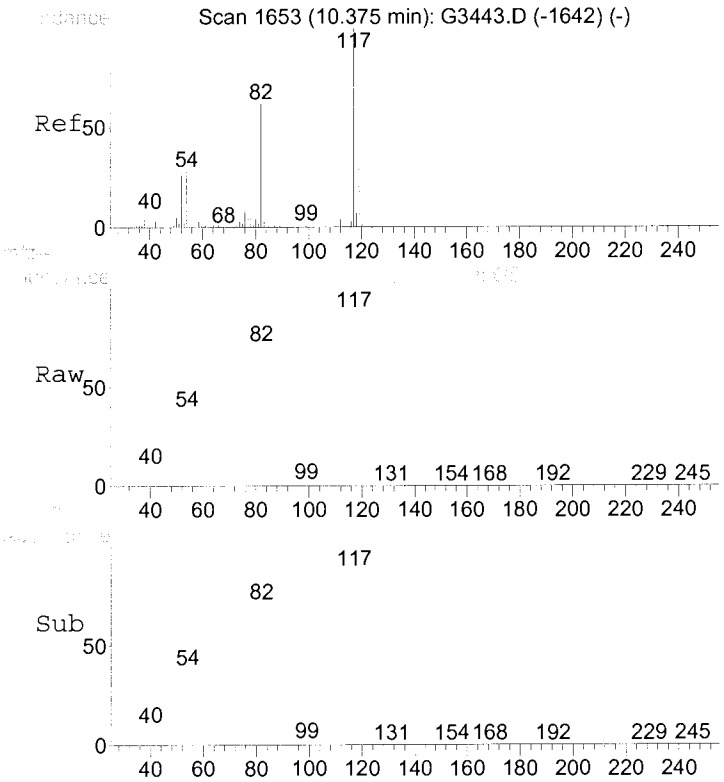


#41
Toluene-d8
Concen: 48.83 UG
RT: 8.70 min Scan# 1332
Delta R.T. -0.00 min
Lab File: G8284.D
Acq: 14 Nov 2015 2:17

Tgt Ion: 98 Resp: 1096714

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.7	53.4	80.0

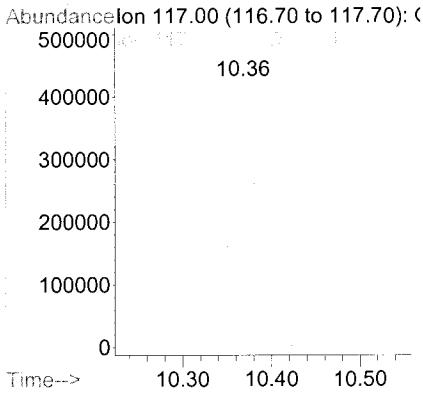


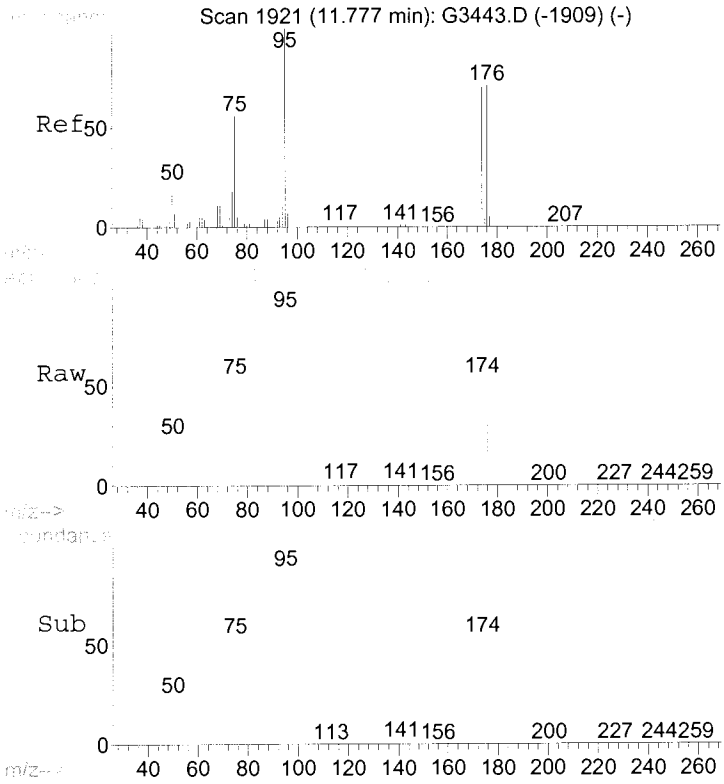


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8284.D
Acq: 14 Nov 2015 2:17

Tgt Ion:117 Resp: 827974

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

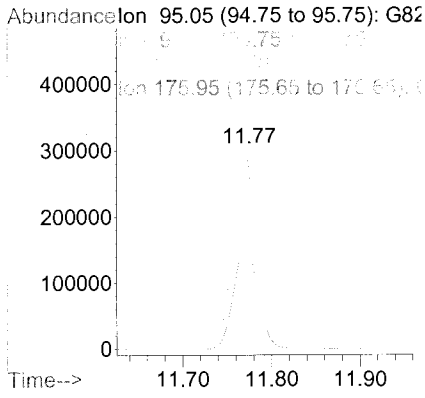




#59
Bromofluorobenzene
Concen: 49.63 UG
RT: 11.77 min Scan# 1920
Delta R.T. 0.00 min
Lab File: G8284.D
Acq: 14 Nov 2015 2:17

Tgt Ion: 95 Resp: 564923

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.5	62.9	94.3#
176	52.9	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8284.D
Acq On : 14 Nov 2015 2:17
Operator : Sylvia
Sample : FB-11062015,E15-10258-013,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 30 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	842	854	875	rBV	736253	1732919	56.26%	12.400%
2	6.515	905	915	942	rBV2	517953	1228810	39.89%	8.793%
3	7.023	1000	1012	1032	rBV	1087149	2327634	75.56%	16.655%
4	8.696	1320	1332	1365	rBV	1541037	3080395	100.00%	22.041%
5	9.256	1426	1439	1456	rVB3	21146	55447	1.80%	0.397%
6	10.365	1638	1651	1679	rBV	1573054	3072469	99.74%	21.984%
7	11.772	1906	1920	1947	rBV	1305076	2477969	80.44%	17.731%

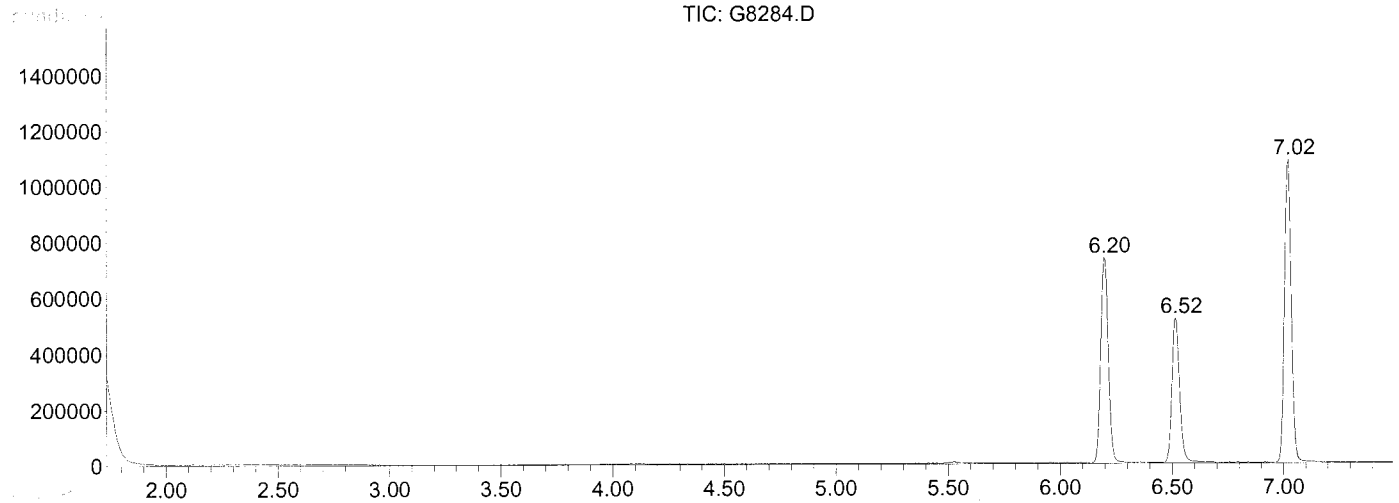
Sum of corrected areas: 13975643

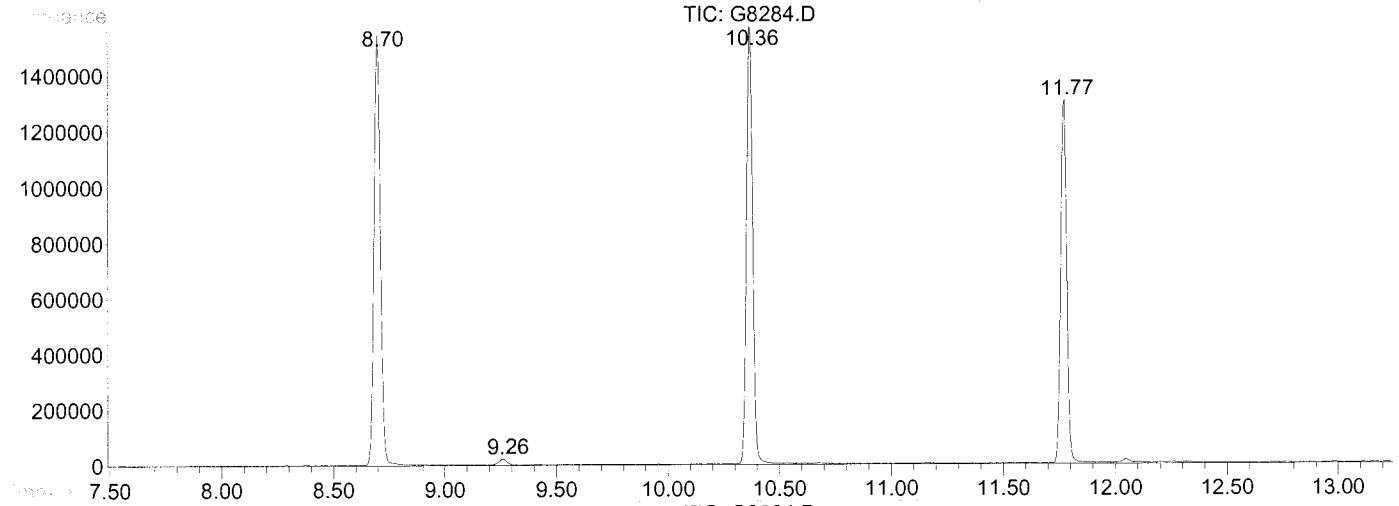
LSC Report - Integrated Chromatogram

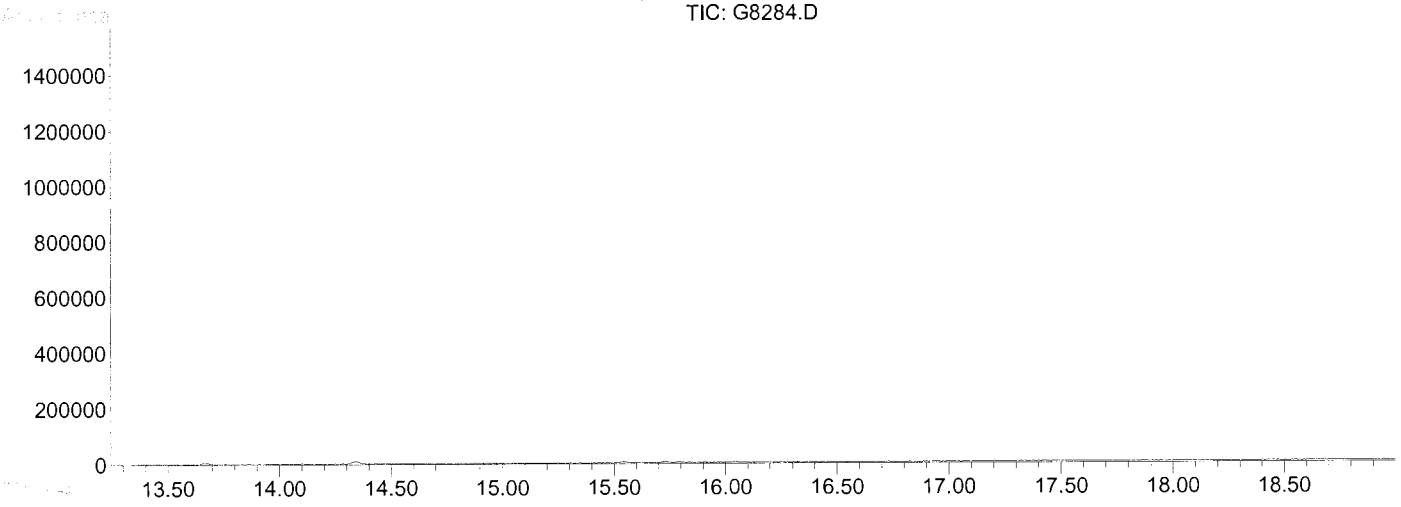
Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8284.D
Acq On : 14 Nov 2015 2:17
Operator : Sylvia
Sample : FB-11062015,E15-10258-013,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 30 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Nov 14 14:33:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

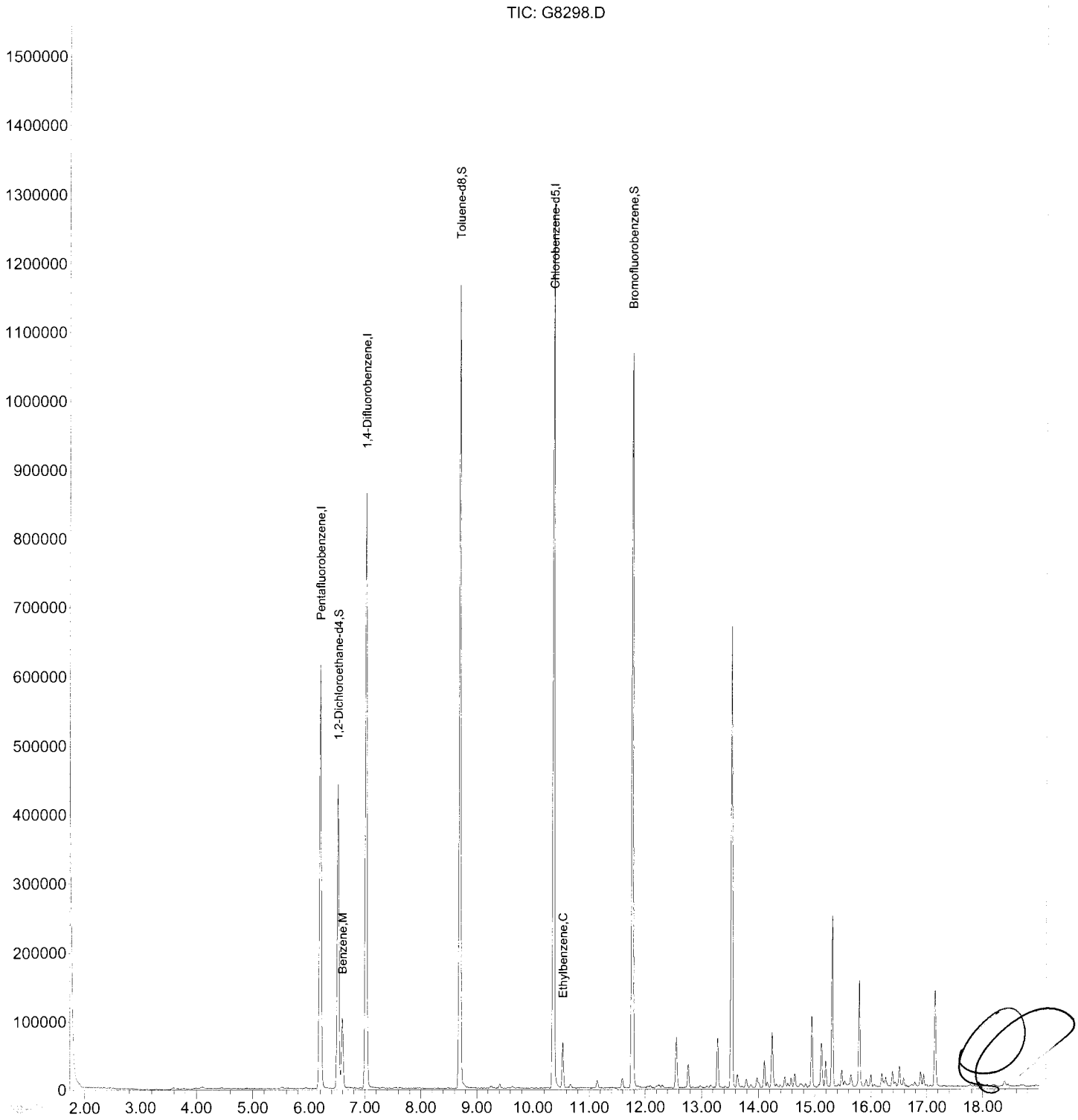
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	377474	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	639028	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	622797	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.51	65	430668	52.94	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 105.88%			
41) Toluene-d8	8.70	98	821045	49.18	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.36%			
59) Bromofluorobenzene	11.77	95	436928	51.03	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 102.06%			
Target Compounds						Qvalue
32) Benzene	6.59	78	89090	5.24	UG	100
53) Ethylbenzene	10.53	91	50450	2.33	UG	97

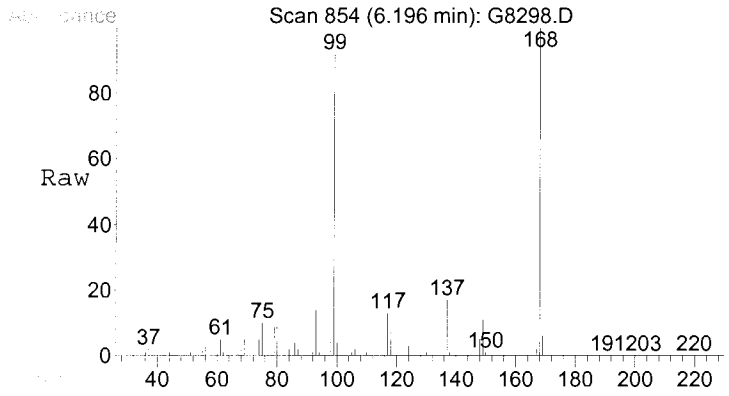
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Time: Nov 14 14:33:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

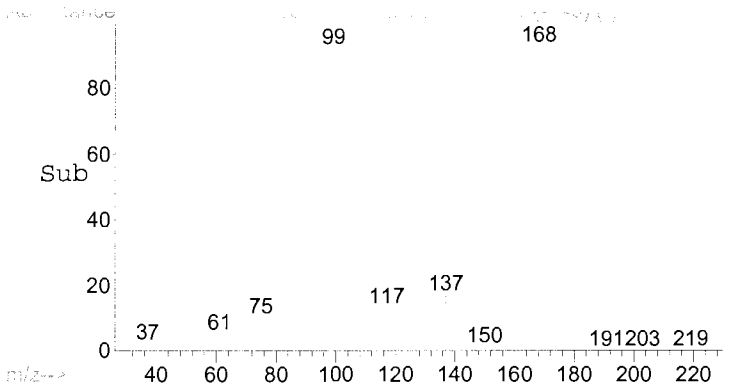


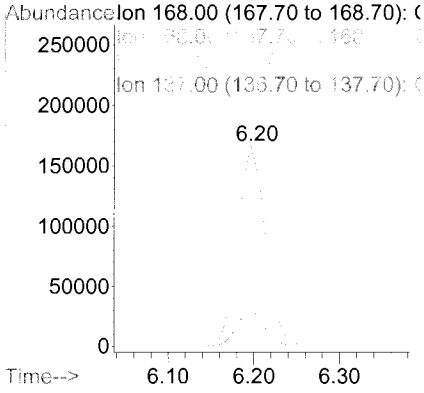


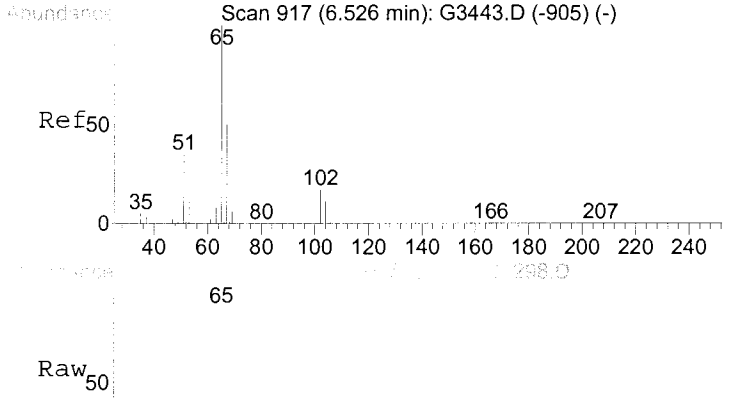
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion:168 Resp: 377474

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0



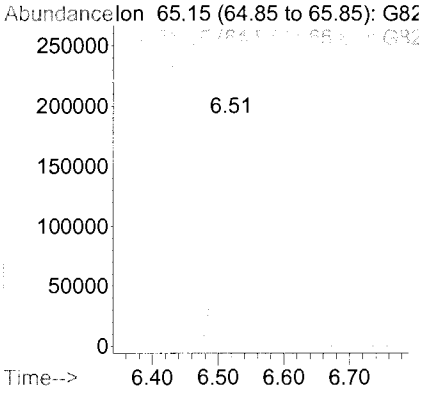


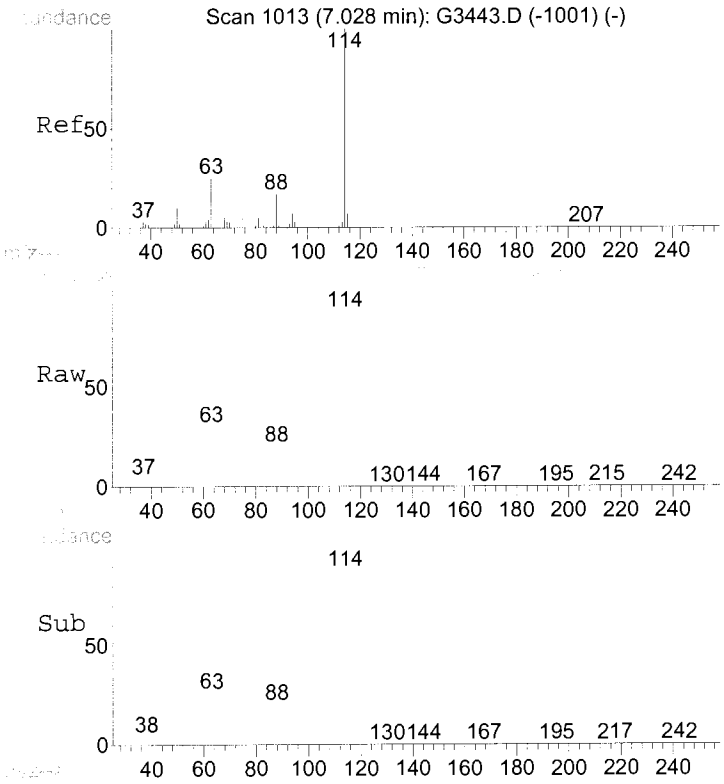


#30
1,2-Dichloroethane-d4
Concen: 52.94 UG
RT: 6.51 min Scan# 914
Delta R.T. -0.00 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion: 65 Resp: 430668

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	43.2	43.2	64.8

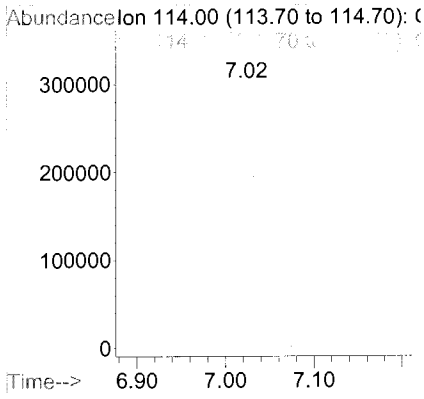


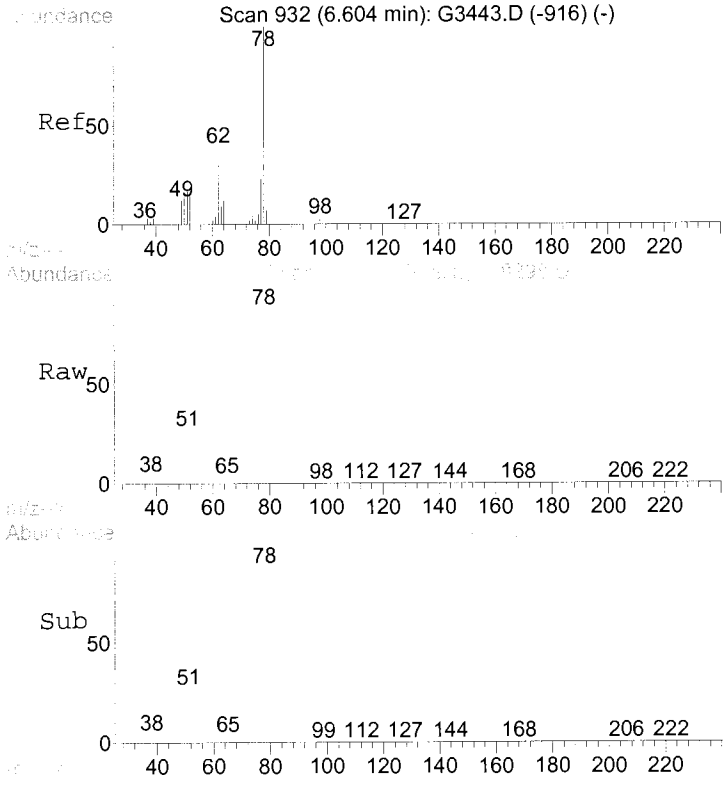


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. -0.00 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion:114 Resp: 639028

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

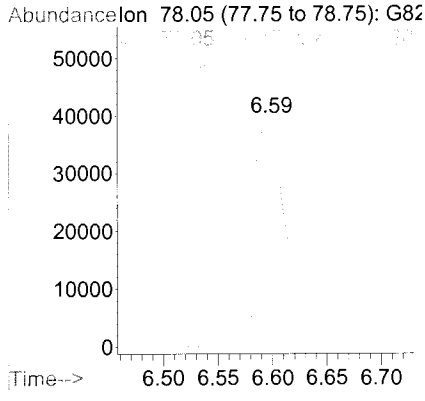


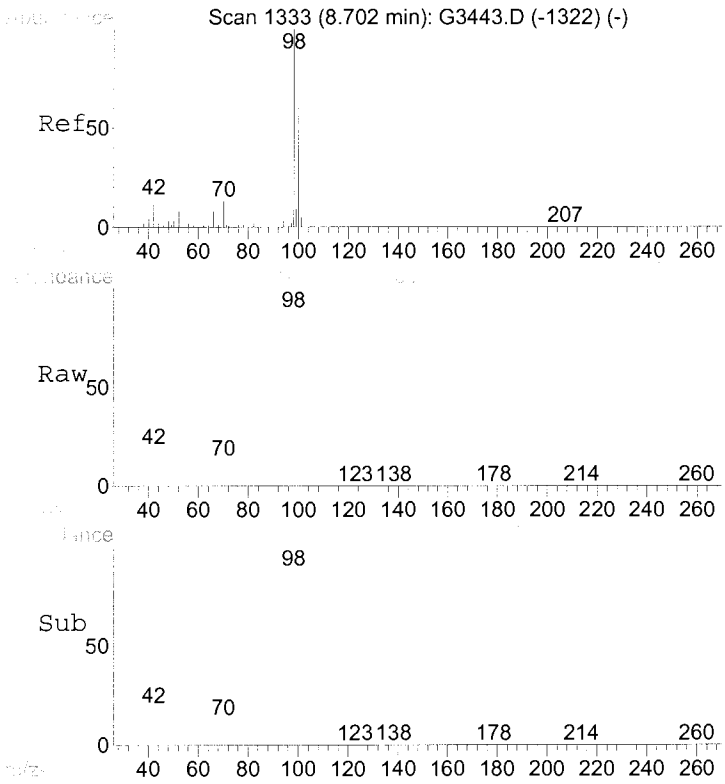


#32
Benzene
Concen: 5.24 UG
RT: 6.59 min Scan# 930
Delta R.T. -0.00 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion: 78 Resp: 89090

Ion	Ratio	Lower	Upper
78	100		
78	100.0	80.0	120.0
77	22.8	18.3	27.5

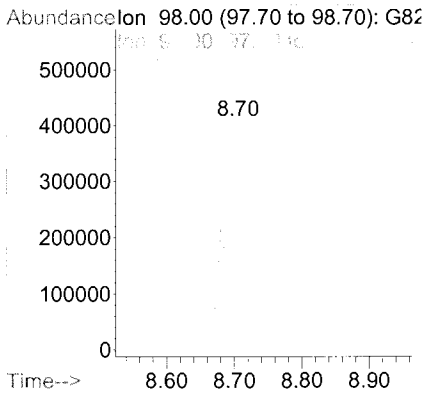


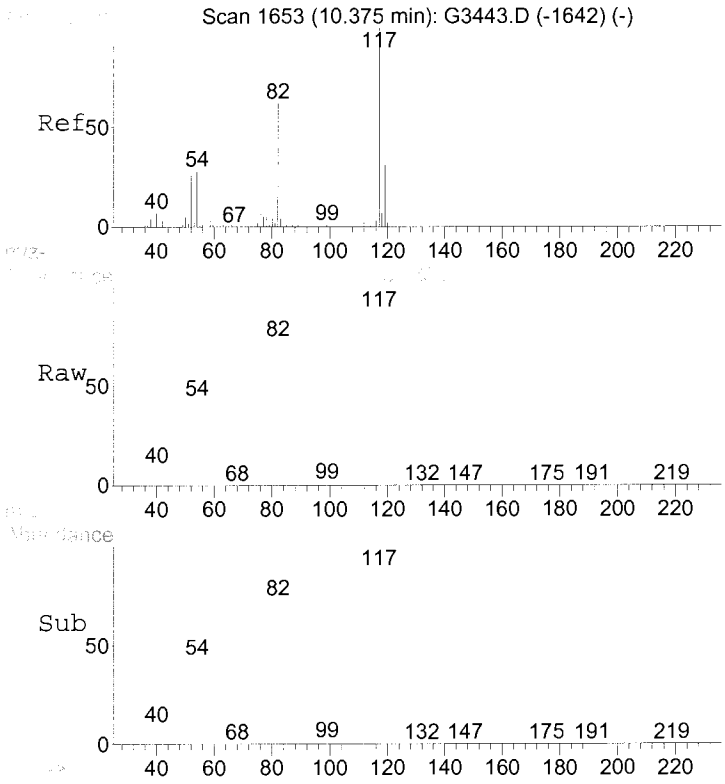


#41
Toluene-d8
Concen: 49.18 UG
RT: 8.70 min Scan# 1332
Delta R.T. -0.00 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion: 98 Resp: 821045

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	58.9	53.4	80.0

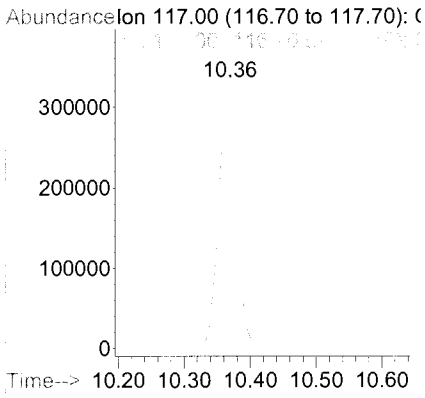


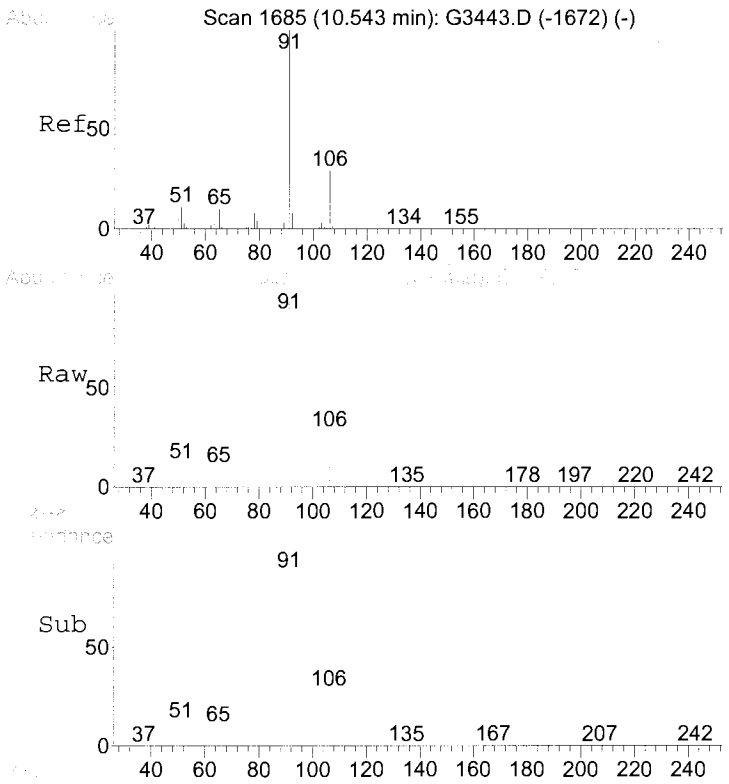


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion:117 Resp: 622797

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

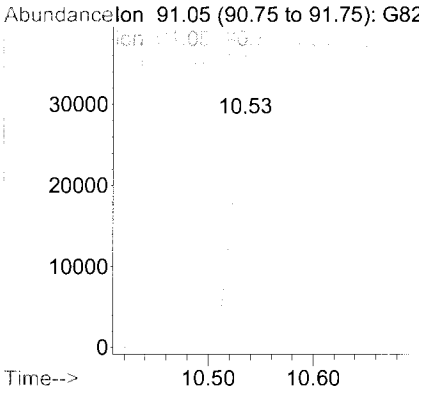


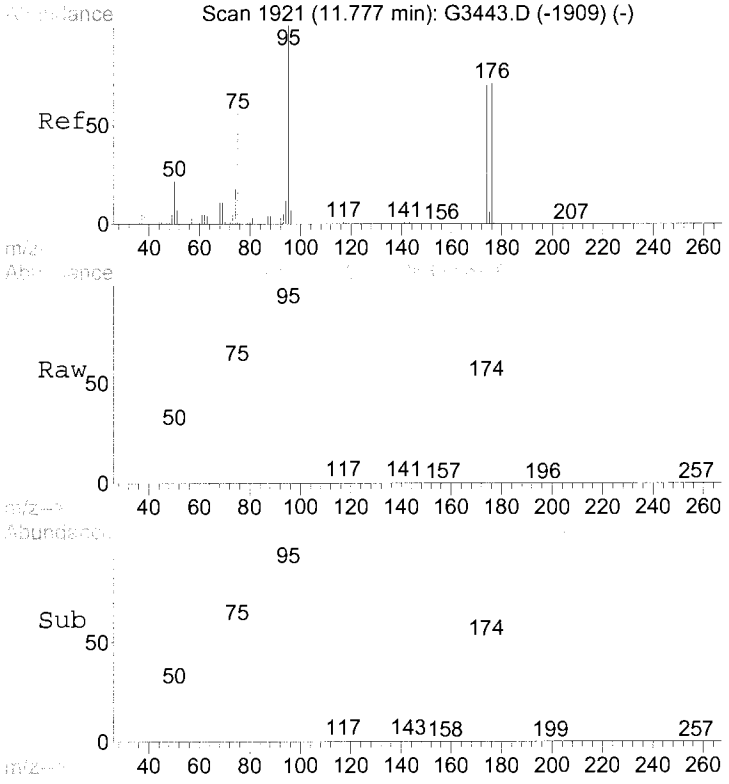


#53
Ethylbenzene
Concen: 2.33 UG
RT: 10.53 min Scan# 1683
Delta R.T. -0.01 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion: 91 Resp: 50450

Ion	Ratio	Lower	Upper
91	100		
91	100.0	80.0	120.0
106	26.5	26.3	39.5

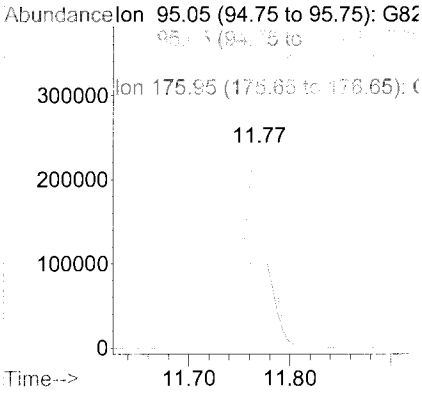




#59
Bromofluorobenzene
Concen: 51.03 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8298.D
Acq: 14 Nov 2015 8:52

Tgt Ion: 95 Resp: 436928

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.5	62.9	94.3#
176	52.5	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	841	854	879	rBV	616148	1403537	57.79%	9.323%
2	6.515	899	915	924	rBV	442008	1006070	41.42%	6.683%
3	6.594	924	930	945	rVB	102283	235463	9.69%	1.564%
4	7.017	999	1011	1033	rBV	864868	1822599	75.04%	12.107%
5	8.696	1320	1332	1356	rBV	1169804	2380137	98.00%	15.810%
6	10.365	1640	1651	1675	rBV	1290921	2428791	100.00%	16.134%
7	10.532	1675	1683	1694	rVV	66388	120677	4.97%	0.802%
8	11.589	1877	1885	1894	rBV4	13814	28068	1.16%	0.186%
9	11.766	1910	1919	1954	rBV2	1067746	1988552	81.87%	13.209%
10	12.556	2059	2070	2082	rBV2	74407	146096	6.02%	0.970%
11	12.765	2102	2110	2121	rVB2	34131	63367	2.61%	0.421%
12	13.283	2200	2209	2227	rVB2	73275	135281	5.57%	0.899%
13	13.529	2244	2256	2270	rBV	670301	1244100	51.22%	8.264%
14	13.634	2270	2276	2287	rBV4	19498	40248	1.66%	0.267%
15	13.791	2297	2306	2315	rVB5	13438	28883	1.19%	0.192%
16	13.979	2335	2342	2357	rVB4	14718	38947	1.60%	0.259%
17	14.110	2357	2367	2372	rBV	39839	73331	3.02%	0.487%
18	14.246	2384	2393	2404	rBV2	80815	169697	6.99%	1.127%
19	14.470	2427	2436	2442	rBV4	16060	30797	1.27%	0.205%
20	14.643	2463	2469	2480	rVV5	19506	36333	1.50%	0.241%
21	14.946	2513	2527	2536	rBV2	105554	186778	7.69%	1.241%
22	15.119	2542	2560	2568	rBV3	64626	135885	5.59%	0.903%
23	15.192	2568	2574	2586	rVB	37804	65651	2.70%	0.436%
24	15.307	2586	2596	2607	rBV	248929	424249	17.47%	2.818%
25	15.480	2623	2629	2634	rBV3	23424	40341	1.66%	0.268%
26	15.647	2652	2661	2674	rVB5	17447	41639	1.71%	0.277%
27	15.794	2674	2689	2702	rBV	155488	265292	10.92%	1.762%
28	15.998	2720	2728	2734	rVB3	17501	29067	1.20%	0.193%
29	16.191	2759	2765	2775	rBV4	19659	44597	1.84%	0.296%
30	16.385	2794	2802	2808	rBV3	22314	40244	1.66%	0.267%
31	16.510	2817	2826	2836	rBV2	29144	54339	2.24%	0.361%
32	16.887	2889	2898	2905	rBV	21193	39128	1.61%	0.260%
33	17.148	2938	2948	2975	rBV	141142	266080	10.96%	1.767%

Sum of corrected areas: 15054264

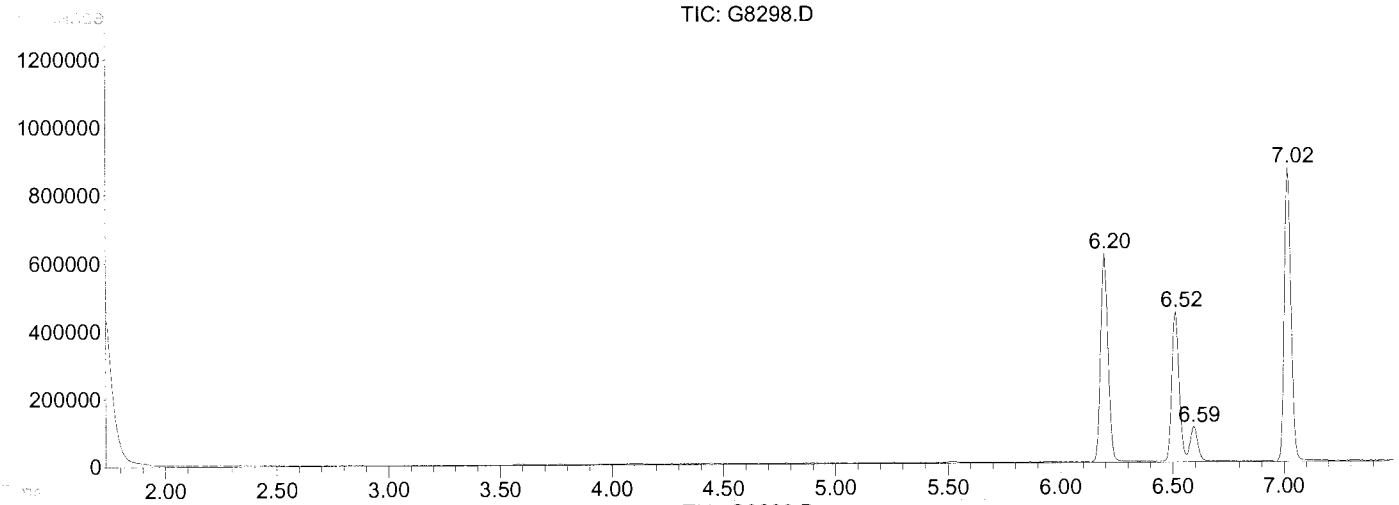
E15-10258

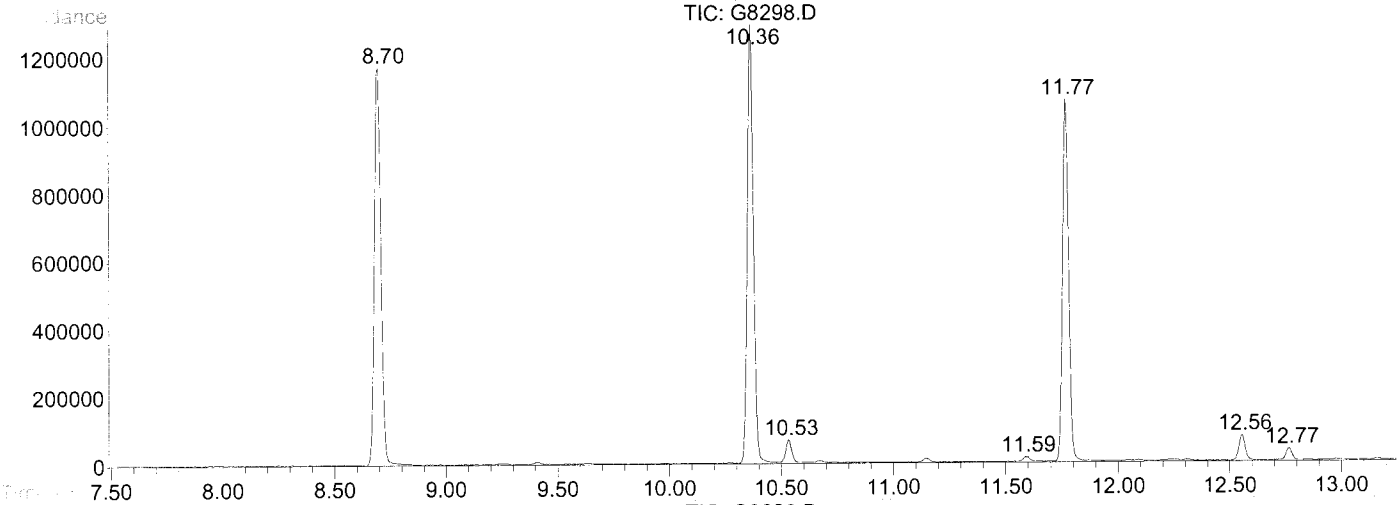
LSC Report - Integrated Chromatogram

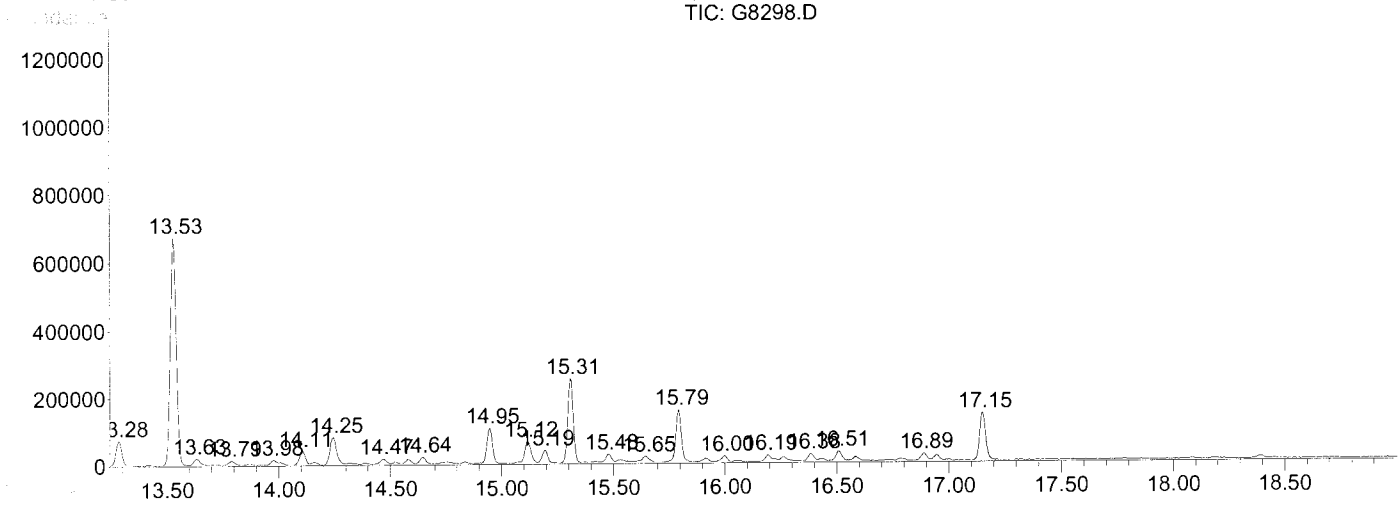
Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

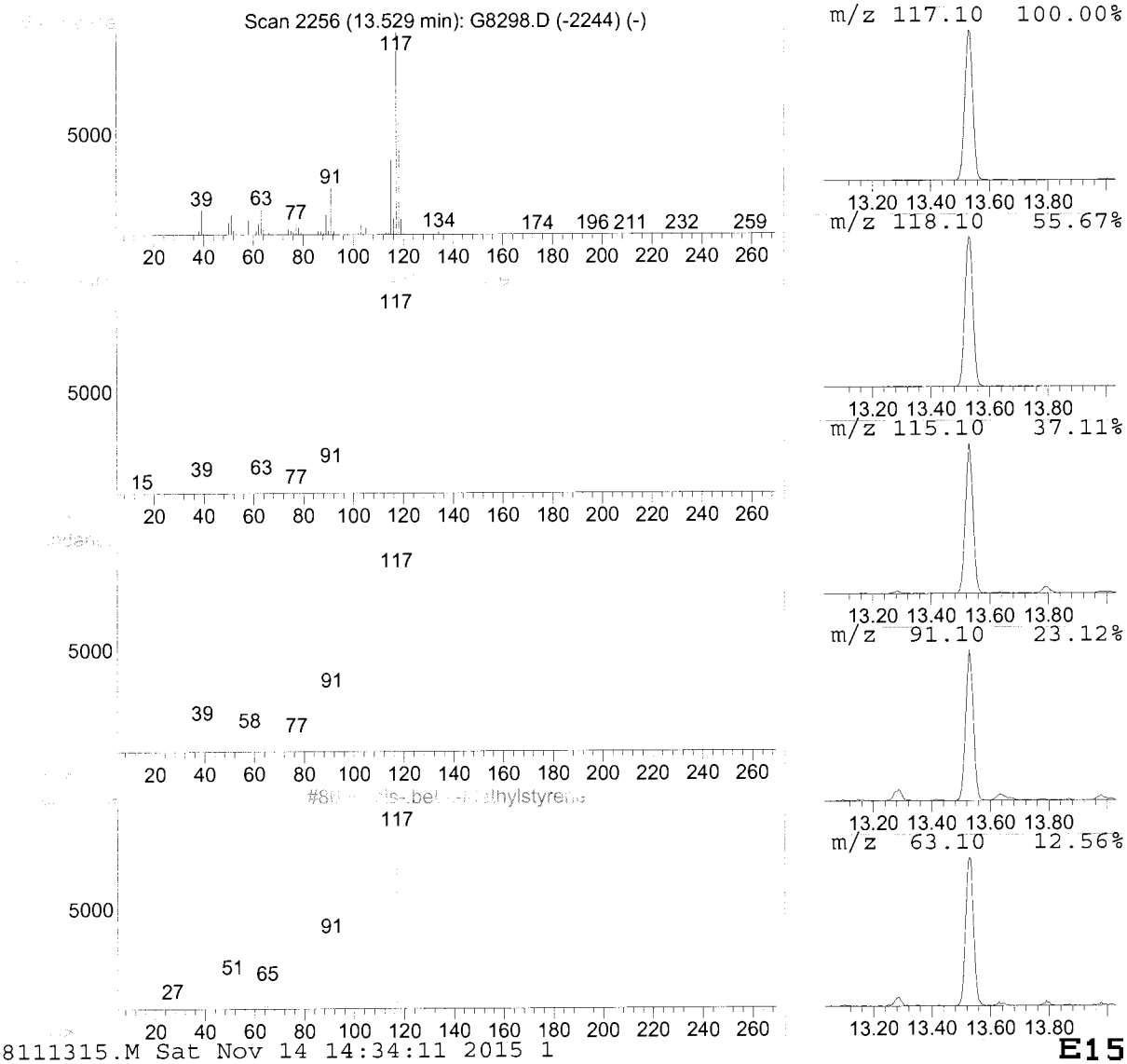
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 1 Unknown Aromatic Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.53	25.61 UG	1244100	Chlorobenzene-d5	10.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	93
2	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	90
3	cis-.beta.-Methylstyrene	118	C9H10	000766-90-5	87
4	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	68
5	Benzene, cyclopropyl-	118	C9H10	000873-49-4	64



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

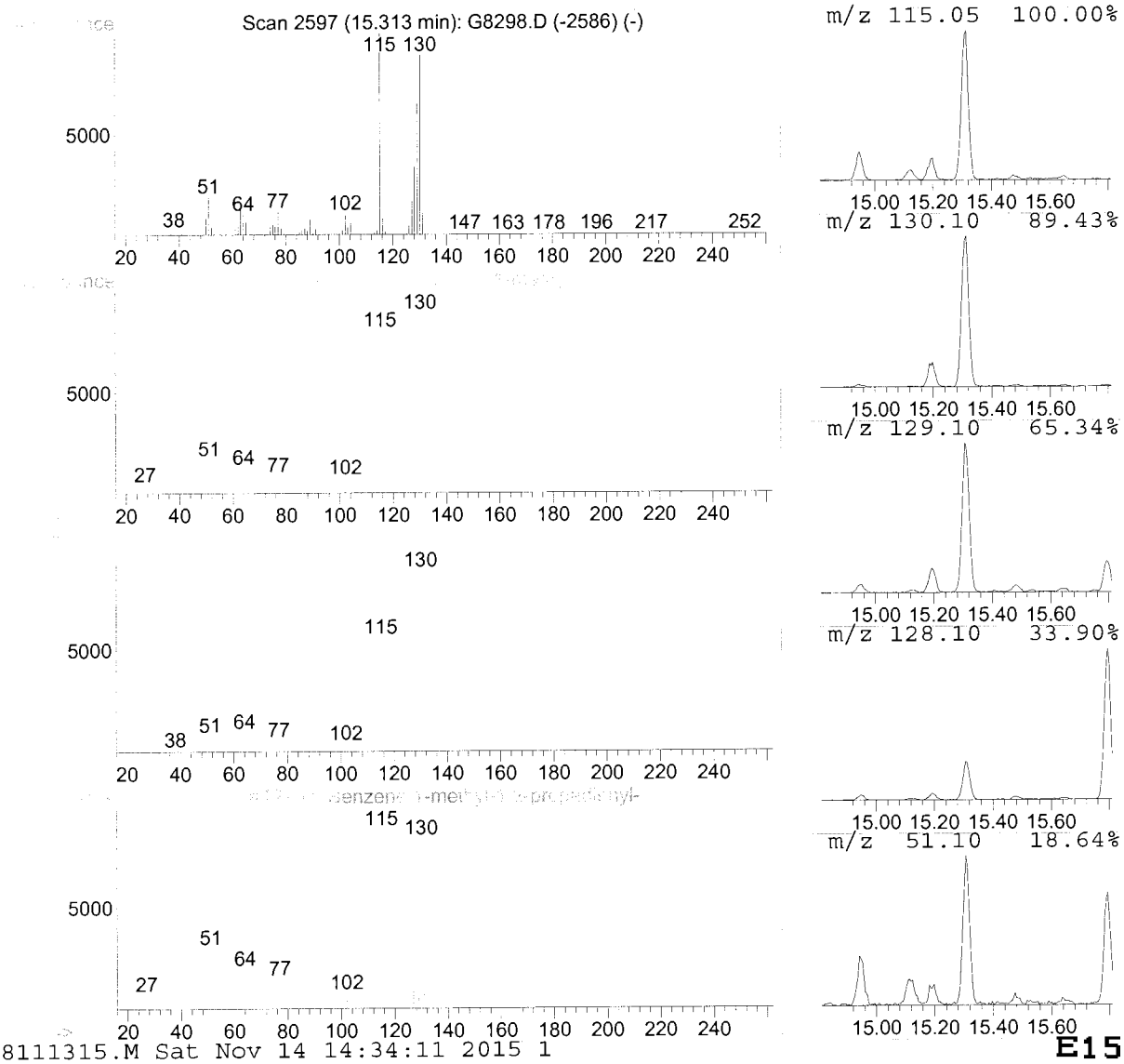
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 2 1H-Indene, 1-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.31	8.73 UG	424249	Chlorobenzene-d5	10.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, 1-methyl-	130	C10H10	000767-59-9	96
2	2-Methylindene	130	C10H10	002177-47-1	96
3	Benzene,1-methyl-1,2-propadienyl-	130	C10H10	022433-39-2	95
4	Benzene, 1-butynyl-	130	C10H10	000622-76-4	94
5	2-Methylindene	130	C10H10	002177-47-1	93



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

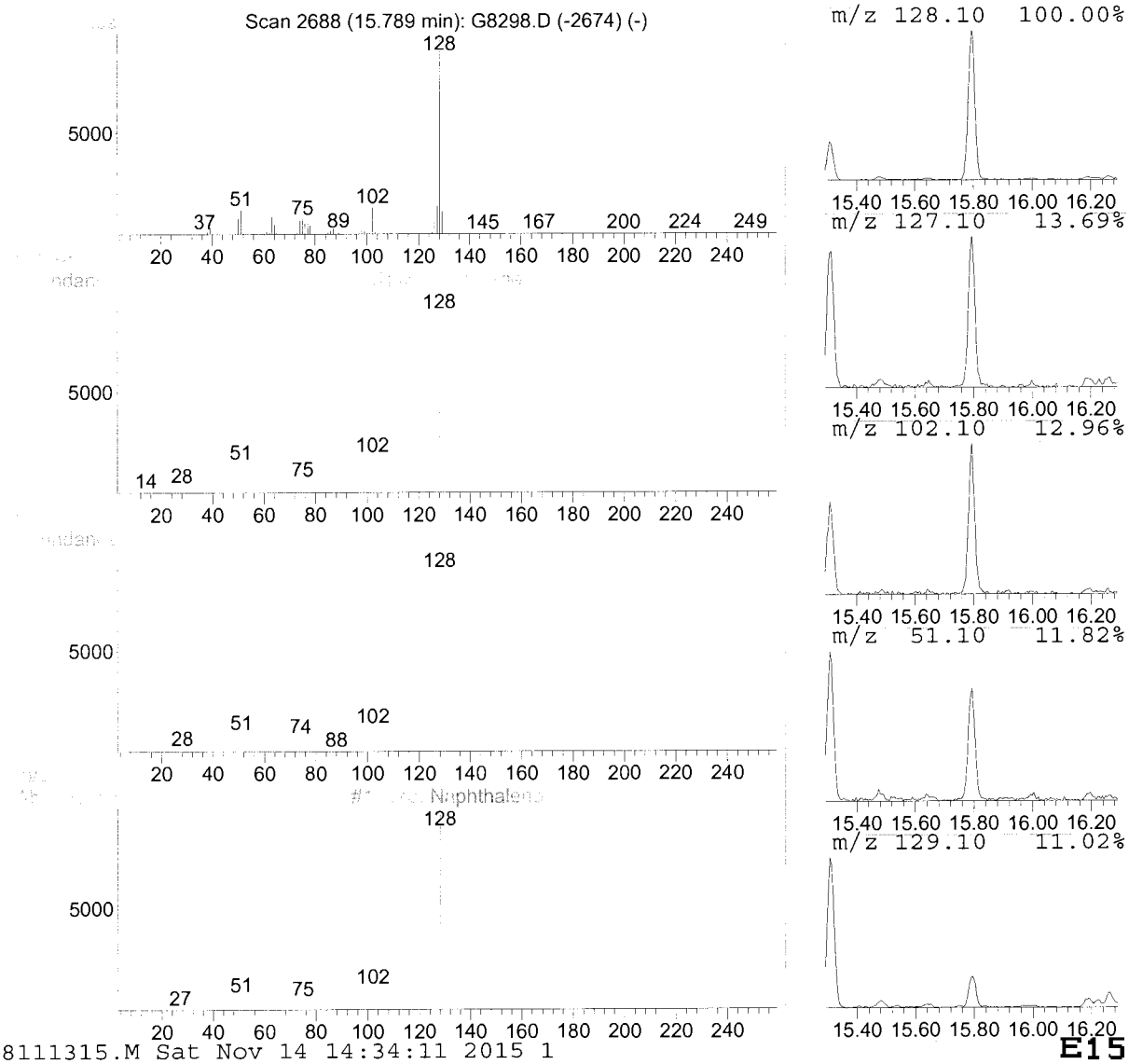
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 3 Azulene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.79	5.46 UG	265292	Chlorobenzene-d5	10.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Azulene	128	C10H8	000275-51-4	96
2	Naphthalene	128	C10H8	000091-20-3	95
3	Naphthalene	128	C10H8	000091-20-3	95
4	Azulene	128	C10H8	000275-51-4	94
5	Azulene	128	C10H8	000275-51-4	91



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8298.D
Acq On : 14 Nov 2015 8:52
Operator : Sylvia
Sample : MW-24-2,E15-10258-014,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 44 Sample Multiplier: 1

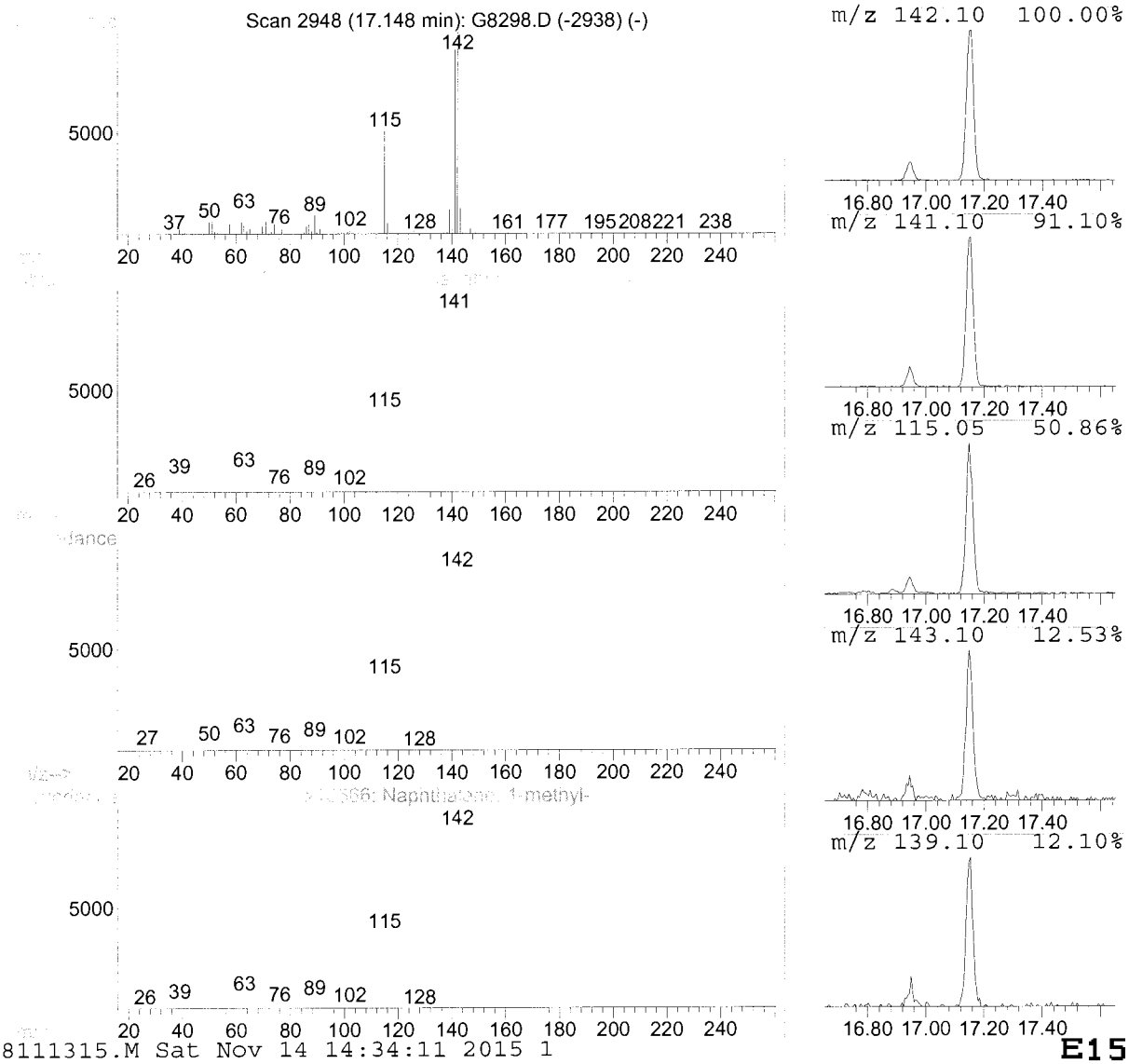
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****
Peak Number 4 1,4-Methanonaphthalene, 1,4... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.15	5.48 UG	266080	Chlorobenzene-d5	10.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,4-Methanonaphthalene, 1,4-dihy...	142	C11H10	004453-90-1	94
2	Naphthalene, 2-methyl-	142	C11H10	000091-57-6	94
3	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	94
4	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	93
5	Benzocycloheptatriene	142	C11H10	000264-09-5	91



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8299.D
Acq On : 14 Nov 2015 9:21
Operator : Sylvia
Sample : MW-24-1,E15-10258-015,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Nov 14 14:34:39 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

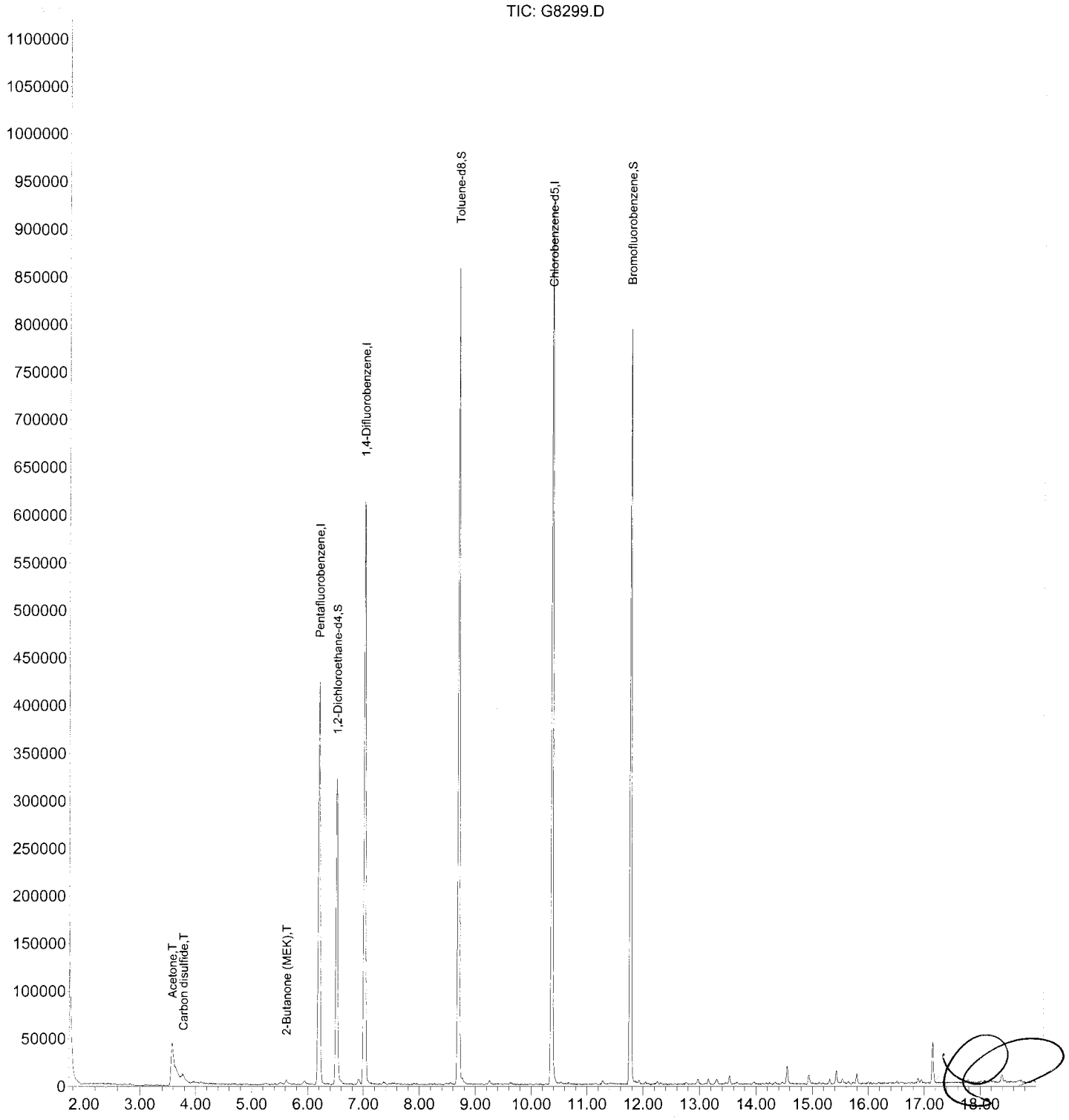
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	260089	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.02	114	456682	50.00	UG		0.00
50) Chlorobenzene-d5	10.36	117	465612	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	314149	56.05	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 112.10%				
41) Toluene-d8	8.70	98	597137	50.05	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.10%				
59) Bromofluorobenzene	11.77	95	324571	50.70	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 101.40%				
Target Compounds							Qvalue
10) Acetone	3.58	43	189719	68.53	UG	#	94
11) Carbon disulfide	3.78	76	6716	0.89	UG		100
22) 2-Butanone (MEK)	5.62	43	8483	2.58	UG	#	93

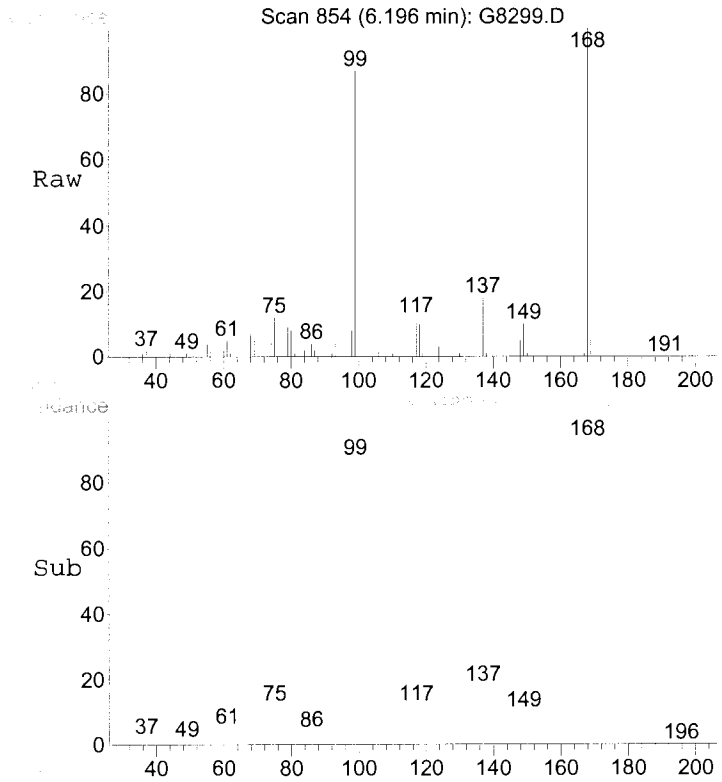
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8299.D
Acq On : 14 Nov 2015 9:21
Operator : Sylvia
Sample : MW-24-1,E15-10258-015,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 45 Sample Multiplier: 1

Quant Time: Nov 14 14:34:39 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

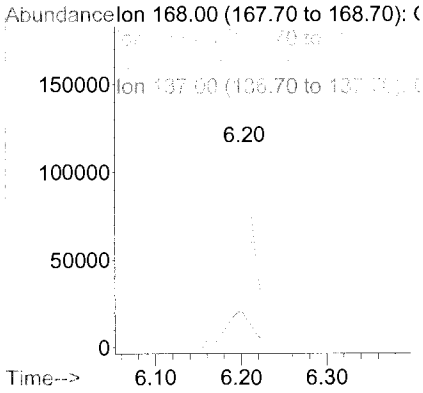


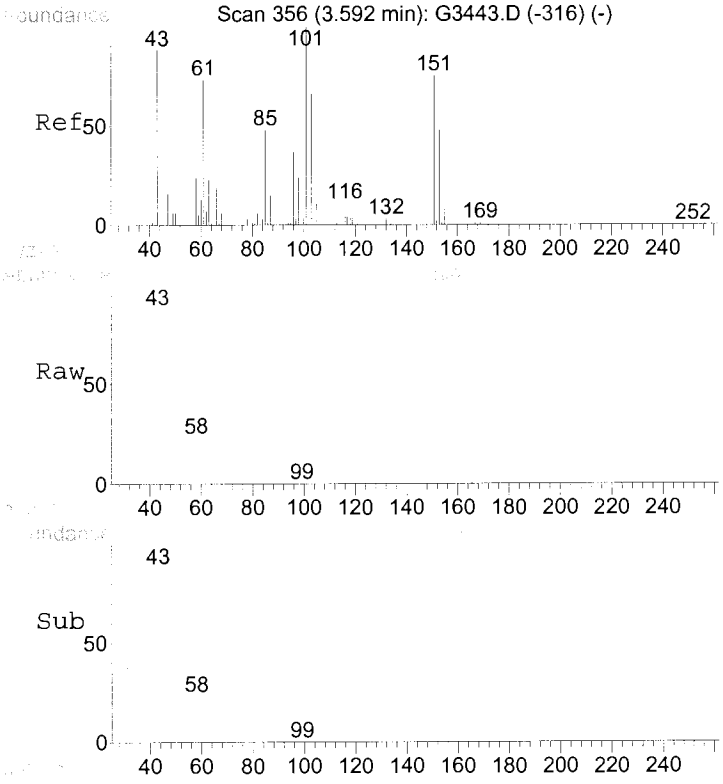


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion:168 Resp: 260089

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

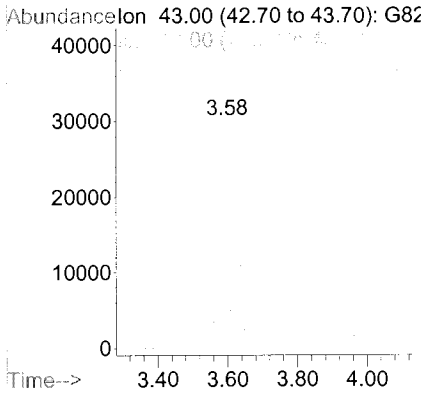


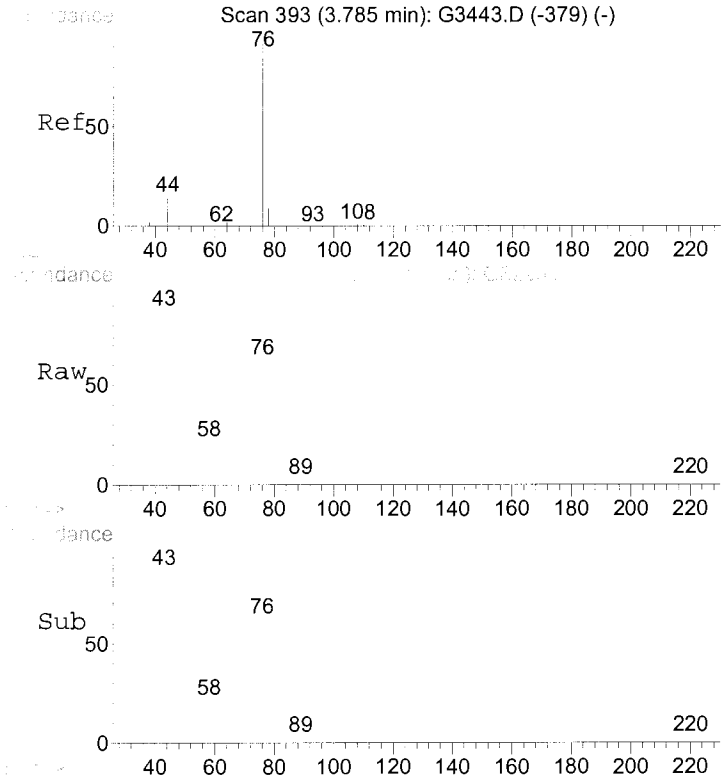


#10
Acetone
Concen: 68.53 UG
RT: 3.58 min Scan# 354
Delta R.T. 0.01 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion: 43 Resp: 189719

Ion	Ratio	Lower	Upper
43	100		
43	100.0	80.0	120.0
58	17.7	25.0	37.6#

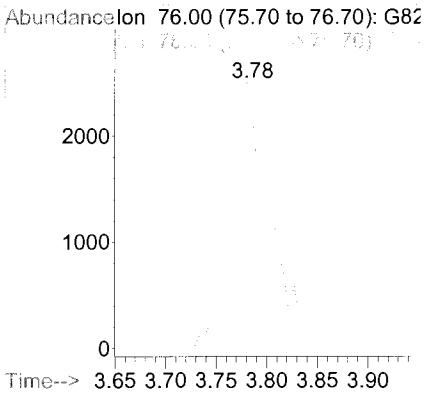


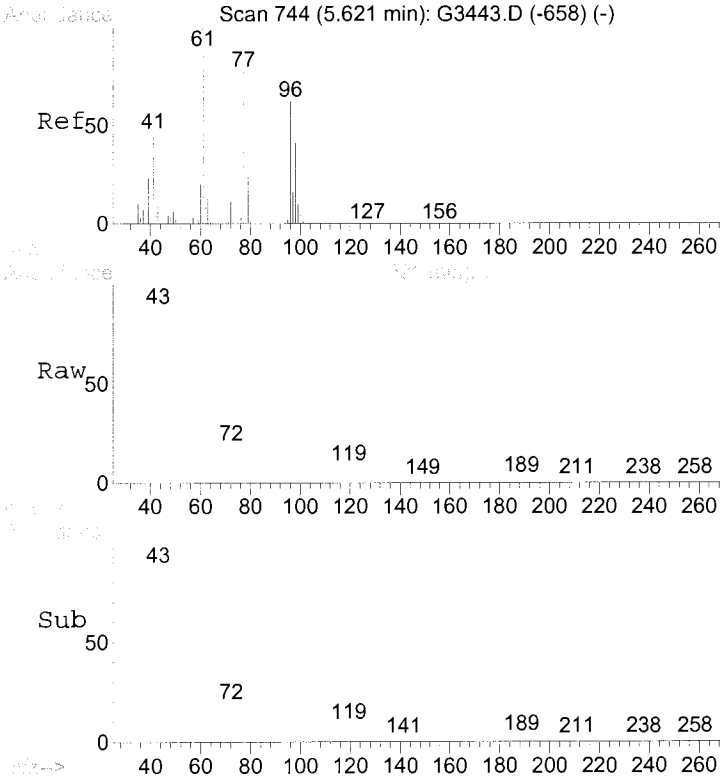


#11
Carbon disulfide
Concen: 0.89 UG
RT: 3.78 min Scan# 392
Delta R.T. 0.01 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion: 76 Resp: 6716

Ion	Ratio	Lower	Upper
76	100		
76	100.0	80.0	120.0

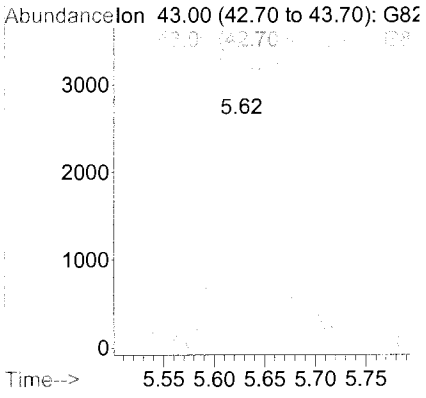


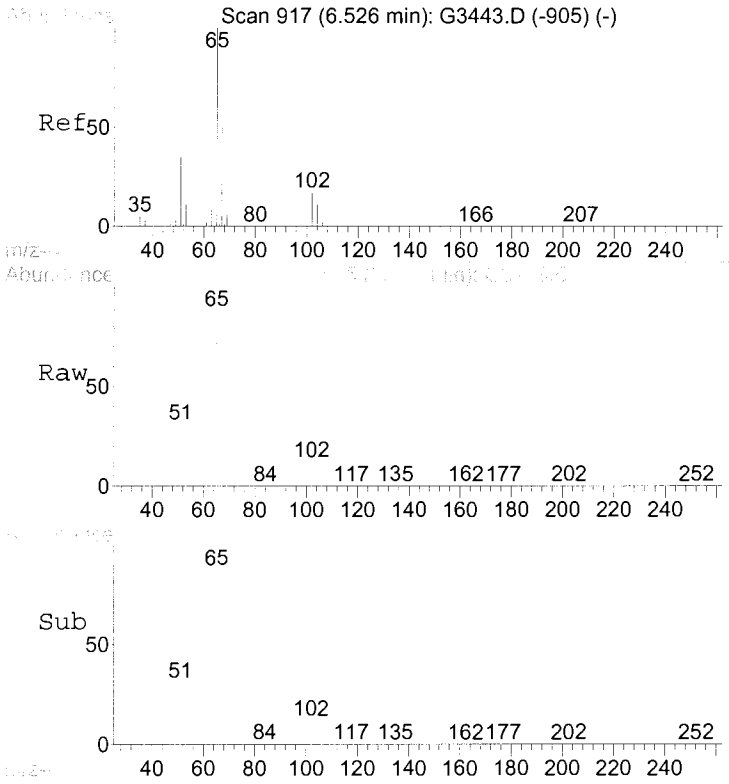


#22
2-Butanone (MEK)
Concen: 2.58 UG
RT: 5.62 min Scan# 744
Delta R.T. 0.02 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion: 43 Resp: 8483

Ion	Ratio	Lower	Upper
43	100		
43	100.0	80.0	120.0
72	15.6	25.6	38.4#

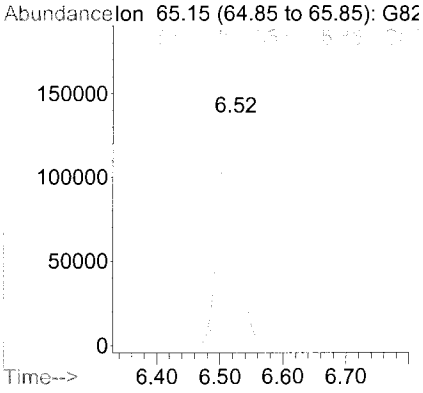


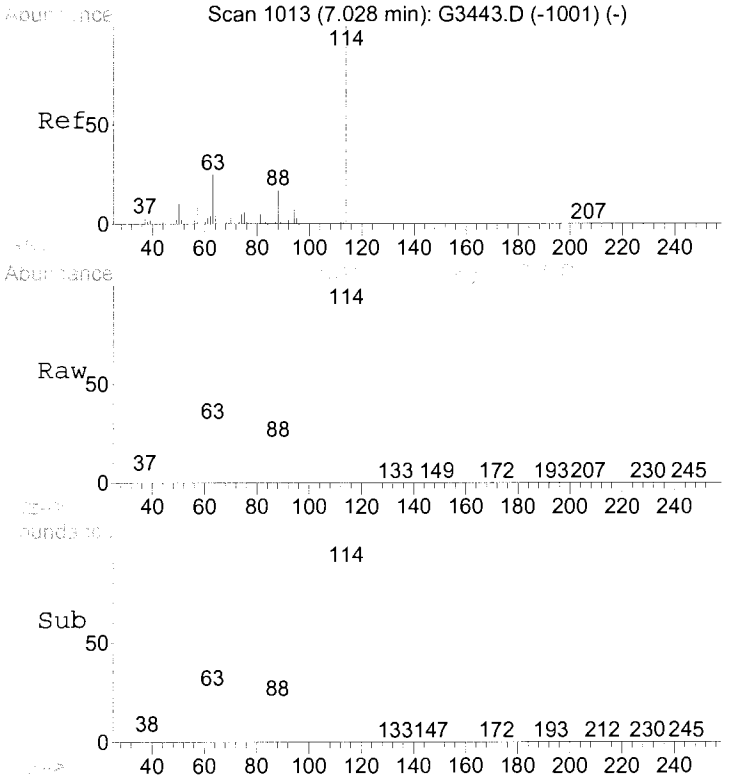


#30
1,2-Dichloroethane-d4
Concen: 56.05 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion: 65 Resp: 314149

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	44.3	43.2	64.8

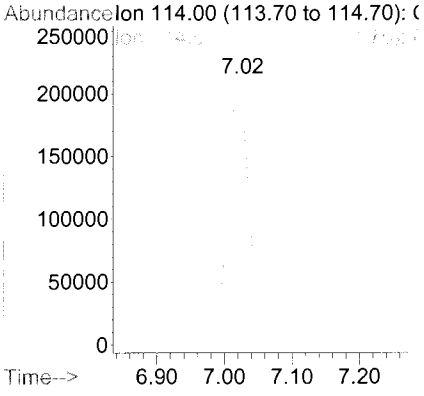


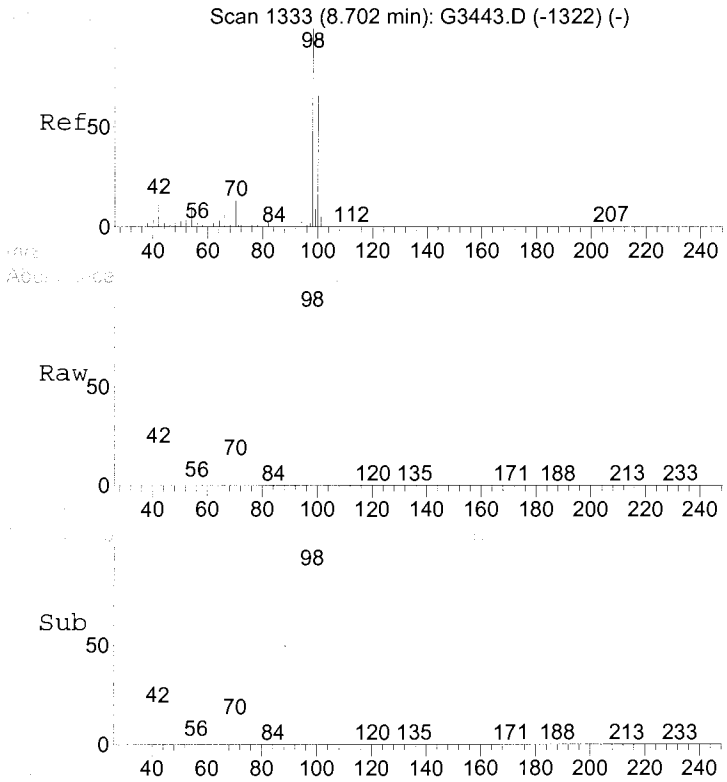


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. 0.00 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion:114 Resp: 456682

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

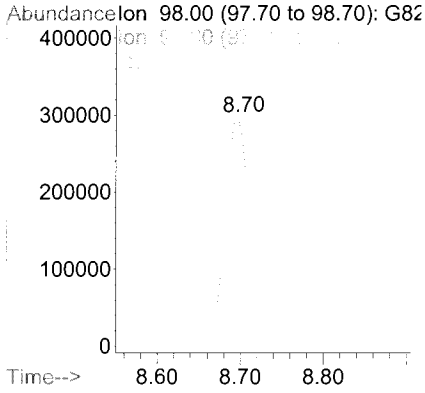


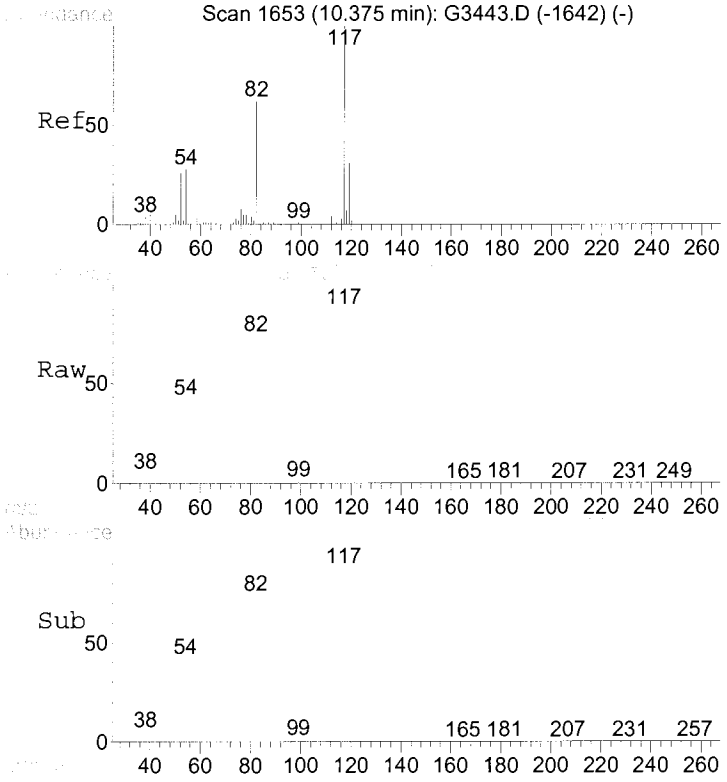


#41
Toluene-d8
Concen: 50.05 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion: 98 Resp: 597137

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.7	53.4	80.0

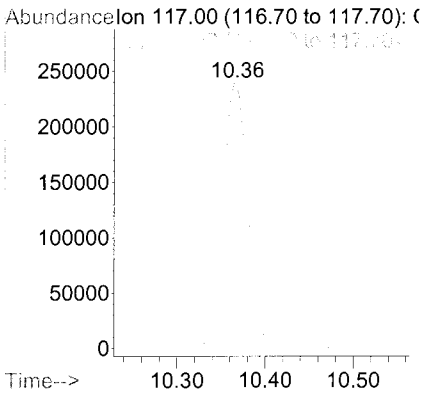


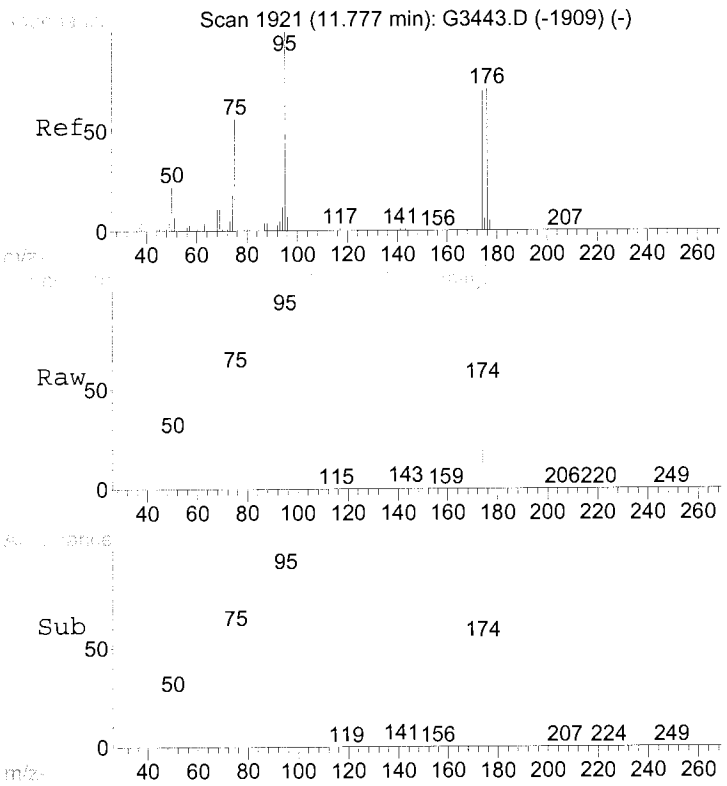


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion:117 Resp: 465612

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

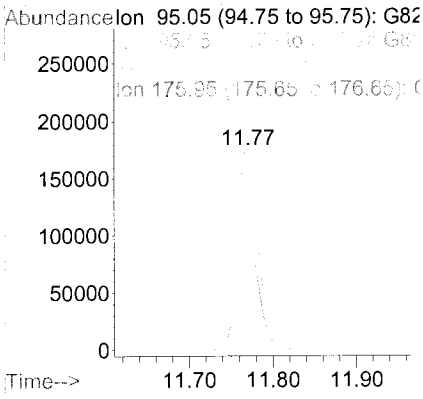




#59
Bromofluorobenzene
Concen: 50.70 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8299.D
Acq: 14 Nov 2015 9:21

Tgt Ion: 95 Resp: 324571

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.1	62.9	94.3#
176	52.4	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8299.D
Acq On : 14 Nov 2015 9:21
Operator : Sylvia
Sample : MW-24-1,E15-10258-015,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 45 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.581	337	354	384	rBV2	45248	247037	13.77%	2.890%
2	3.770	384	390	412	rVB6	10250	43936	2.45%	0.514%
3	6.196	840	854	879	rBV	423288	970084	54.06%	11.347%
4	6.515	902	915	945	rVB	321212	753587	41.99%	8.815%
5	7.018	1001	1011	1030	rBV	612086	1302959	72.60%	15.241%
6	8.696	1317	1332	1364	rBV	858470	1744903	97.23%	20.410%
7	10.365	1641	1651	1672	rBV	932025	1794603	100.00%	20.992%
8	11.767	1909	1919	1934	rBV	794132	1469607	81.89%	17.190%
9	14.549	2442	2451	2465	rBV2	18472	38668	2.15%	0.452%
10	14.941	2517	2526	2536	rBV7	10340	24788	1.38%	0.290%
11	15.428	2612	2619	2631	rBV6	14050	27218	1.52%	0.318%
12	15.794	2682	2689	2700	rVB	10989	20036	1.12%	0.234%
13	17.154	2939	2949	2971	rBV2	43412	89838	5.01%	1.051%
14	18.393	3176	3186	3194	rBV7	8137	21834	1.22%	0.255%

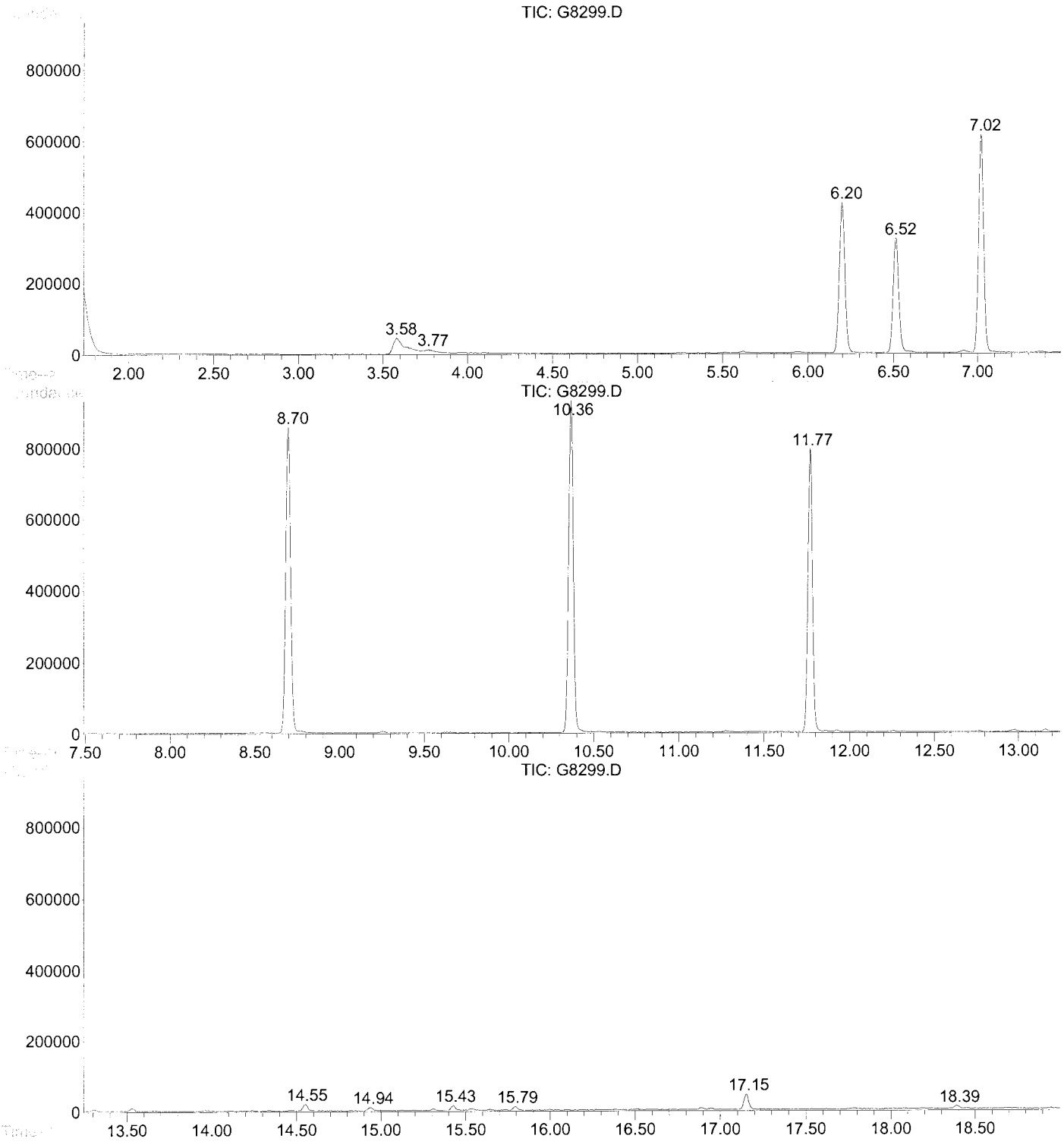
Sum of corrected areas: 8549098

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8299.D
Acq On : 14 Nov 2015 9:21
Operator : Sylvia
Sample : MW-24-1,E15-10258-015,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 45 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 14 14:38:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

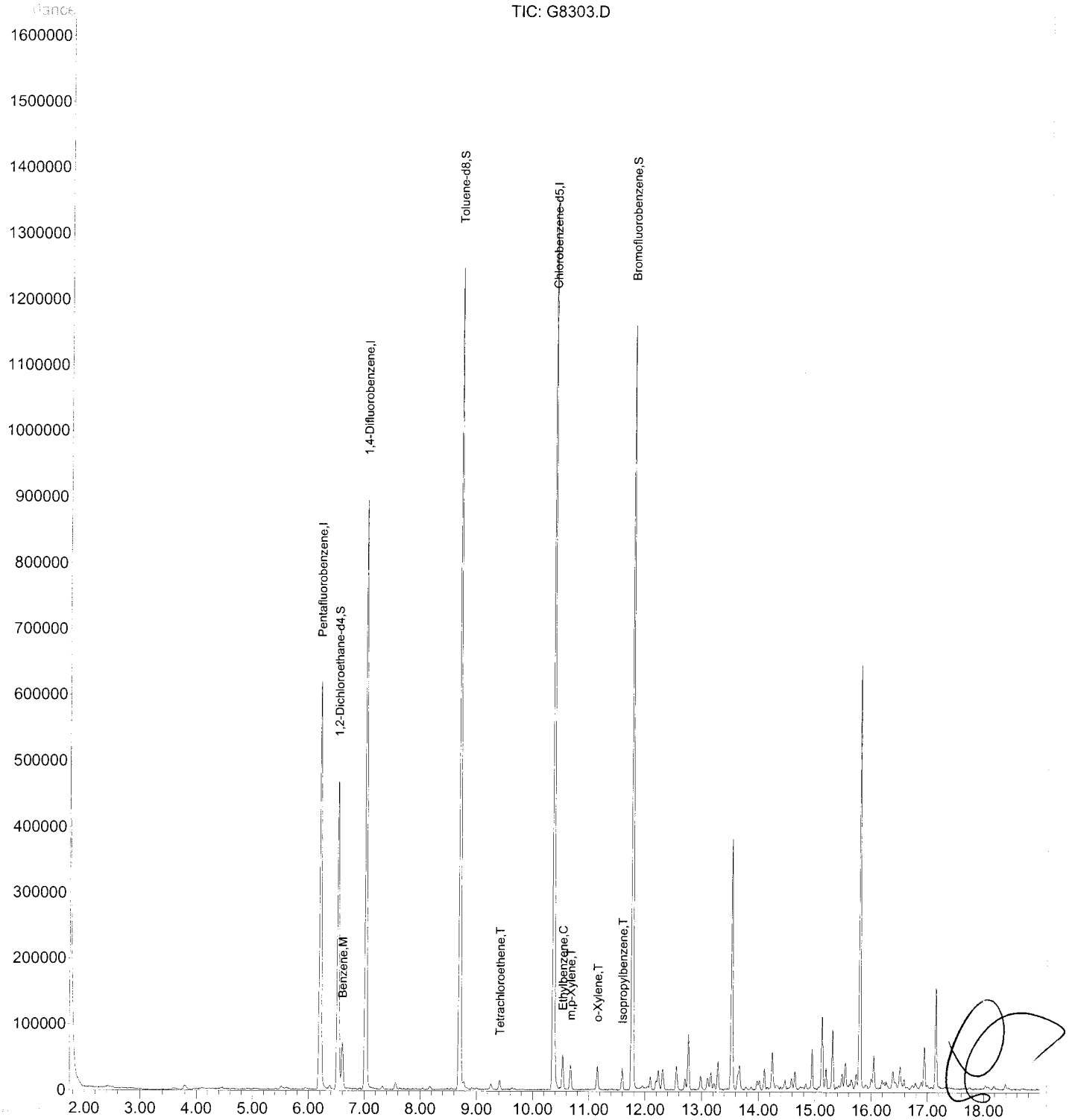
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.21	168	388564	50.00	UG		0.01
31) 1,4-Difluorobenzene	7.02	114	663307	50.00	UG		0.00
50) Chlorobenzene-d5	10.37	117	679134	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	449739	53.71	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 107.42%				
41) Toluene-d8	8.70	98	875516	50.53	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.06%				
59) Bromofluorobenzene	11.77	95	485515	52.00	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 104.00%				
Target Compounds							Qvalue
32) Benzene	6.60	78	61094	3.46	UG		100
45) Tetrachloroethene	9.42	166	3781	1.03	UG	#	77
53) Ethylbenzene	10.54	91	41193	1.75	UG	#	86
54) m,p-Xylene	10.67	106	10393	1.35	UG	#	76
55) o-Xylene	11.15	106	7750	1.01	UG	#	11
58) Isopropylbenzene	11.59	105	20198	1.00	UG		99

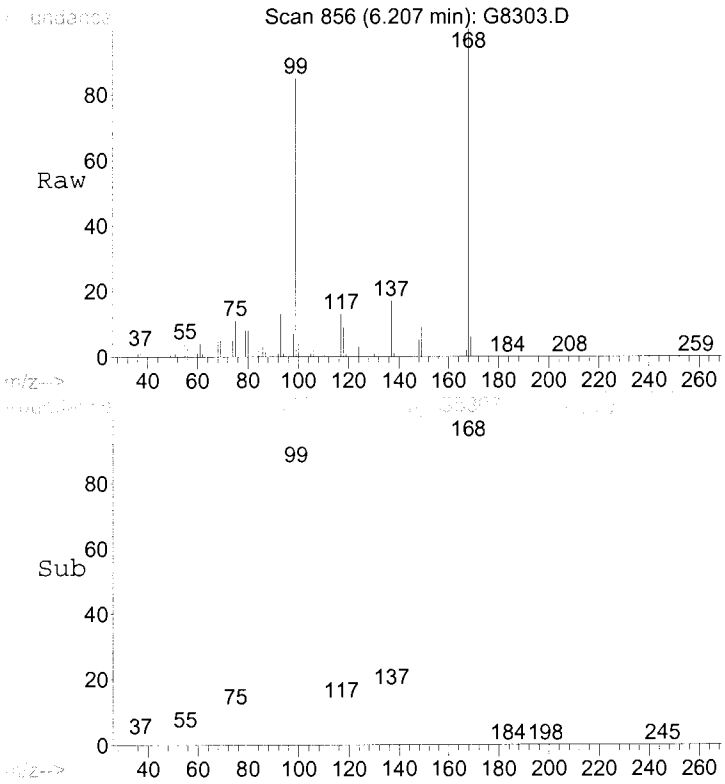
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 14 14:38:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

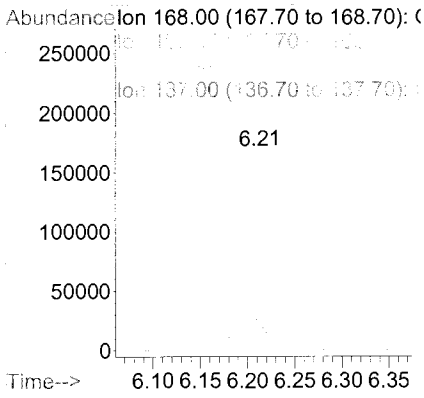


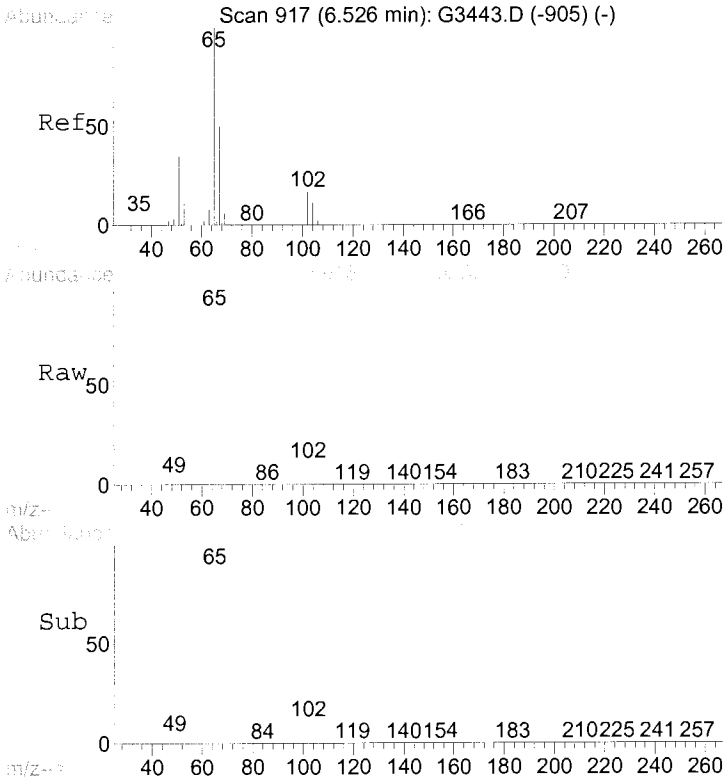


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.21 min Scan# 856
Delta R.T. 0.01 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion:168 Resp: 388564

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	89.4	0.0	0.0#
137	18.0	0.0	0.0#

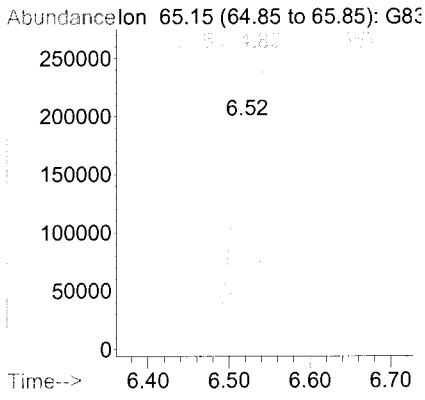


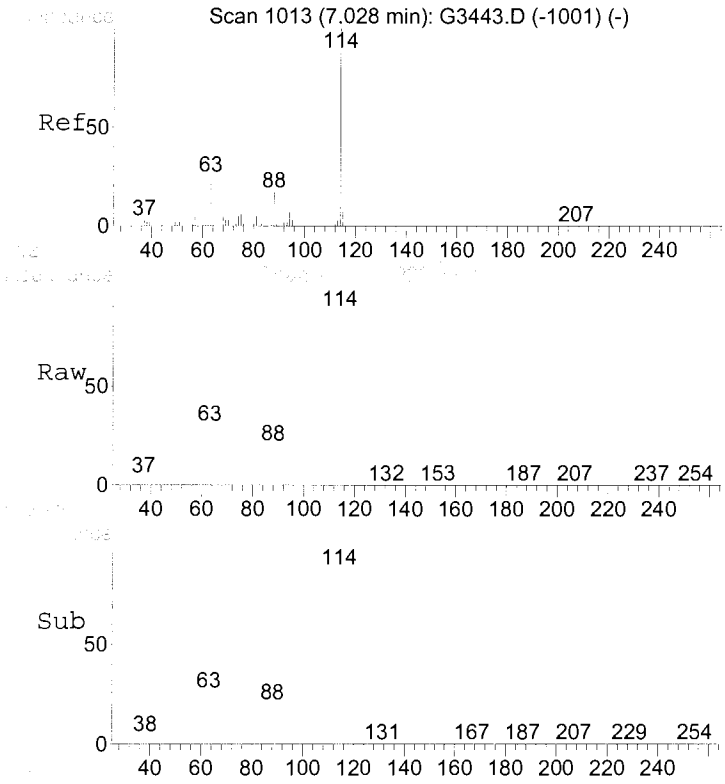


#30
1,2-Dichloroethane-d4
Concen: 53.71 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion: 65 Resp: 449739

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	43.6	43.2	64.8

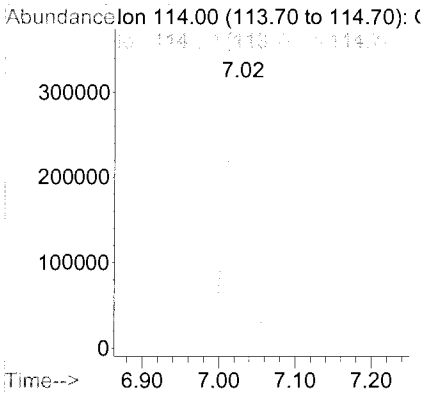


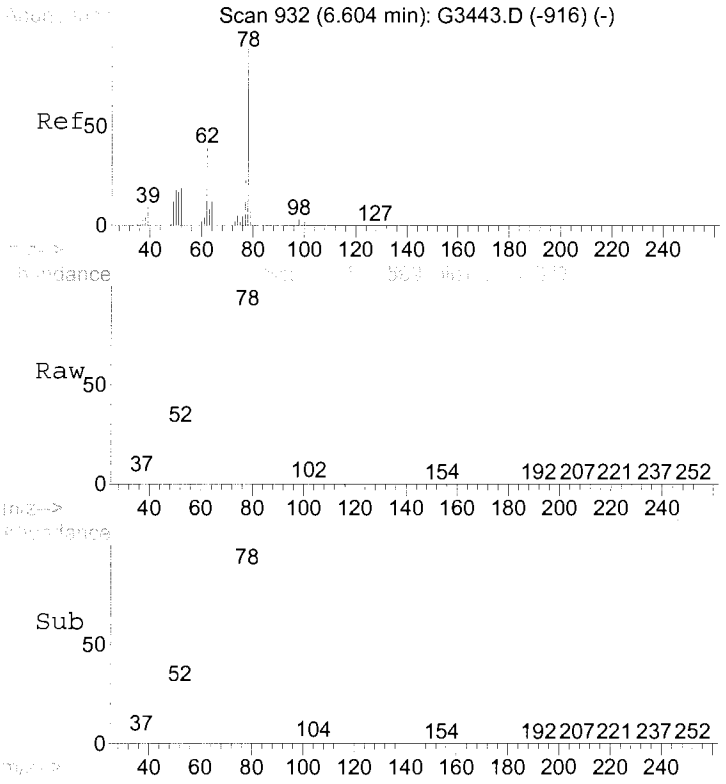


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion:114 Resp: 663307

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

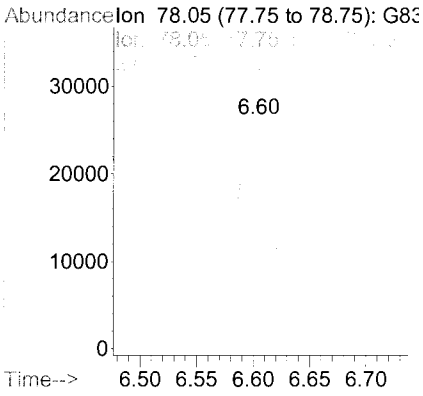


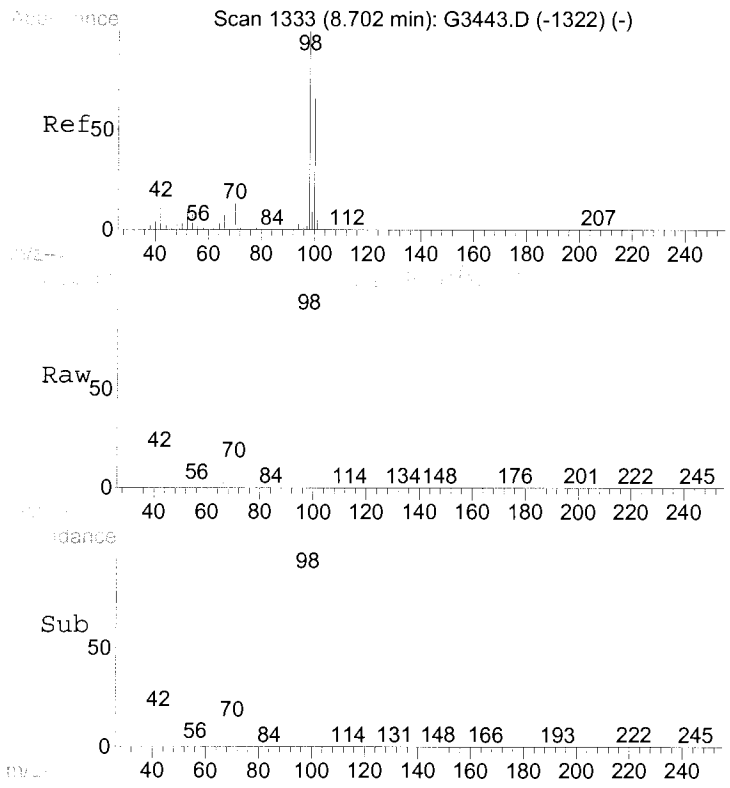


#32
Benzene
Concen: 3.46 UG
RT: 6.60 min Scan# 931
Delta R.T. 0.01 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion: 78 Resp: 61094

Ion	Ratio	Lower	Upper
78	100		
78	100.0	80.0	120.0
77	23.3	18.3	27.5

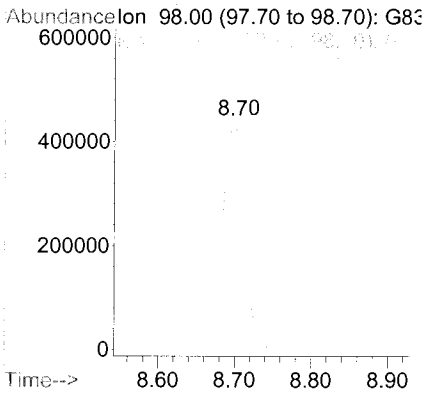


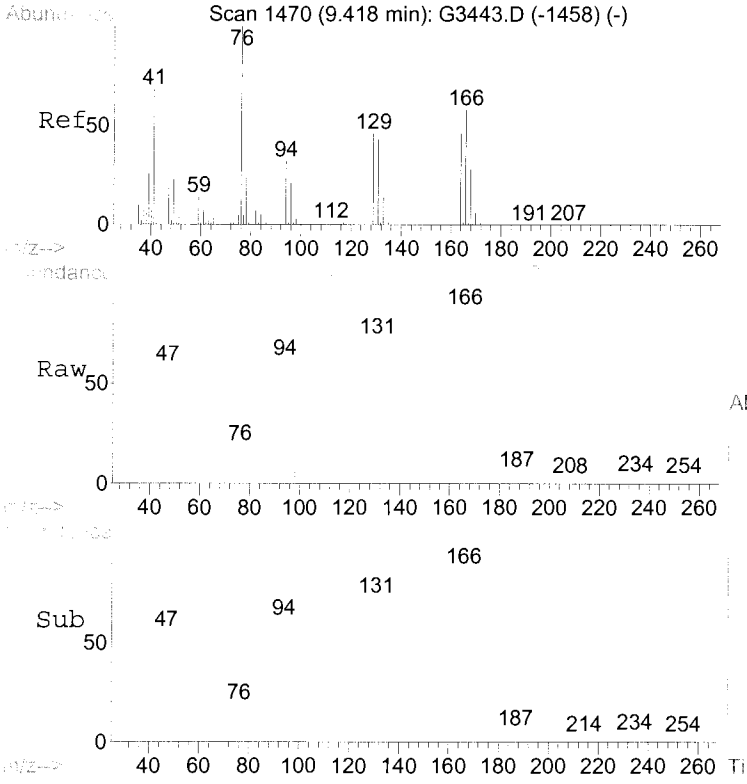


#41
Toluene-d8
Concen: 50.53 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion: 98 Resp: 875516

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	58.6	53.4	80.0

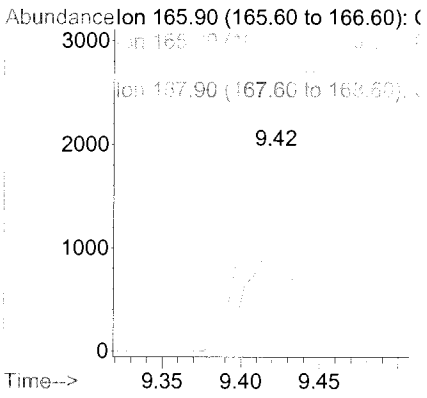


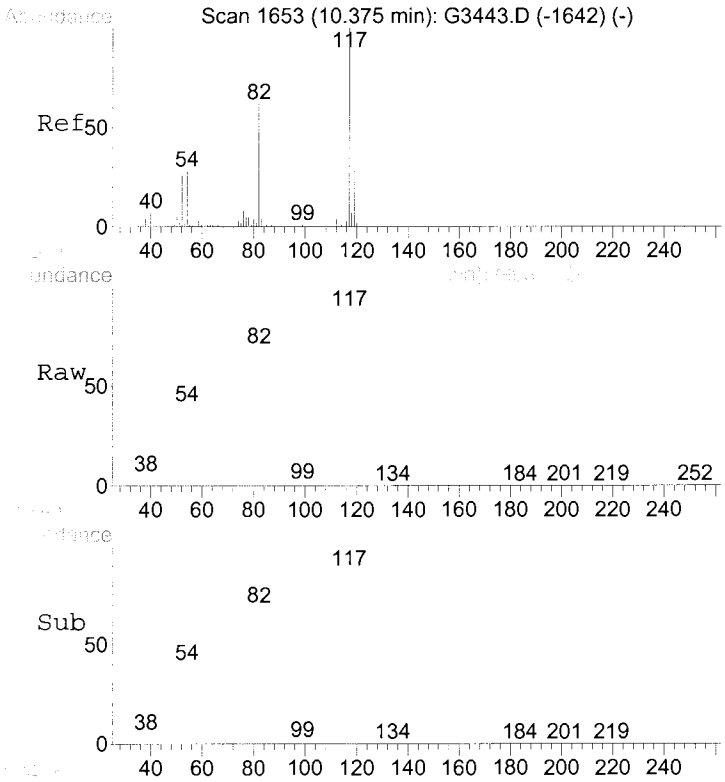


#45
Tetrachloroethene
Concen: 1.03 UG
RT: 9.42 min Scan# 1470
Delta R.T. 0.01 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion:166 Resp: 3781

Ion	Ratio	Lower	Upper
166	100		
166	100.0	80.0	120.0
129	81.1	0.0	0.0#
168	0.0	38.3	57.5#

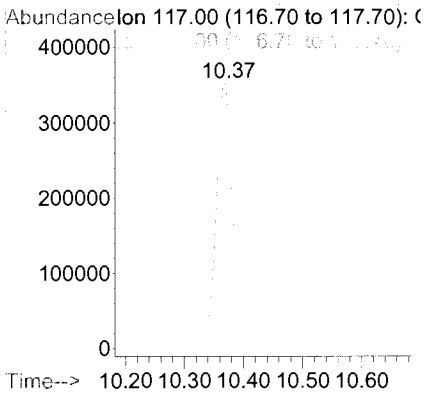


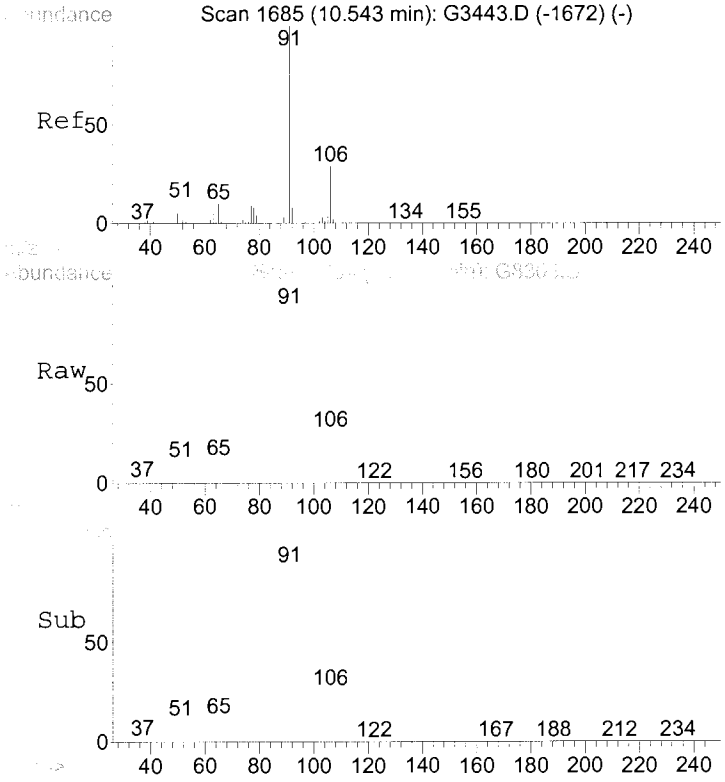


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.37 min Scan# 1652
Delta R.T. 0.00 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion:117 Resp: 679134

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

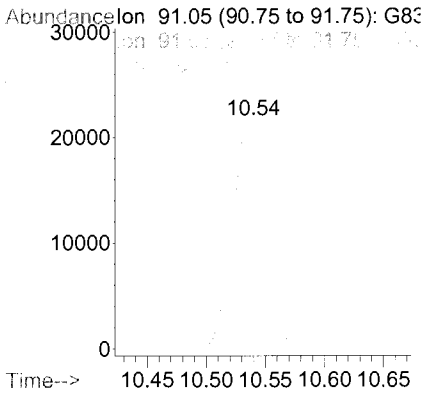


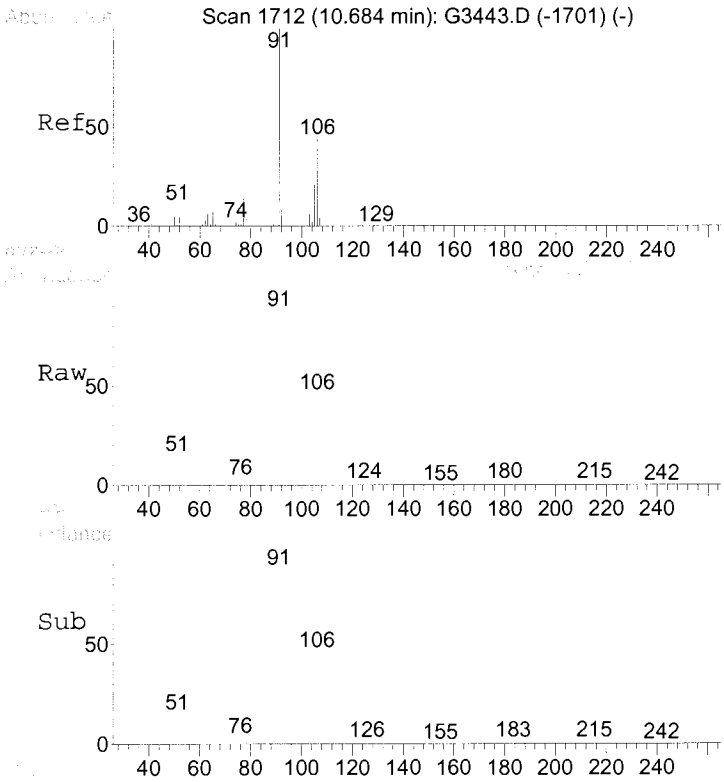


#53
Ethylbenzene
Concen: 1.75 UG
RT: 10.54 min Scan# 1684
Delta R.T. 0.00 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion: 91 Resp: 41193

Ion	Ratio	Lower	Upper
91	100		
91	100.0	80.0	120.0
106	0.0	26.3	39.5#

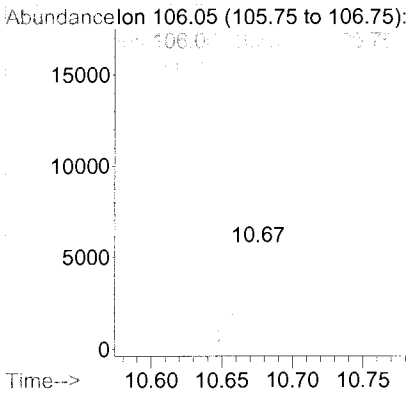


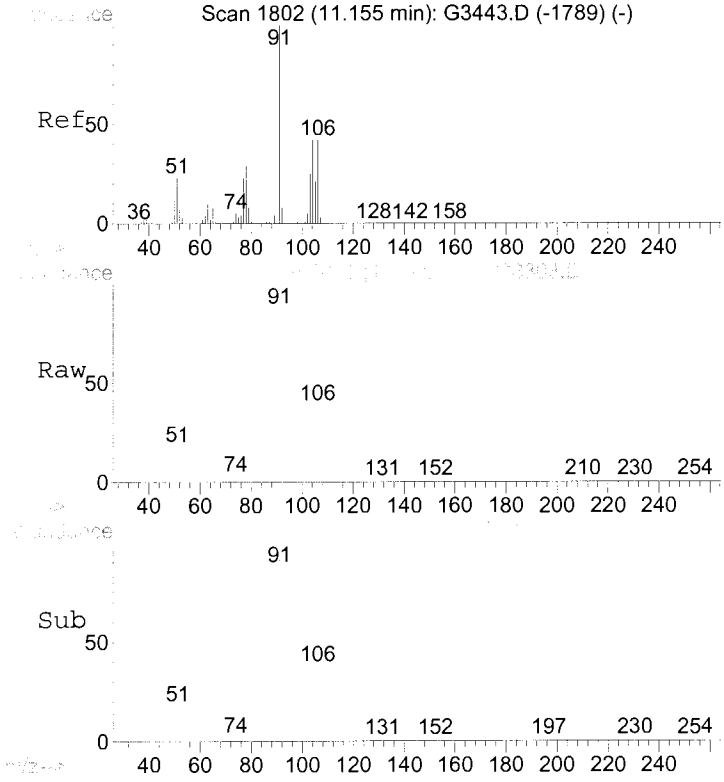


#54
m,p-Xylene
Concen: 1.35 UG
RT: 10.67 min Scan# 1710
Delta R.T. -0.01 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion:106 Resp: 10393

Ion	Ratio	Lower	Upper
106	100		
106	100.0	80.0	120.0
91	246.7	154.5	231.7#

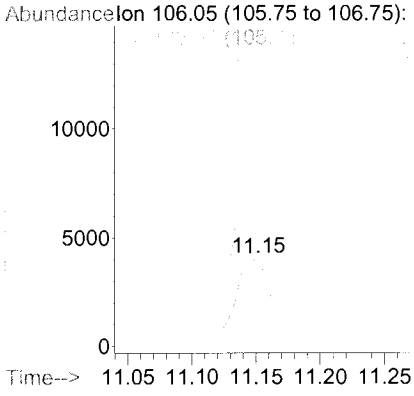


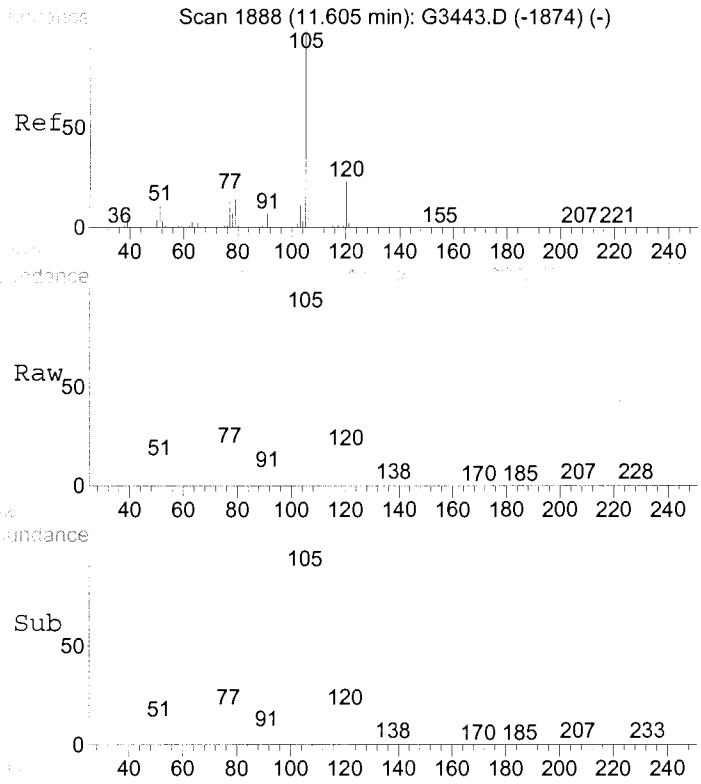


#55
o-Xylene
Concen: 1.01 UG
RT: 11.15 min Scan# 1801
Delta R.T. 0.00 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion:106 Resp: 7750

Ion	Ratio	Lower	Upper
106	100		
106	100.0	80.0	120.0
91	0.0	163.3	244.9#

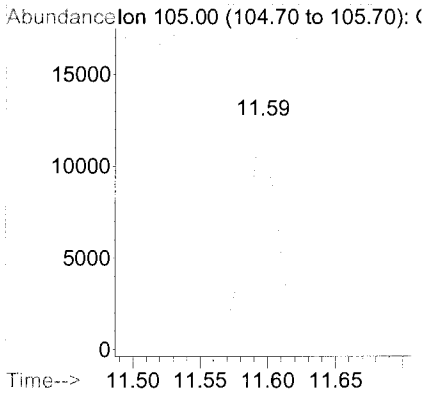


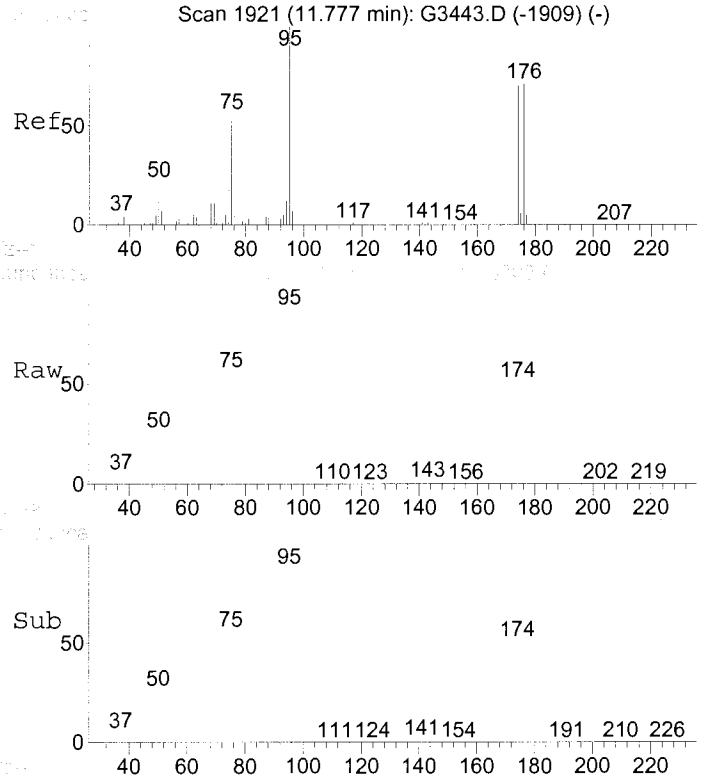


#58
Isopropylbenzene
Concen: 1.00 UG
RT: 11.59 min Scan# 1886
Delta R.T. 0.00 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion:105 Resp: 20198

Ion	Ratio	Lower	Upper
105	100		
105	100.0	80.0	120.0
120	24.5	21.9	32.9

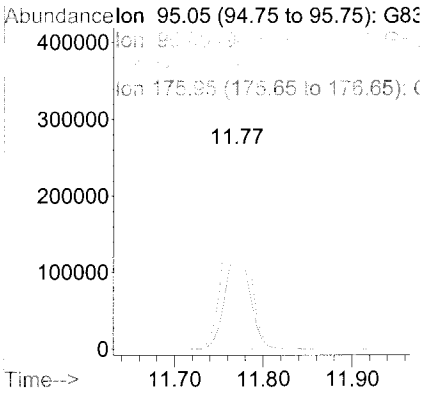




#59
Bromofluorobenzene
Concen: 52.00 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8303.D
Acq: 14 Nov 2015 11:21

Tgt Ion: 95 Resp: 485515

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.4	62.9	94.3#
176	52.6	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.796	383	395	410	rBV	7428	27597	1.05%	0.168%
2	6.202	840	855	878	rBV2	618711	1448809	55.18%	8.825%
3	6.515	904	915	925	rBV	467819	1056474	40.24%	6.435%
4	6.599	925	931	949	rVB2	69507	164553	6.27%	1.002%
5	7.023	999	1012	1036	rBV	894393	1905108	72.56%	11.604%
6	8.696	1318	1332	1344	rBV	1247237	2509535	95.59%	15.286%
7	8.770	1344	1346	1368	rVB5	12269	32256	1.23%	0.196%
8	9.413	1459	1469	1478	rVB3	15170	31141	1.19%	0.190%
9	10.365	1639	1651	1672	rBV	1352500	2625411	100.00%	15.992%
10	10.532	1677	1683	1697	rVB	51712	98989	3.77%	0.603%
11	10.673	1703	1710	1728	rVB2	38113	80223	3.06%	0.489%
12	11.149	1792	1801	1812	rVB4	35127	68348	2.60%	0.416%
13	11.594	1875	1886	1893	rBV3	32983	58312	2.22%	0.355%
14	11.772	1908	1920	1944	rBV	1161056	2183434	83.17%	13.300%
15	12.096	1976	1982	1994	rVB2	19706	35026	1.33%	0.213%
16	12.237	2004	2009	2017	rVV2	29251	58693	2.24%	0.358%
17	12.316	2017	2024	2037	rVB3	31455	73253	2.79%	0.446%
18	12.556	2062	2070	2084	rVB2	36228	72139	2.75%	0.439%
19	12.708	2087	2099	2104	rBV2	18051	37090	1.41%	0.226%
20	12.766	2104	2110	2121	rVB	84517	151424	5.77%	0.922%
21	12.980	2138	2151	2165	rVB2	22063	47626	1.81%	0.290%
22	13.105	2165	2175	2180	rBV5	18016	40390	1.54%	0.246%
23	13.163	2180	2186	2191	rVV2	25600	47768	1.82%	0.291%
24	13.289	2202	2210	2218	rVV	42107	71632	2.73%	0.436%
25	13.529	2247	2256	2270	rVB	381272	705381	26.87%	4.297%
26	13.665	2270	2282	2296	rVB6	37165	110898	4.22%	0.676%
27	14.016	2345	2349	2357	rVB2	14586	26953	1.03%	0.164%
28	14.110	2357	2367	2373	rBV	32900	60031	2.29%	0.366%
29	14.246	2381	2393	2403	rBV	56253	116681	4.44%	0.711%
30	14.471	2427	2436	2443	rVB5	14617	27388	1.04%	0.167%
31	14.586	2449	2458	2464	rBV3	15246	28223	1.07%	0.172%
32	14.648	2464	2470	2479	rVB	27131	46684	1.78%	0.284%
33	14.947	2521	2527	2536	rVB	60899	99217	3.78%	0.604%
34	15.124	2552	2561	2569	rBV3	108558	197376	7.52%	1.202%
35	15.198	2569	2575	2581	rVB3	30683	49369	1.88%	0.301%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

36	15.313	2586	2597	2605	rVB	90790	159963	6.09%	0.974%
37	15.480	2622	2629	2634	rBV2	20824	34098	1.30%	0.208%
38	15.543	2634	2641	2652	rVB4	36539	69862	2.66%	0.426%
39	15.647	2656	2661	2669	rVB4	14346	33486	1.28%	0.204%
40	15.736	2669	2678	2682	rBV3	22717	44552	1.70%	0.271%
41	15.794	2682	2689	2703	rVV	642884	1038023	39.54%	6.323%
42	16.003	2718	2729	2732	rVV5	15177	29693	1.13%	0.181%
43	16.045	2732	2737	2749	rVB2	49391	84123	3.20%	0.512%
44	16.385	2791	2802	2818	rBV4	26562	80877	3.08%	0.493%
45	16.510	2818	2826	2836	rVV2	32506	70343	2.68%	0.428%
46	16.944	2903	2909	2917	rVV	60328	103287	3.93%	0.629%
47	17.148	2939	2948	2965	rBV	152602	275414	10.49%	1.678%

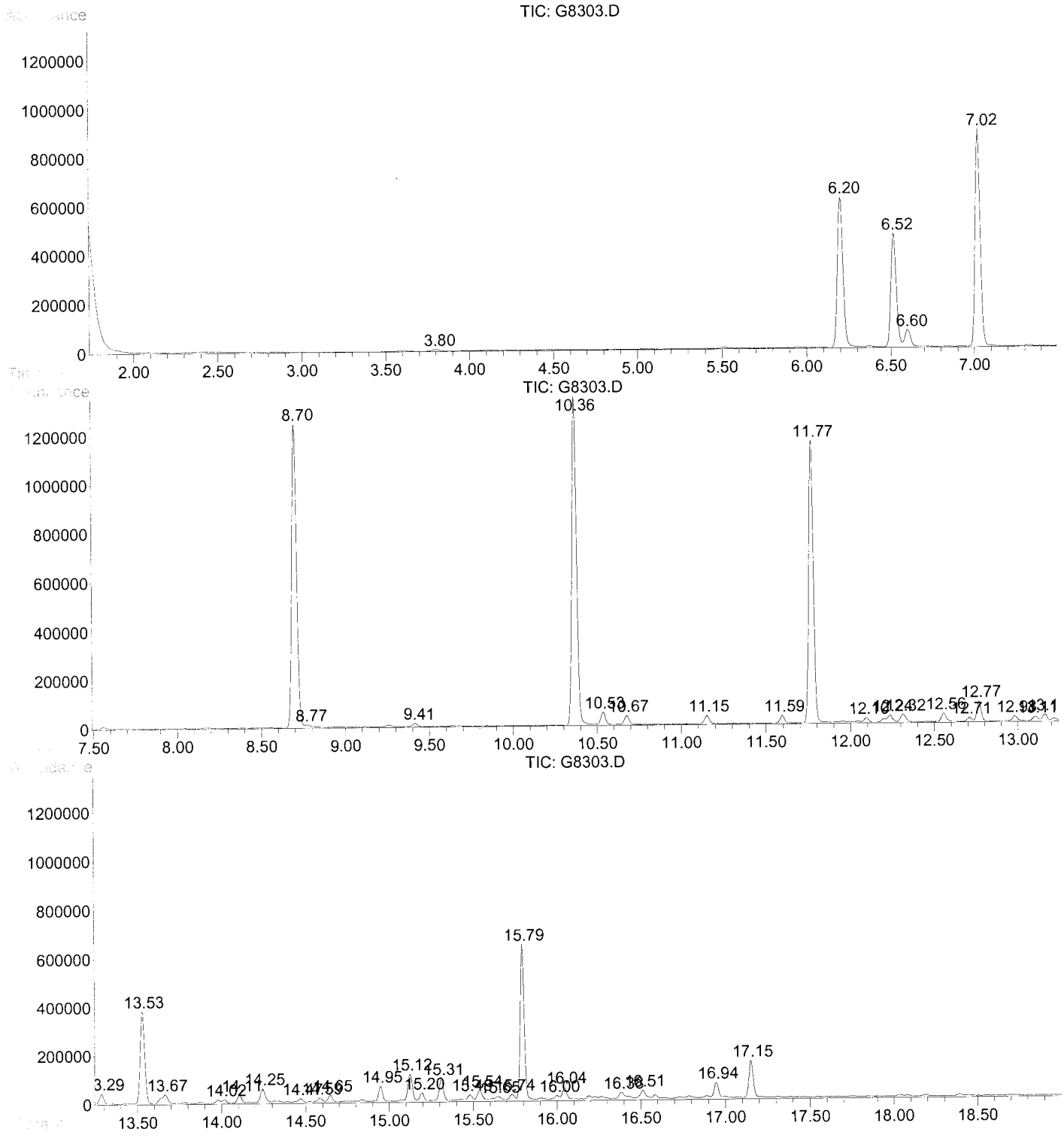
Sum of corrected areas: 16417153

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

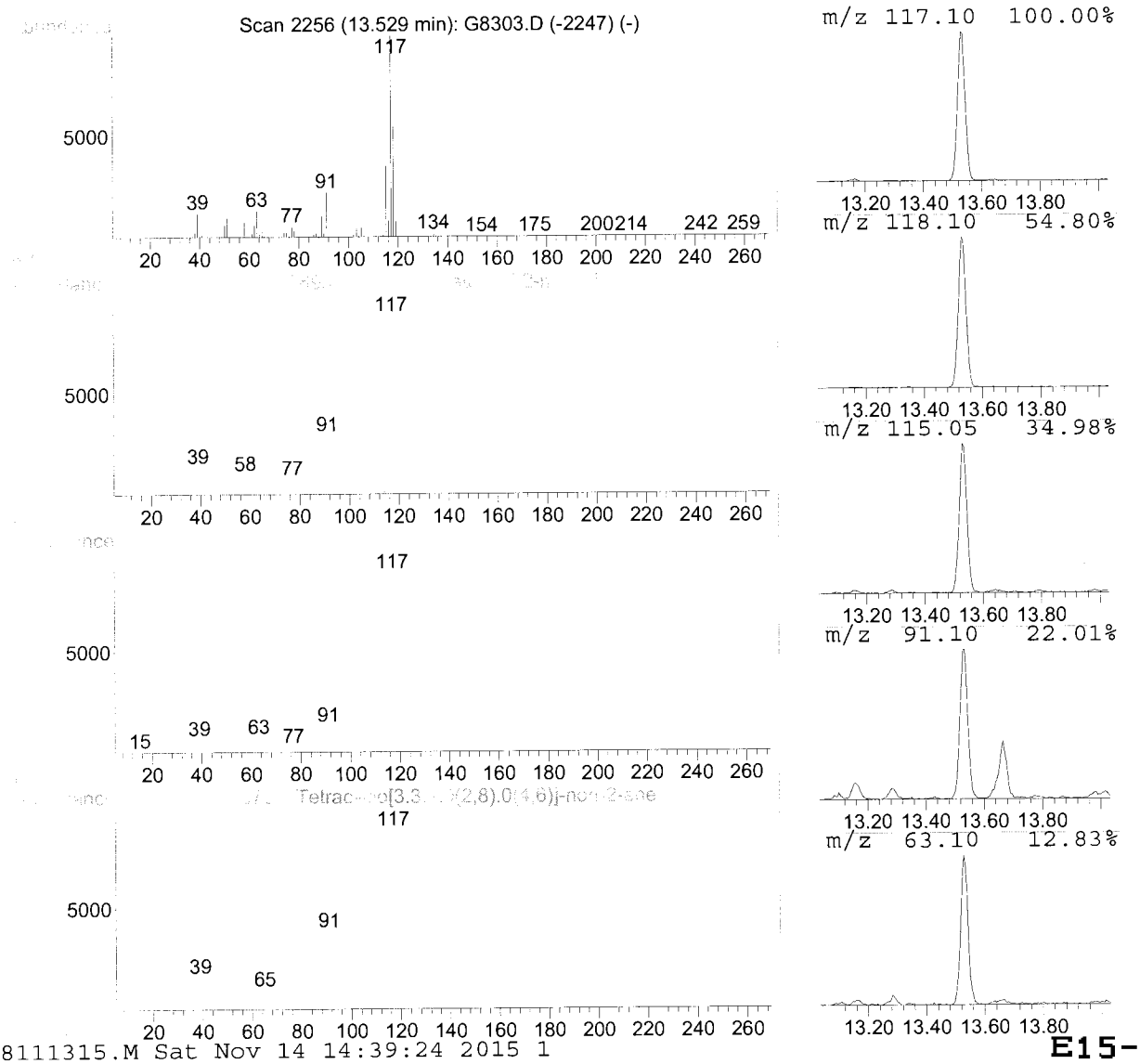
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 1 Benzene, 1-ethenyl-2-methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.53	13.43 UG	705381	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	90
2	Indane	118	C9H10	000496-11-7	87
3	Tetracyclo[3.3.1.0(2,8).0(4,6)]-...	118	C9H10	1000191-13-7	81
4	Indane	118	C9H10	000496-11-7	81
5	Benzene, 2-propenyl-	118	C9H10	000300-57-2	80



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

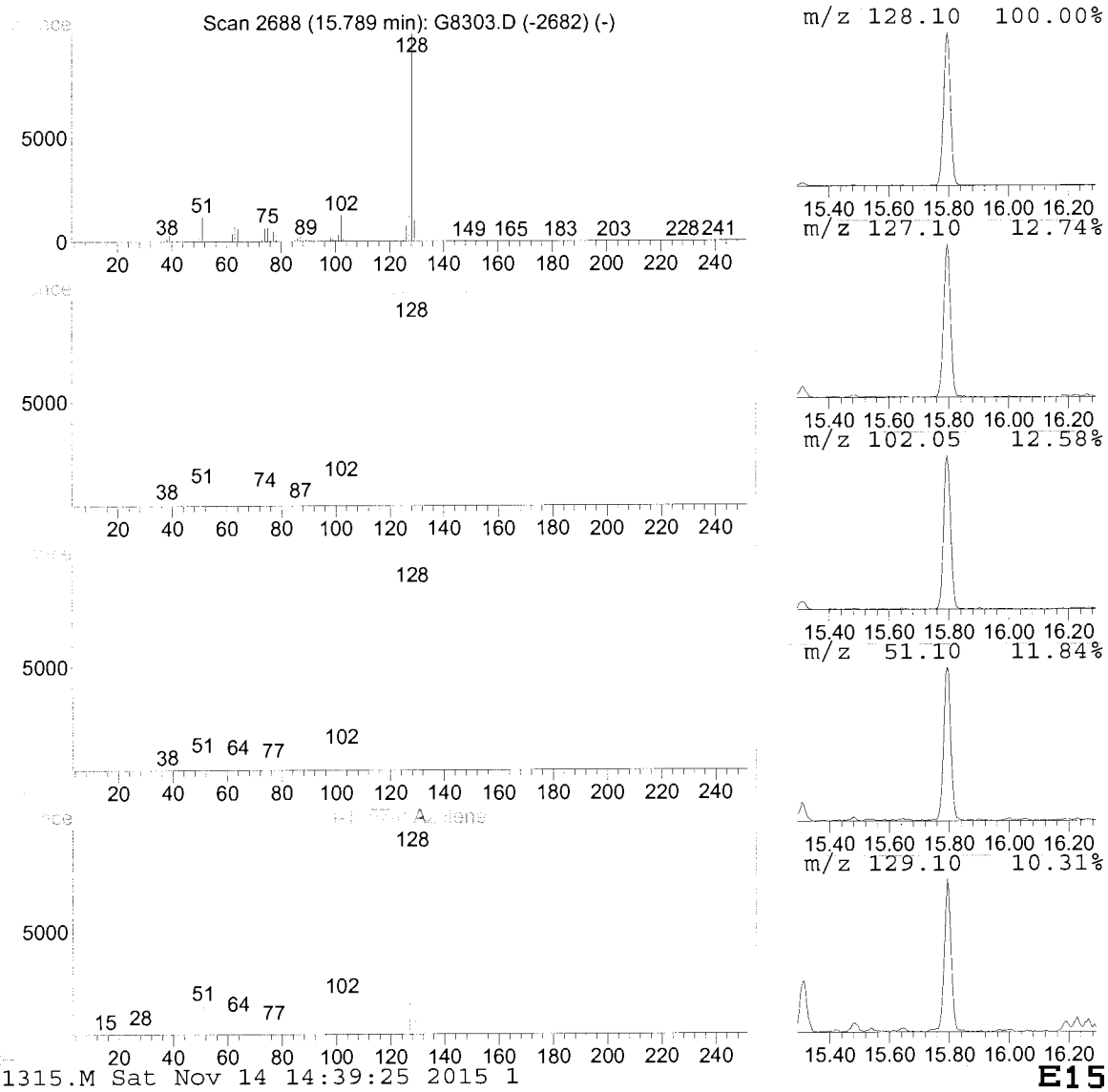
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 2 Naphthalene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.79	19.77 UG	1038020	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	95
2	Naphthalene	128	C10H8	000091-20-3	95
3	Azulene	128	C10H8	000275-51-4	94
4	Azulene	128	C10H8	000275-51-4	94
5	Naphthalene	128	C10H8	000091-20-3	91



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8303.D
Acq On : 14 Nov 2015 11:21
Operator : Sylvia
Sample : MW-26,E15-10258-016,A,5mL,1000
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

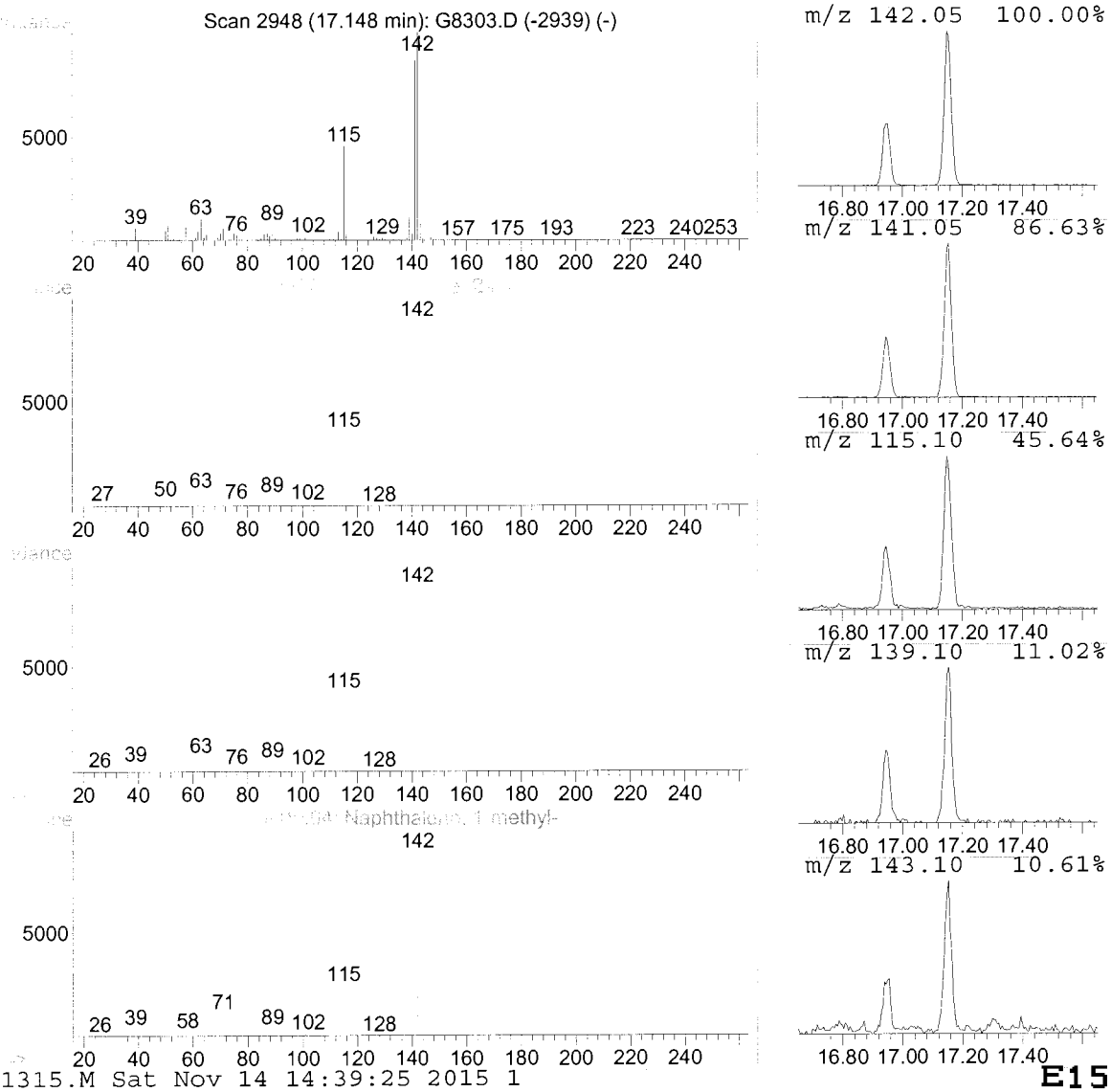
TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 3 Naphthalene, 2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.15	5.25 UG	275414	Chlorobenzene-d5	10.37

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 2-methyl-	142	C11H10	000091-57-6	96
2	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	96
3	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	94
4	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	94
5	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	93



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8285.D
Acq On : 14 Nov 2015 2:45
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-017,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 14 13:56:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	354719	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	635001	50.00	UG	0.00
50) Chlorobenzene-d5	10.36	117	625691	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	378430	49.51	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 99.02%			
41) Toluene-d8	8.70	98	823246	49.63	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.26%			
59) Bromofluorobenzene	11.77	95	425794	49.50	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 99.00%			

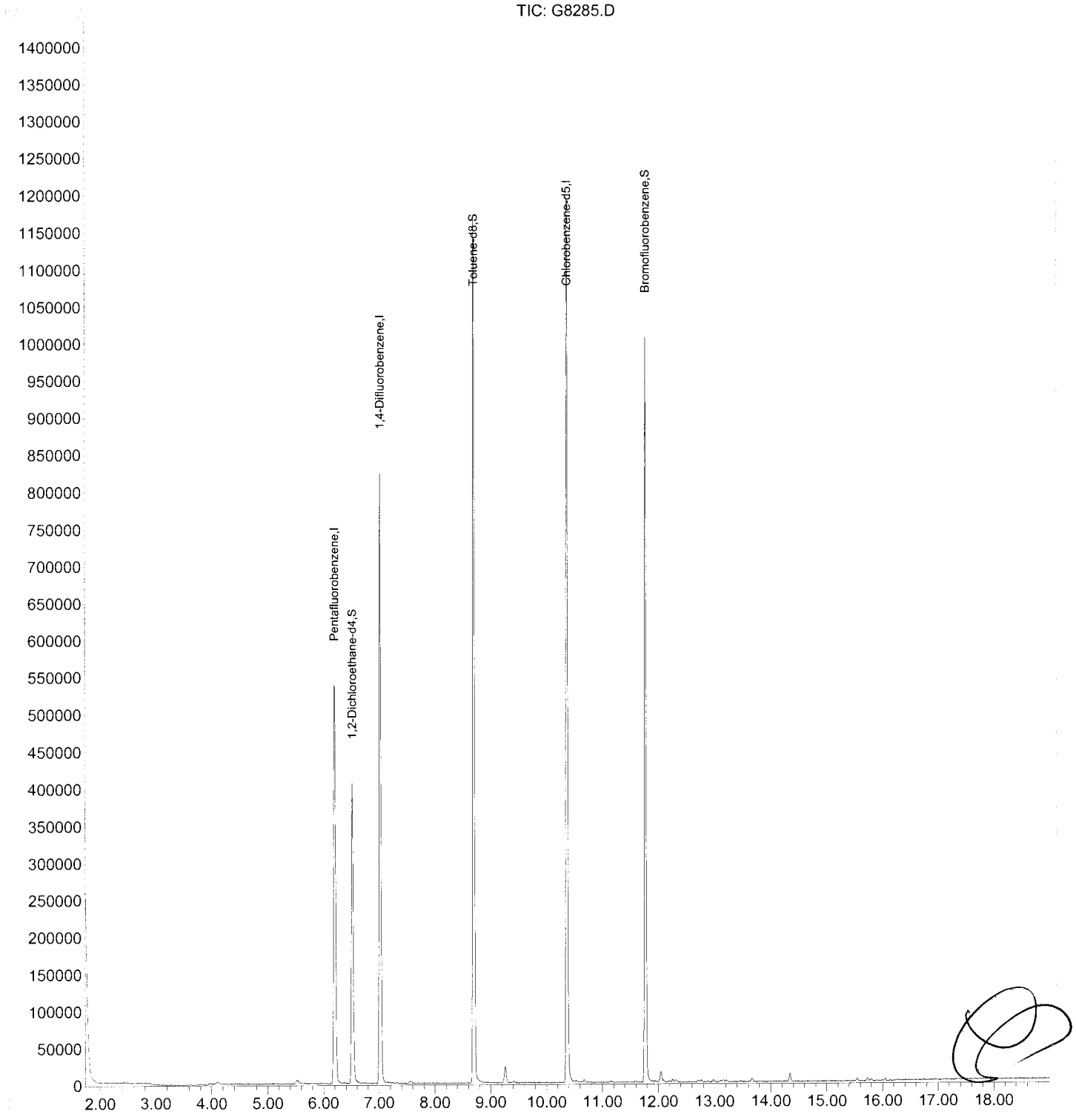
Target Compounds	Qvalue

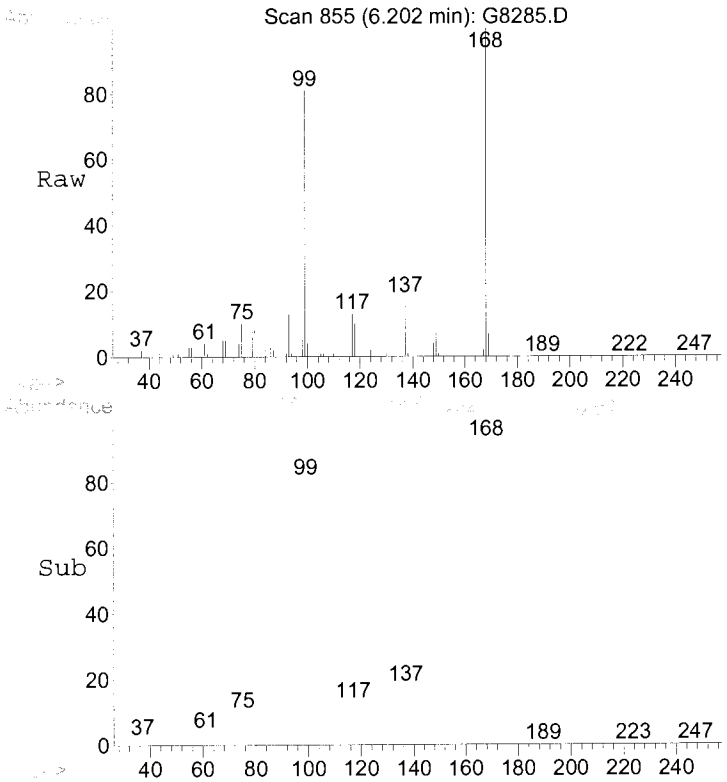
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8285.D
Acq On : 14 Nov 2015 2:45
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-017,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 14 13:56:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

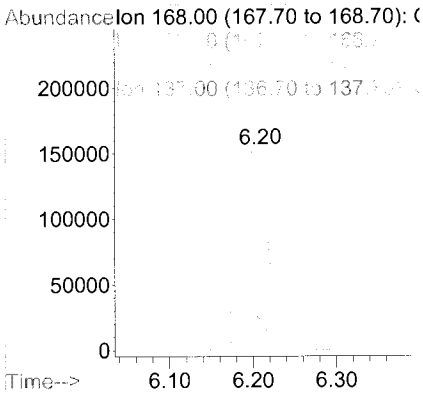


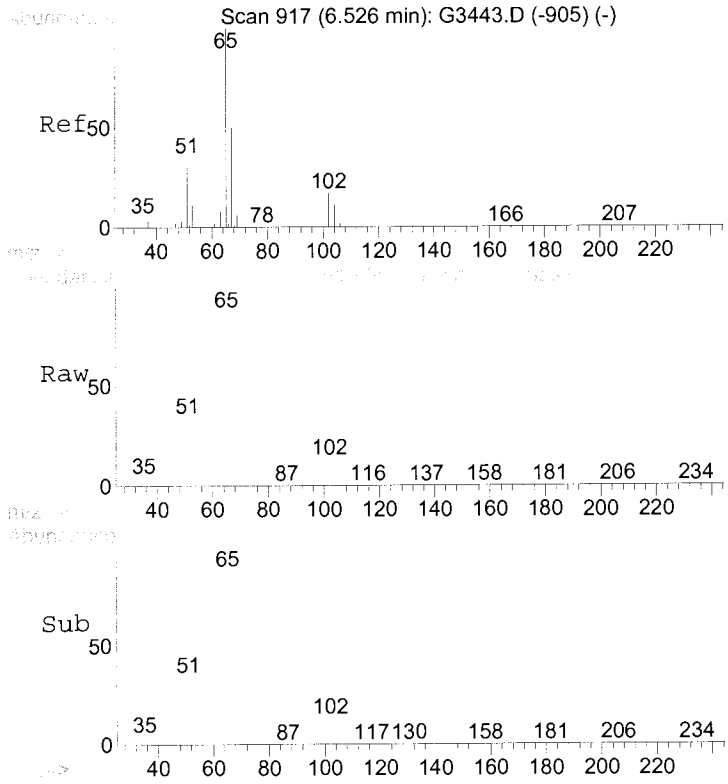


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8285.D
Acq: 14 Nov 2015 2:45

Tgt Ion:168 Resp: 354719

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	82.7	0.0	0.0#
137	17.2	0.0	0.0#

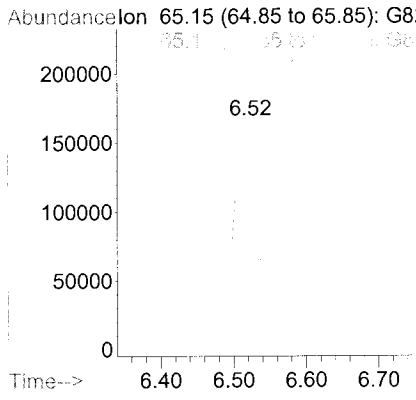


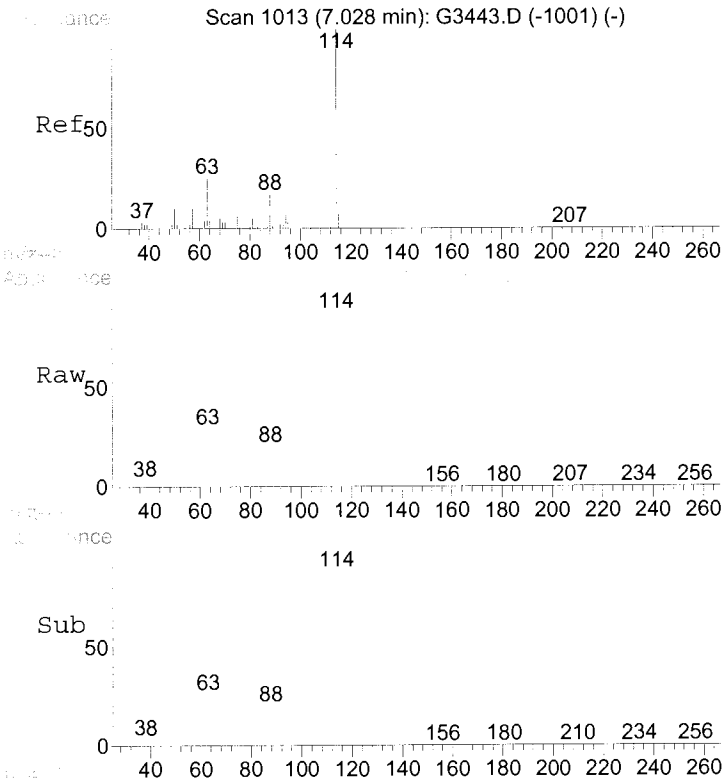


#30
1,2-Dichloroethane-d4
Concen: 49.51 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8285.D
Acq: 14 Nov 2015 2:45

Tgt Ion: 65 Resp: 378430

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.7	43.2	64.8

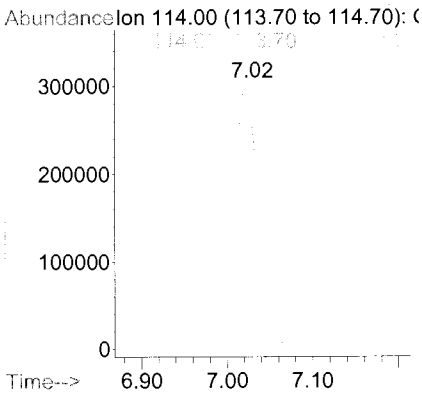


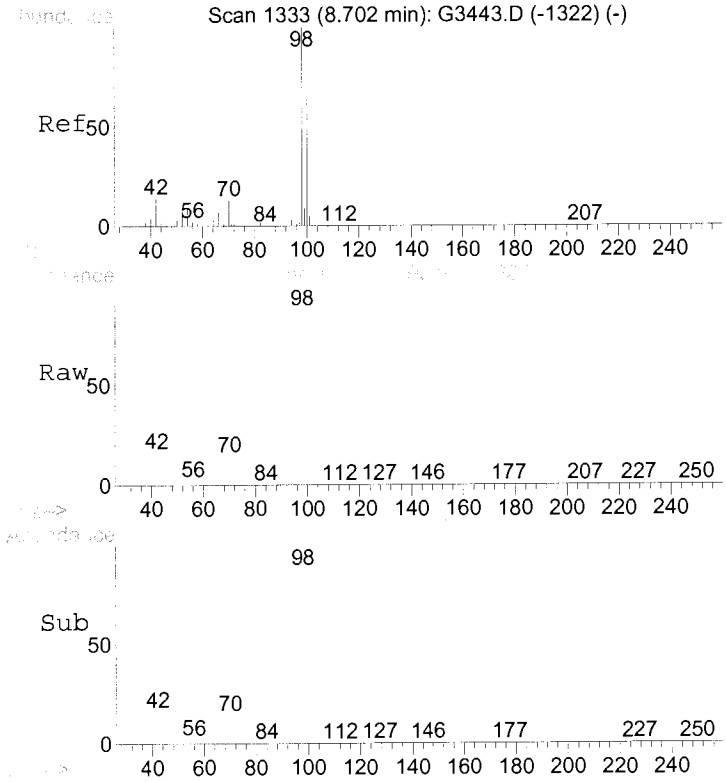


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8285.D
Acq: 14 Nov 2015 2:45

Tgt Ion:114 Resp: 635001

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

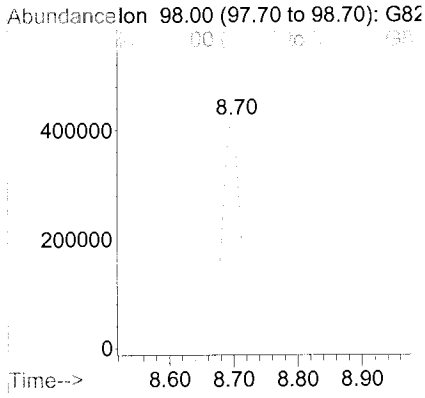


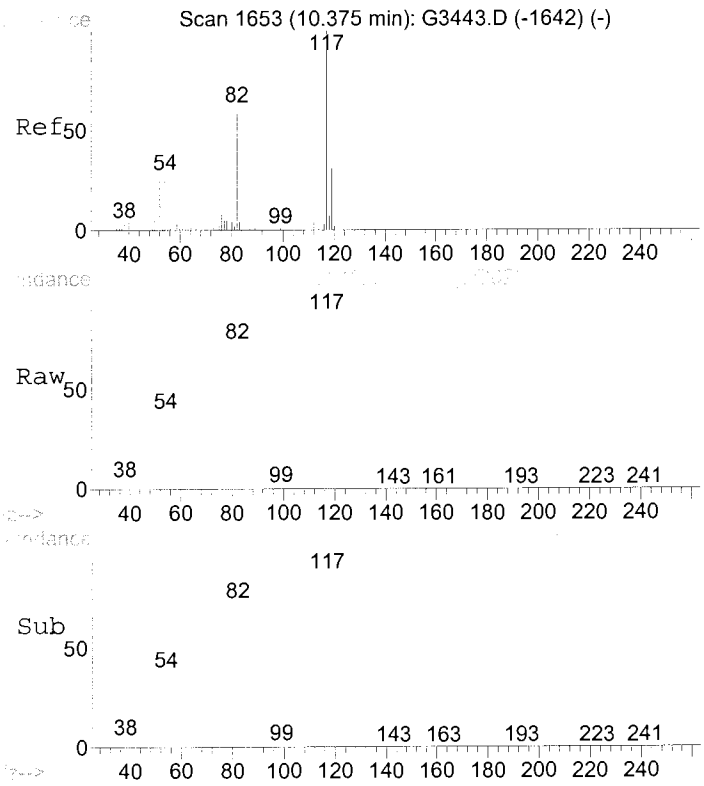


#41
Toluene-d8
Concen: 49.63 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8285.D
Acq: 14 Nov 2015 2:45

Tgt Ion: 98 Resp: 823246

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.4	53.4	80.0

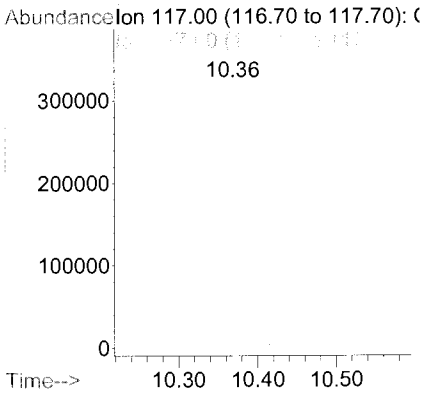


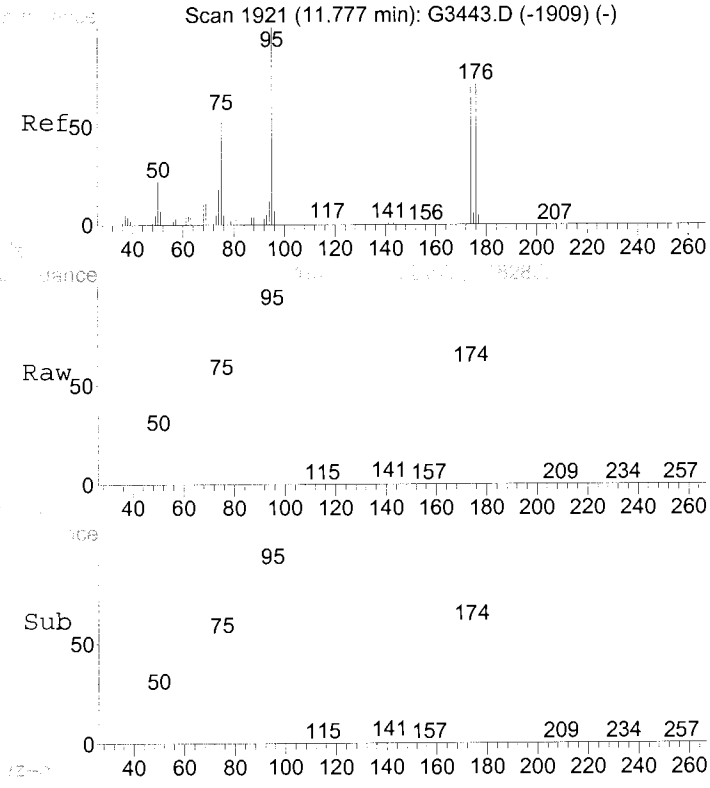


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8285.D
Acq: 14 Nov 2015 2:45

Tgt Ion:117 Resp: 625691

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

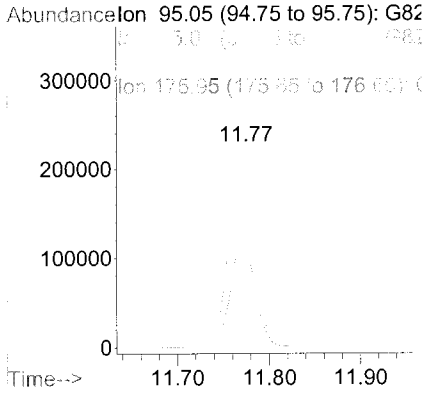




#59
Bromofluorobenzene
Concen: 49.50 UG
RT: 11.77 min Scan# 1920
Delta R.T. 0.00 min
Lab File: G8285.D
Acq: 14 Nov 2015 2:45

Tgt Ion: 95 Resp: 425794

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.6	62.9	94.3#
176	53.5	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8285.D
Acq On : 14 Nov 2015 2:45
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-017,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 31 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	839	854	884	rBV	537002	1257050	54.35%	11.937%
2	6.515	903	915	938	rBV	404569	934210	40.39%	8.871%
3	7.023	999	1012	1031	rBV	822813	1738960	75.18%	16.513%
4	8.696	1319	1332	1355	rBV	1166256	2307628	99.77%	21.913%
5	9.256	1428	1439	1451	rVB3	22648	56059	2.42%	0.532%
6	10.365	1640	1651	1676	rBV	1194593	2313003	100.00%	21.964%
7	11.772	1909	1920	1948	rBV	1005468	1866156	80.68%	17.721%
8	12.049	1963	1973	1979	rBV8	14217	32615	1.41%	0.310%
9	14.345	2404	2412	2423	rVB	11648	25156	1.09%	0.239%

Sum of corrected areas: 10530837

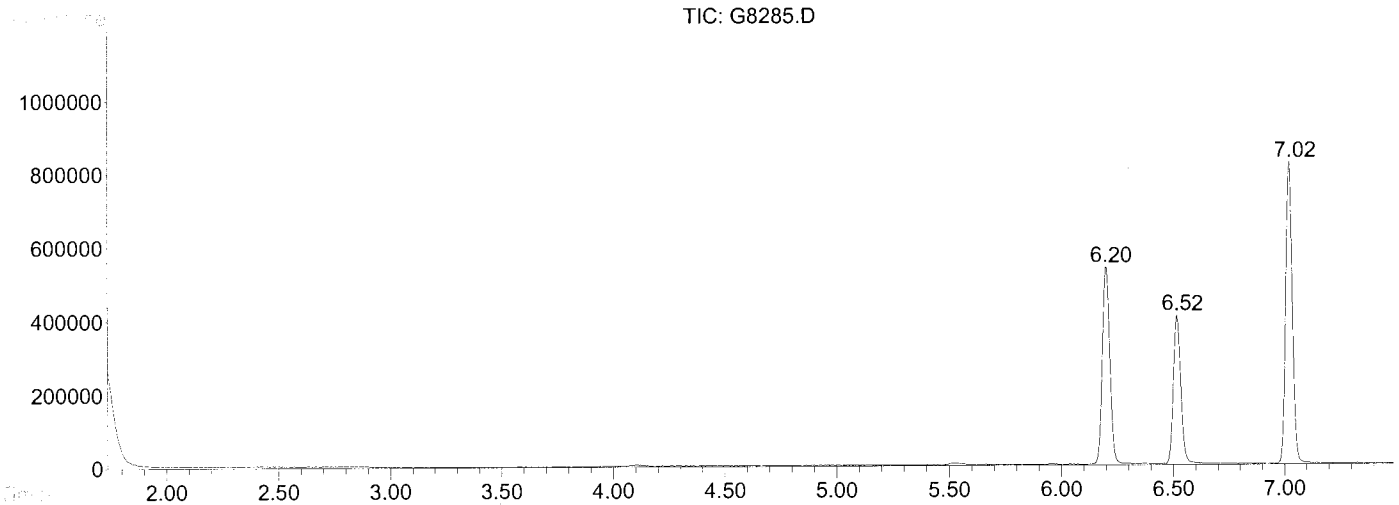
E15-10258

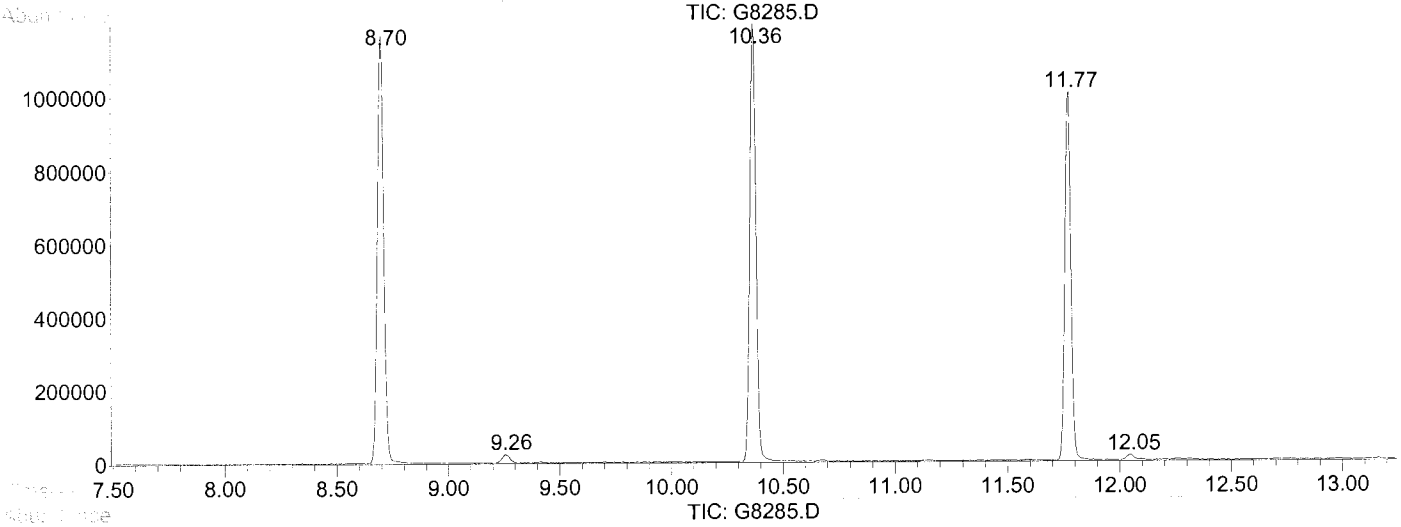
LSC Report - Integrated Chromatogram

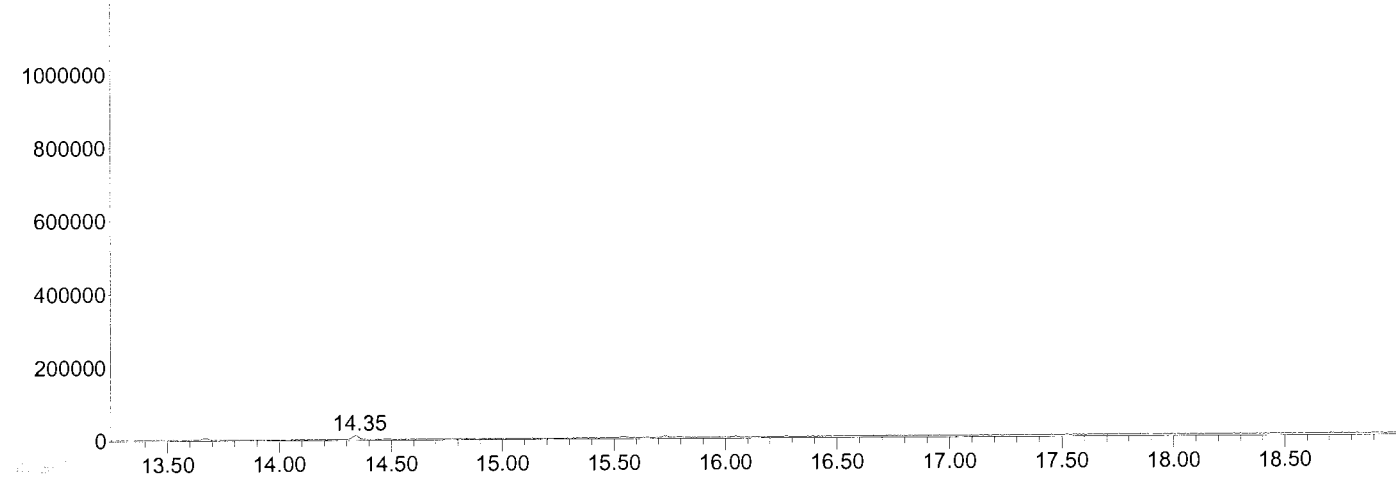
Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8285.D
Acq On : 14 Nov 2015 2:45
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-017,A,5mL,100
Misc : GEI/SIC,11/06/15,11/06/15,1
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8286.D
Acq On : 14 Nov 2015 3:13
Operator : Sylvia
Sample : FB-110315,E15-10258-018,A,5mL,100
Misc : GEI/SIC,11/03/15,11/06/15,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 14 14:24:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	492041	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	844358	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	831233	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	499933	47.15	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 94.30%			
41) Toluene-d8	8.70	98	1098995	49.83	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.66%			
59) Bromofluorobenzene	11.77	95	560552	49.05	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 98.10%			

Target Compounds	Qvalue

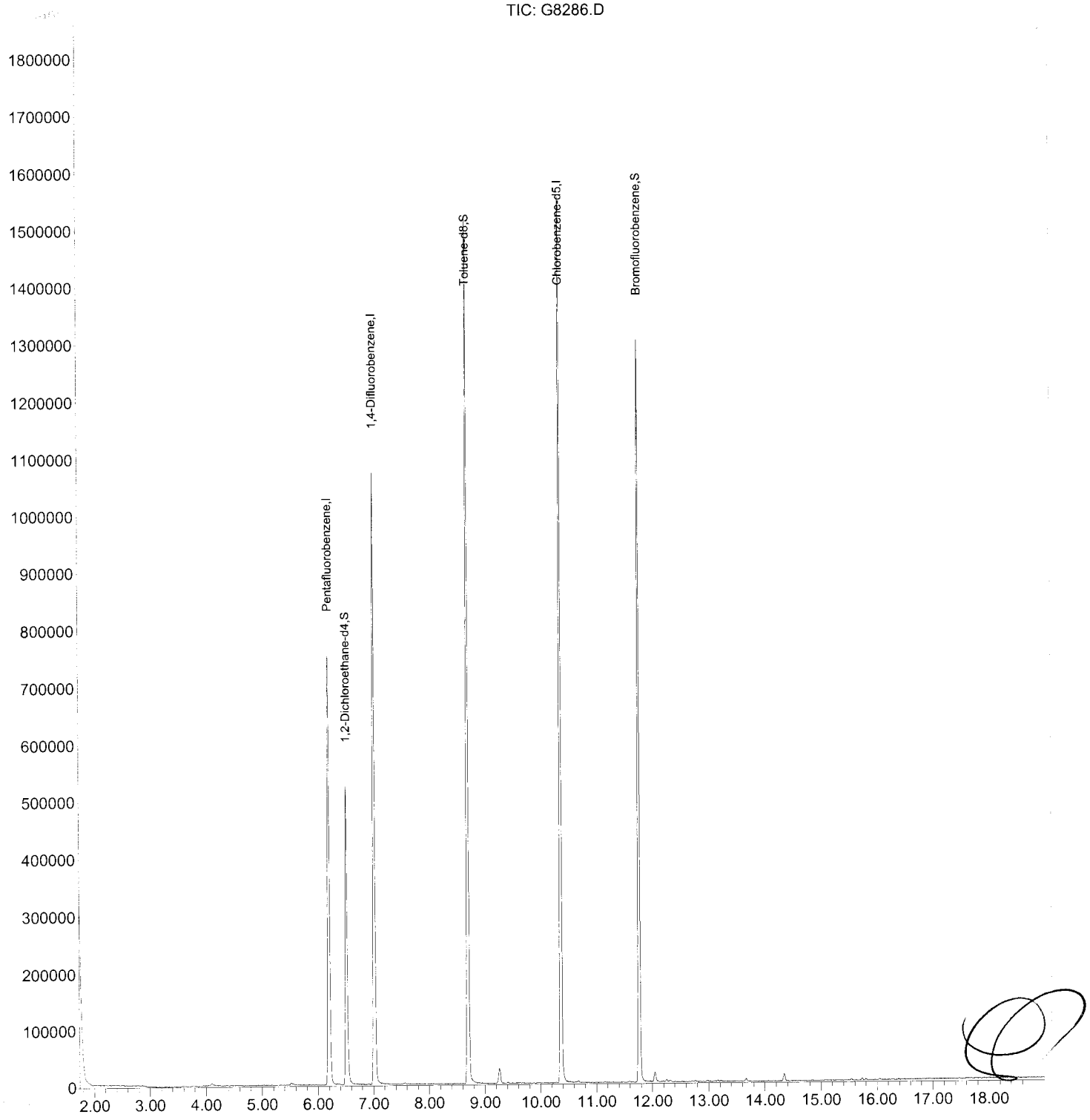
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

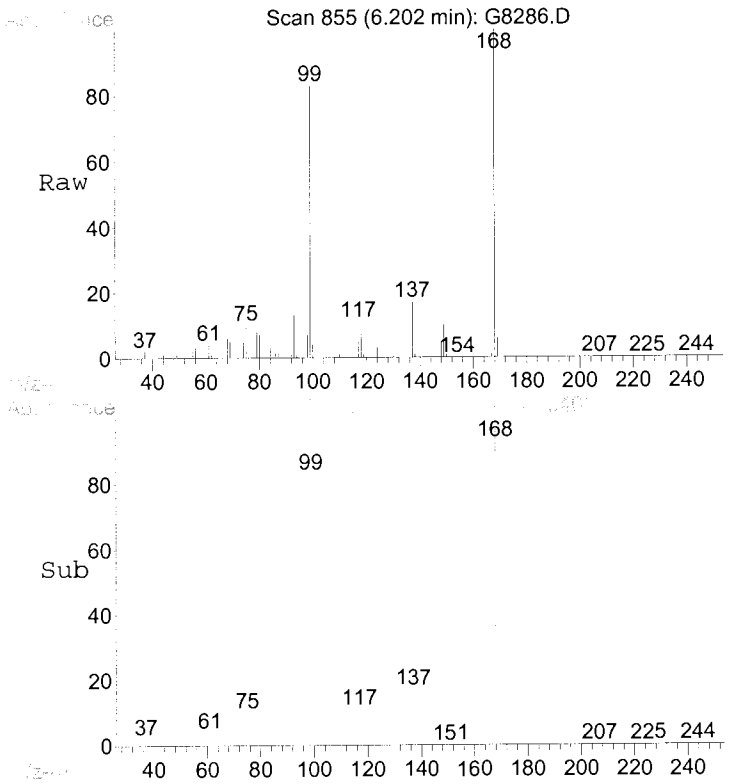
Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8286.D
Acq On : 14 Nov 2015 3:13
Operator : Sylvia
Sample : FB-110315,E15-10258-018,A,5mL,100
Misc : GEI/SIC,11/03/15,11/06/15,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 14 14:24:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

TIC: G8286.D



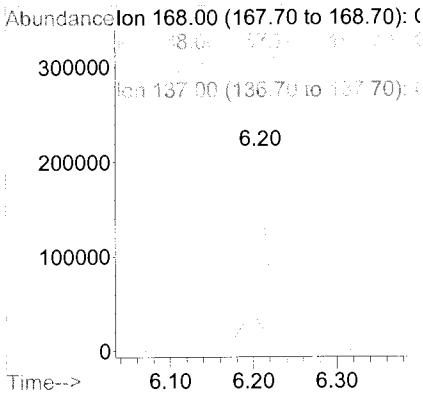
E15-10258 0241

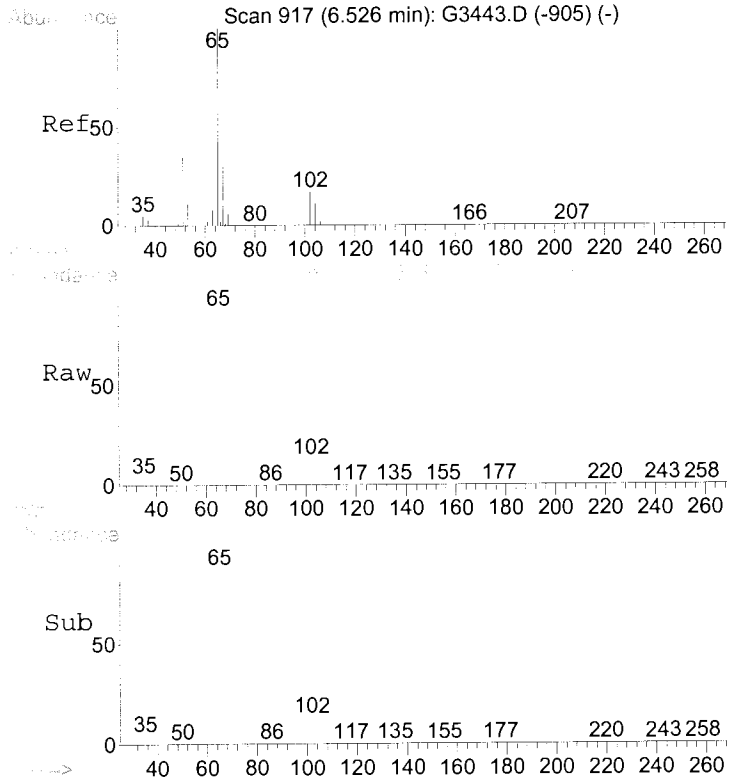


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8286.D
Acq: 14 Nov 2015 3:13

Tgt Ion:168 Resp: 492041

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	82.7	0.0	0.0#
137	16.9	0.0	0.0#

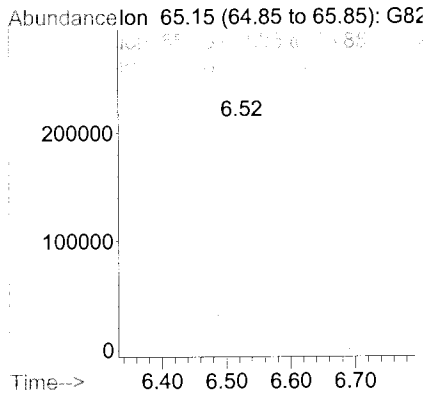


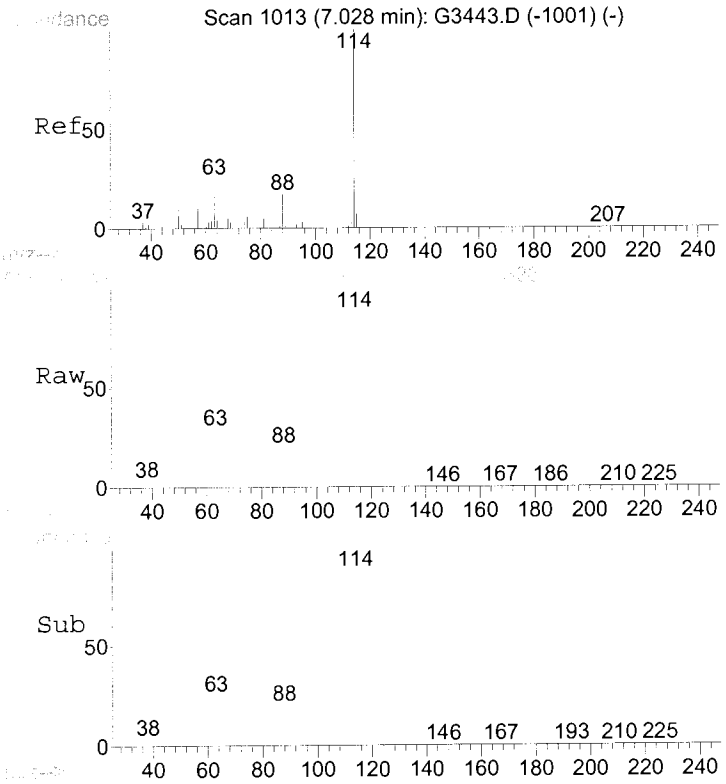


#30
1,2-Dichloroethane-d4
Concen: 47.15 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8286.D
Acq: 14 Nov 2015 3:13

Tgt Ion: 65 Resp: 499933

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	46.1	43.2	64.8

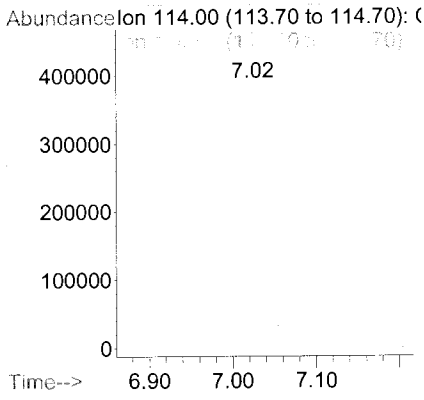


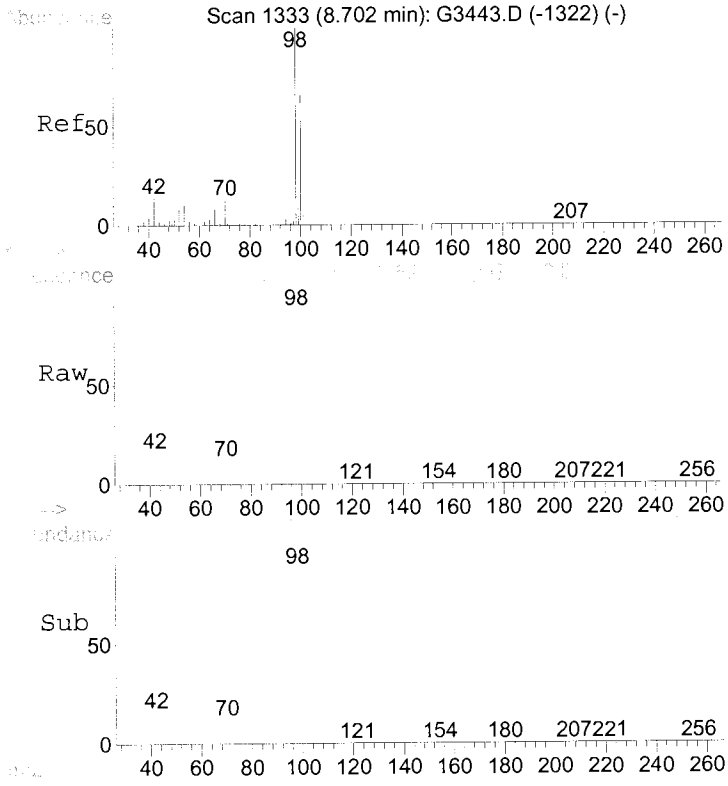


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. -0.00 min
Lab File: G8286.D
Acq: 14 Nov 2015 3:13

Tgt Ion:114 Resp: 844358

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

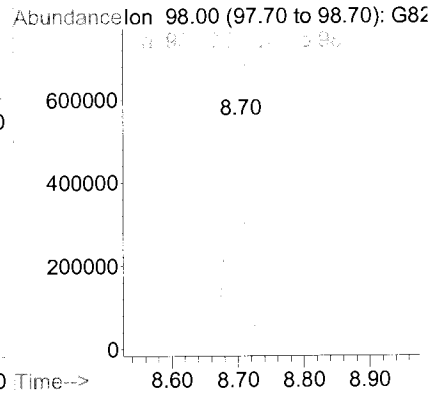


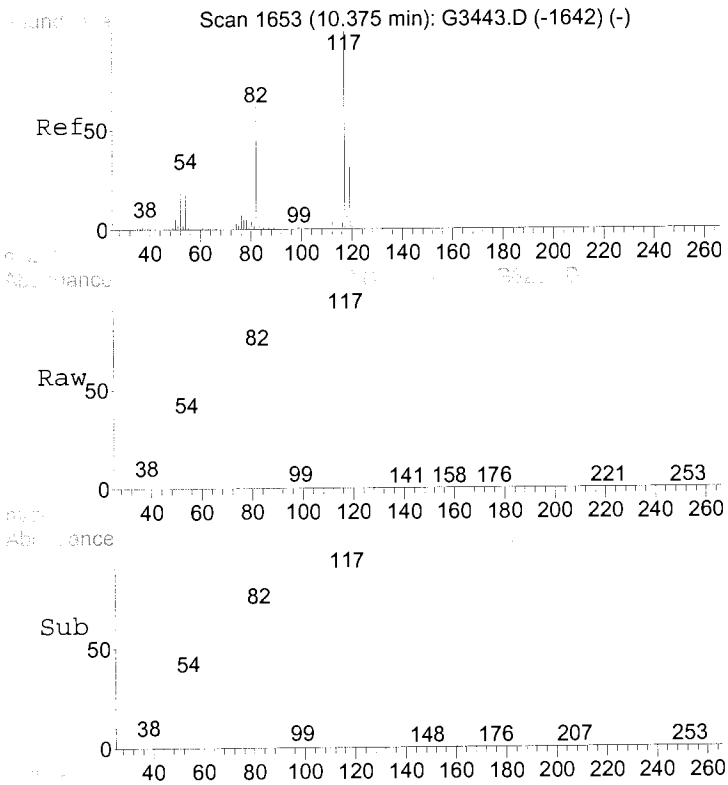


#41
Toluene-d8
Concen: 49.83 UG
RT: 8.70 min Scan# 1332
Delta R.T. -0.00 min
Lab File: G8286.D
Acq: 14 Nov 2015 3:13

Tgt Ion: 98 Resp: 1098995

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.1	53.4	80.0

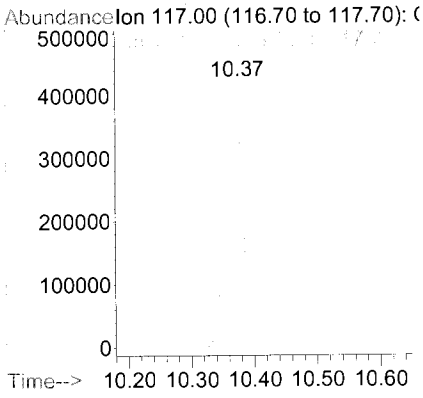


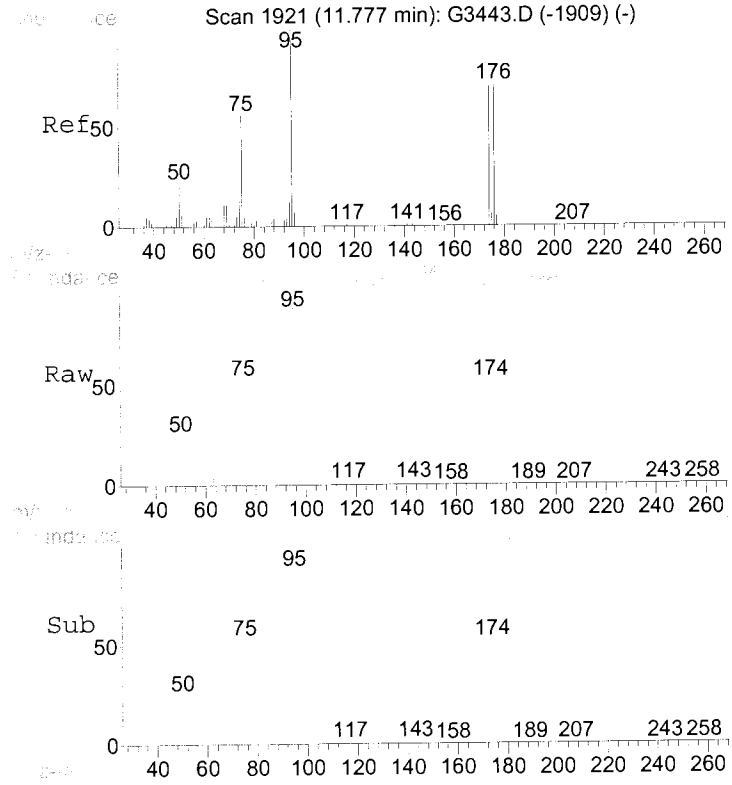


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.37 min Scan# 1652
Delta R.T. -0.00 min
Lab File: G8286.D
Acq: 14 Nov 2015 3:13

Tgt Ion:117 Resp: 831233

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

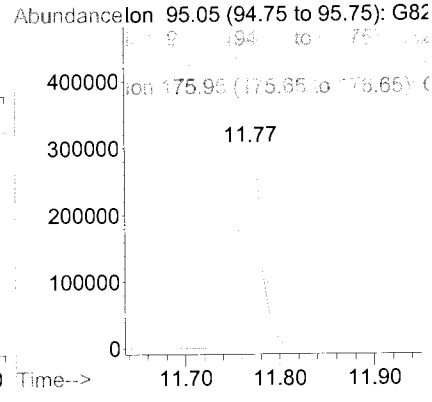




#59
Bromofluorobenzene
Concen: 49.05 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8286.D
Acq: 14 Nov 2015 3:13

Tgt Ion: 95 Resp: 560552

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.8	62.9	94.3#
176	53.5	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8286.D
Acq On : 14 Nov 2015 3:13
Operator : Sylvia
Sample : FB-110315,E15-10258-018,A,5mL,100
Misc : GEI/SIC,11/03/15,11/06/15,1
ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	839	854	880	rBV	751304	1732071	56.36%	12.357%
2	6.515	903	915	946	rBV	522651	1243137	40.45%	8.869%
3	7.017	999	1011	1034	rBV	1071444	2325442	75.67%	16.591%
4	8.696	1319	1332	1364	rBV	1518143	3073253	100.00%	21.926%
5	9.261	1427	1440	1451	rBV2	26905	71079	2.31%	0.507%
6	10.365	1641	1651	1689	rBV	1552924	3070162	99.90%	21.904%
7	11.772	1910	1920	1939	rBV	1300338	2453481	79.83%	17.504%
8	12.044	1964	1972	1991	rVB	17429	48034	1.56%	0.343%

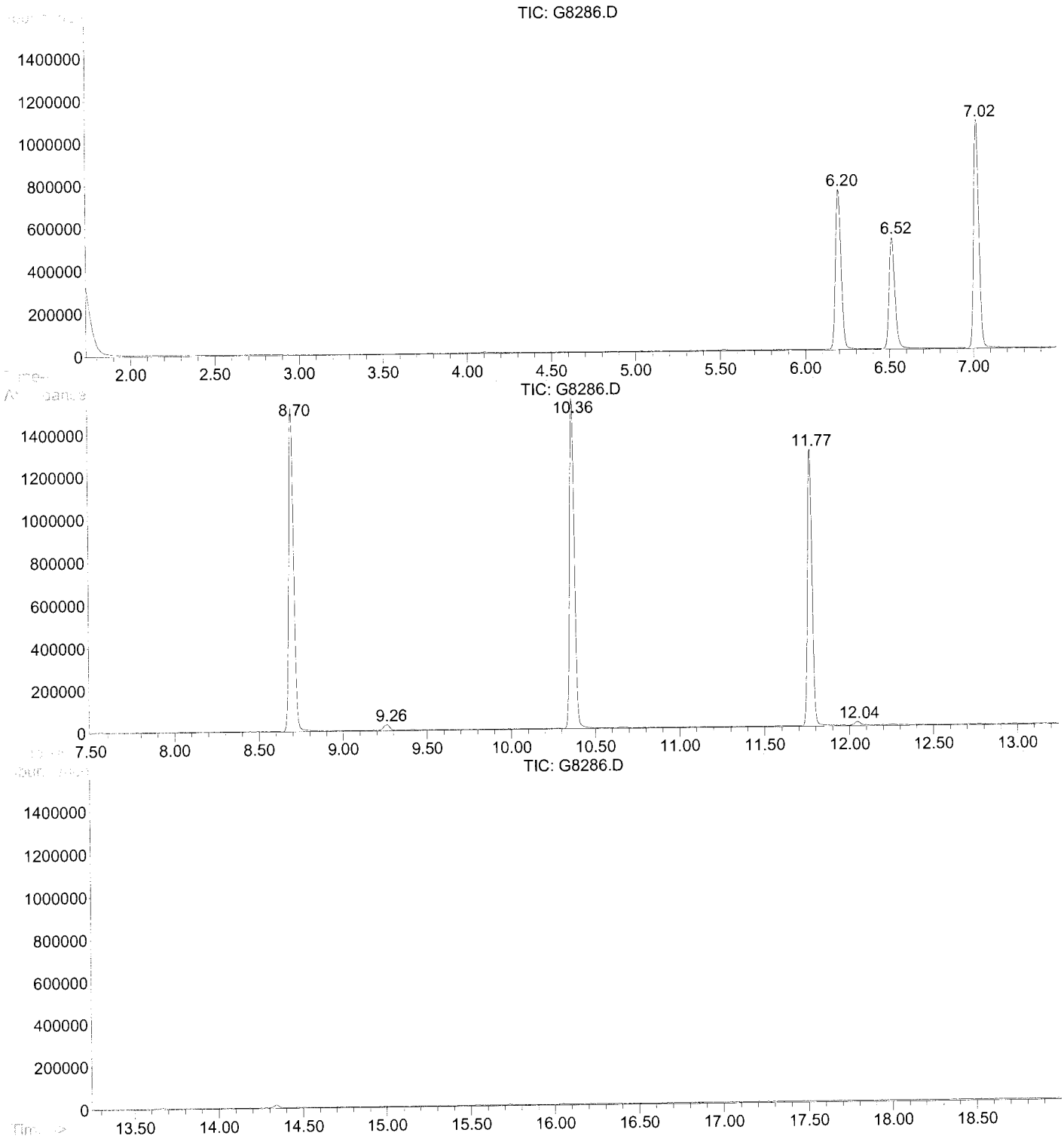
Sum of corrected areas: 14016659

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8286.D
Acq On : 14 Nov 2015 3:13
Operator : Sylvia
Sample : FB-110315,E15-10258-018,A,5mL,100
Misc : GEI/SIC,11/03/15,11/06/15,1
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8287.D
Acq On : 14 Nov 2015 3:42
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-019,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 14 14:24:31 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	287121	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	522205	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	522606	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	320016	51.72	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 103.44%			
41) Toluene-d8	8.70	98	674099	49.42	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.84%			
59) Bromofluorobenzene	11.77	95	355950	49.54	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 99.08%			

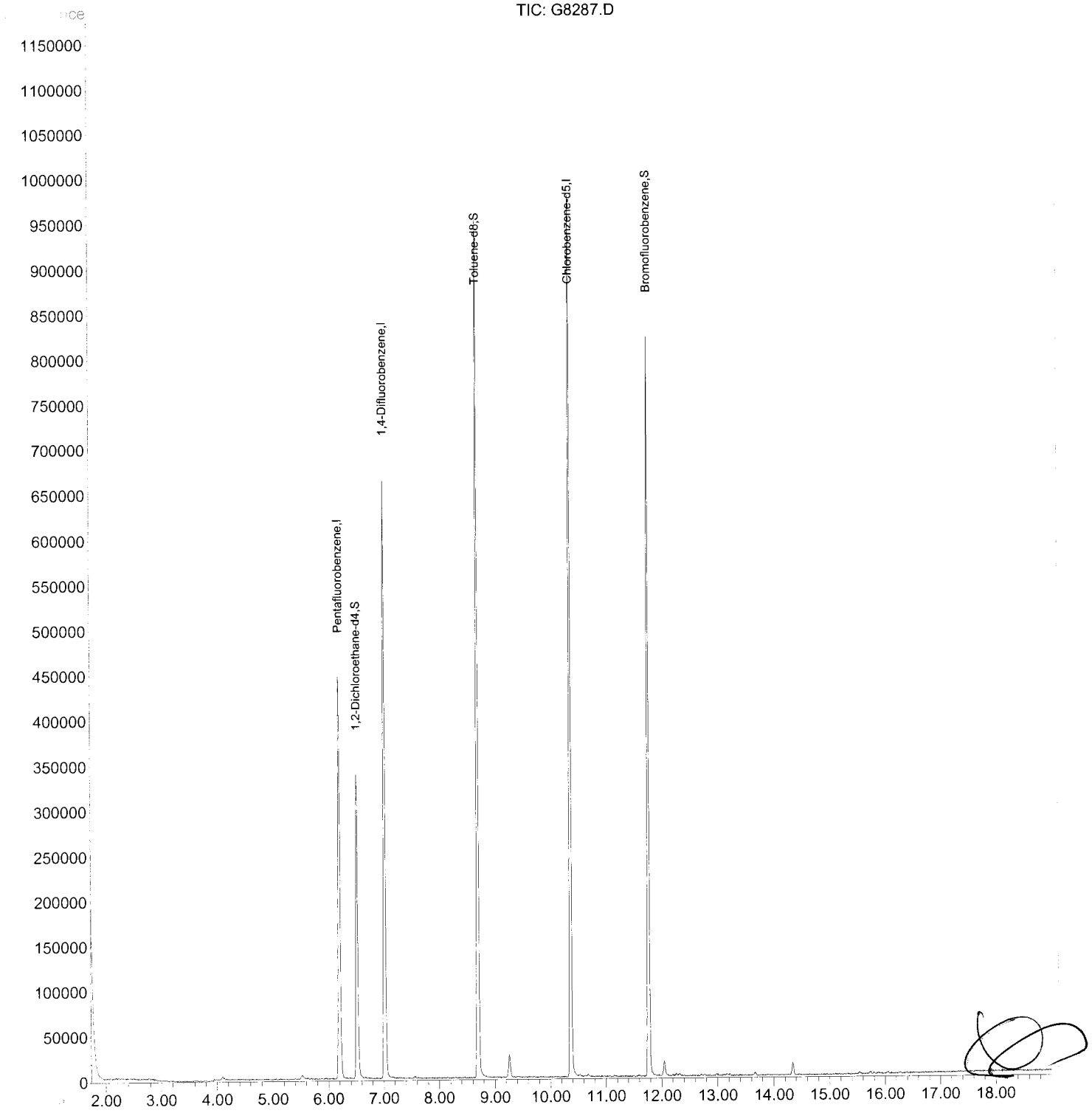
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

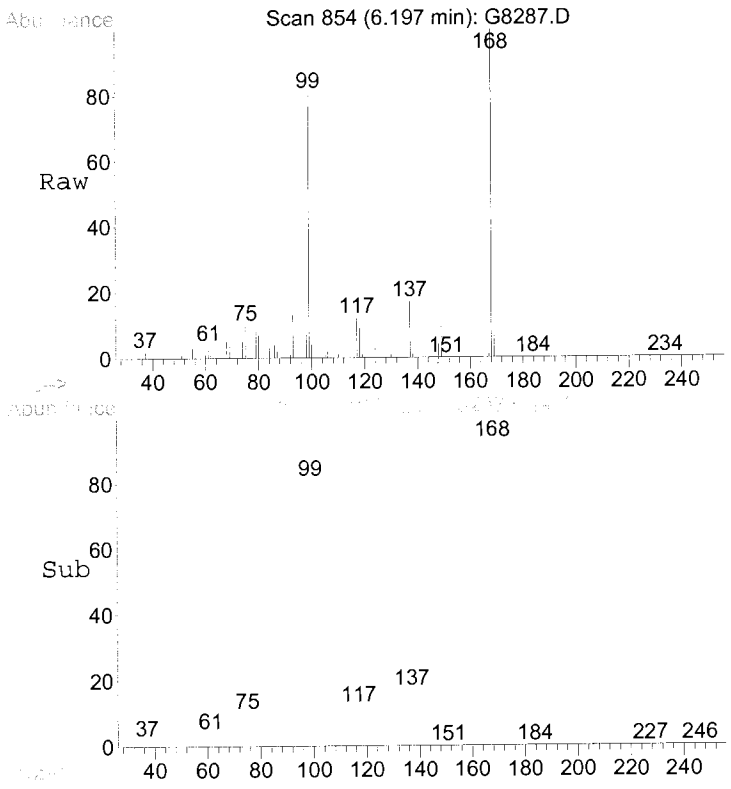
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8287.D
Acq On : 14 Nov 2015 3:42
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-019,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 33 Sample Multiplier: 1

Quant Time: Nov 14 14:24:31 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration



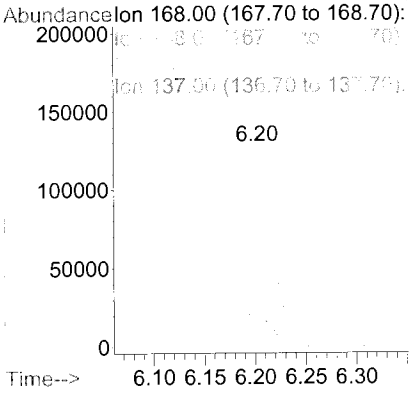
E15-10258 0248

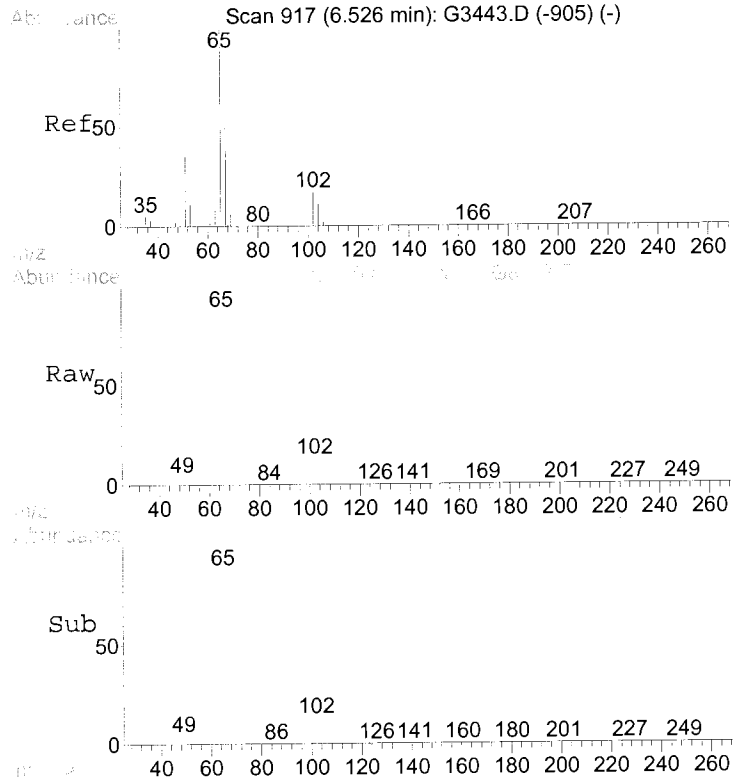


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 854
Delta R.T. 0.00 min
Lab File: G8287.D
Acq: 14 Nov 2015 3:42

Tgt Ion:168 Resp: 287121

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	0.0	0.0	0.0
137	0.0	0.0	0.0

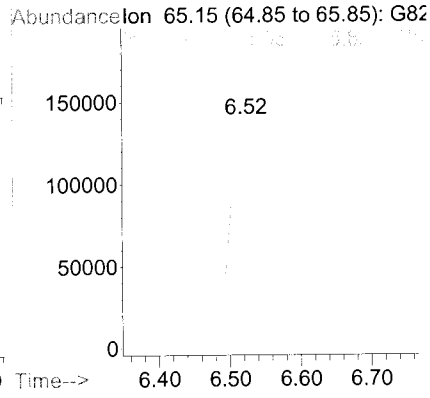


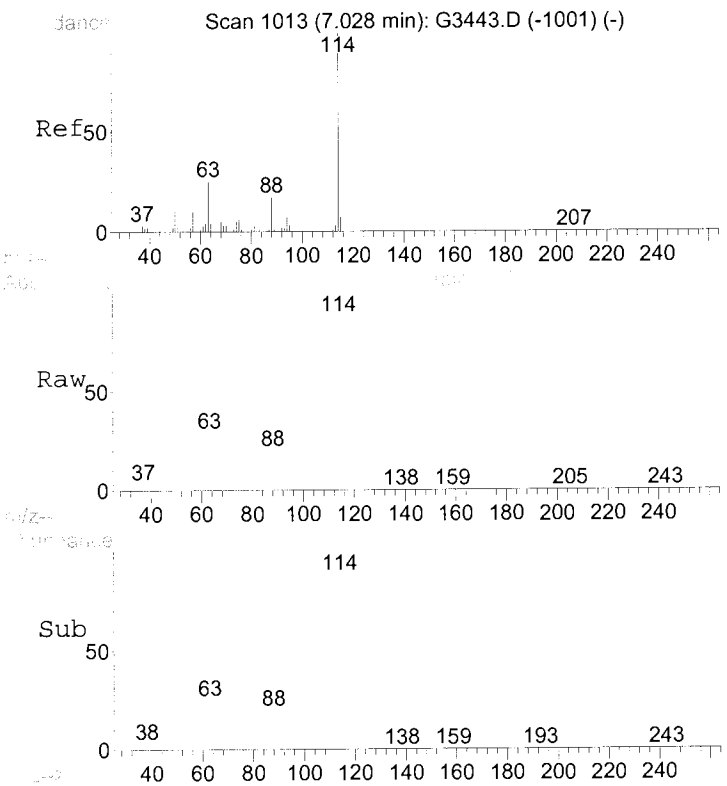


#30
1,2-Dichloroethane-d4
Concen: 51.72 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8287.D
Acq: 14 Nov 2015 3:42

Tgt Ion: 65 Resp: 320016

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.6	43.2	64.8

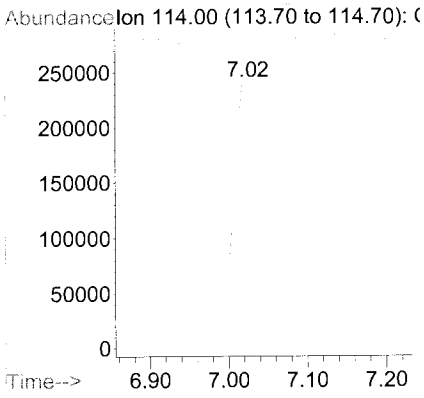


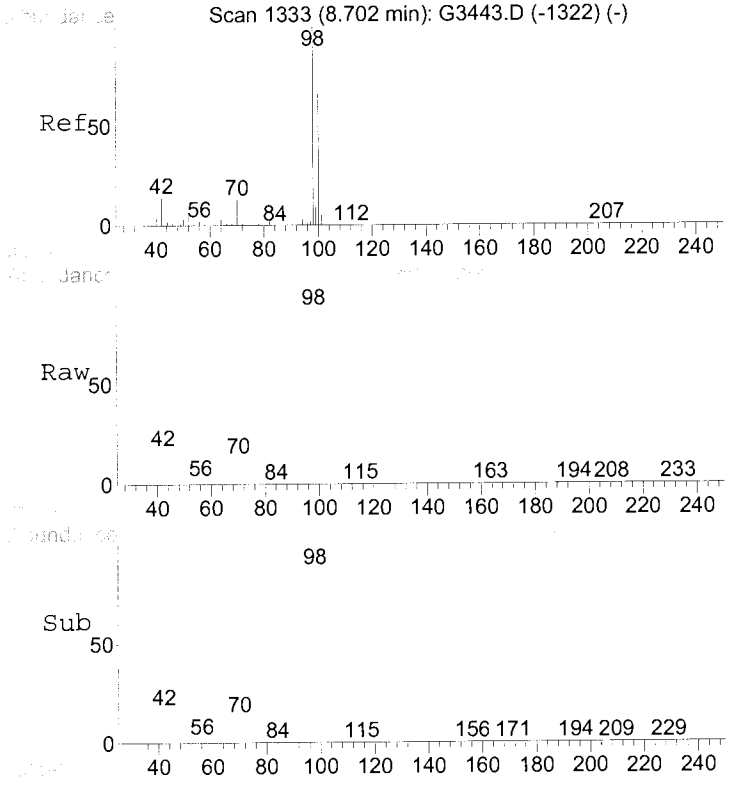


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. 0.00 min
Lab File: G8287.D
Acq: 14 Nov 2015 3:42

Tgt Ion:114 Resp: 522205

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

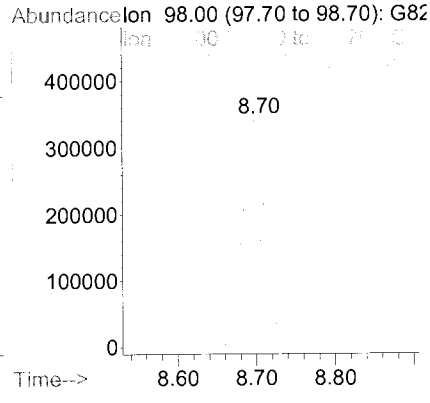


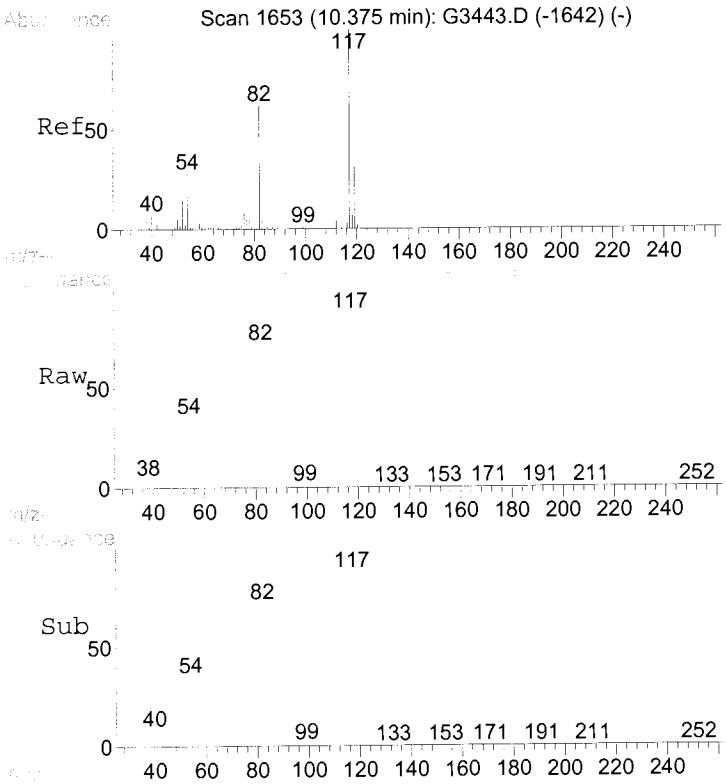


#41
Toluene-d8
Concen: 49.42 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8287.D
Acq: 14 Nov 2015 3:42

Tgt Ion: 98 Resp: 674099

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.9	53.4	80.0

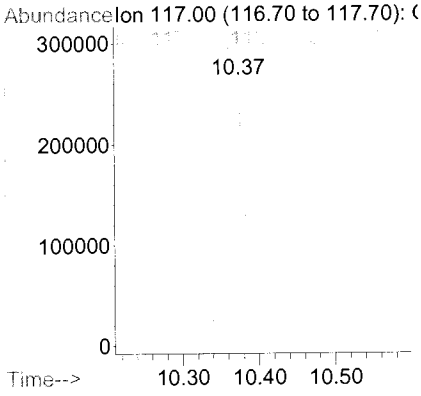


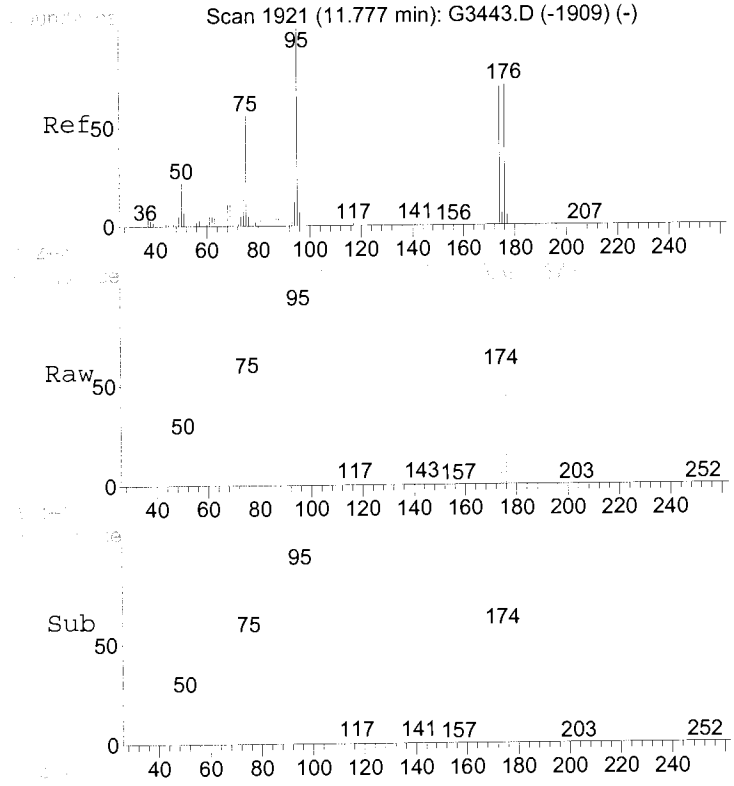


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.37 min Scan# 1652
Delta R.T. 0.00 min
Lab File: G8287.D
Acq: 14 Nov 2015 3:42

Tgt Ion:117 Resp: 522606

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

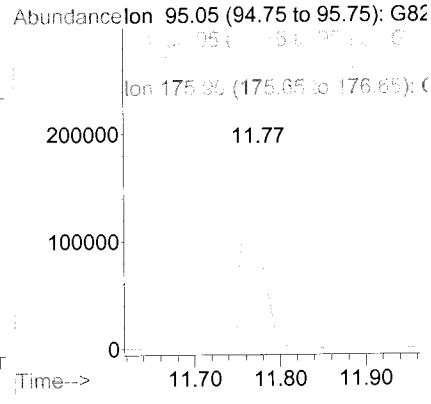


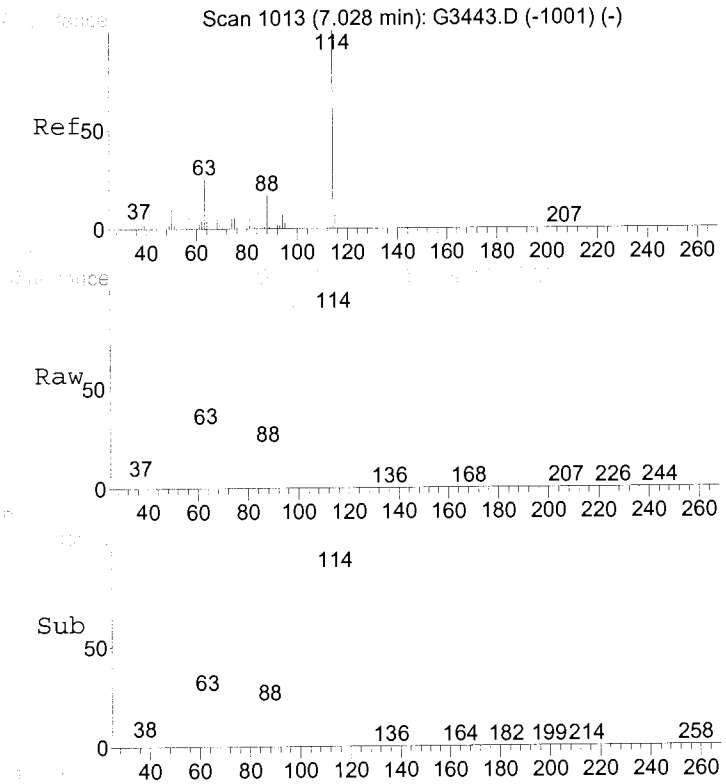


#59
Bromofluorobenzene
Concen: 49.54 UG
RT: 11.77 min Scan# 1920
Delta R.T. 0.00 min
Lab File: G8287.D
Acq: 14 Nov 2015 3:42

Tgt Ion: 95 Resp: 355950

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	56.0	62.9	94.3#
176	53.5	60.5	90.7#

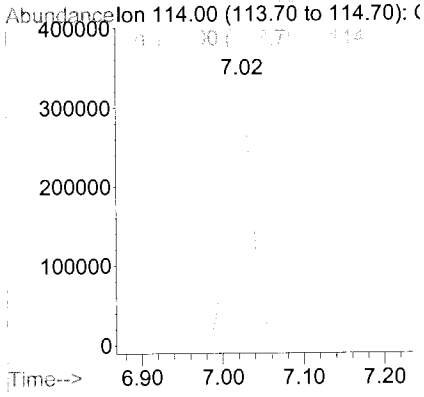


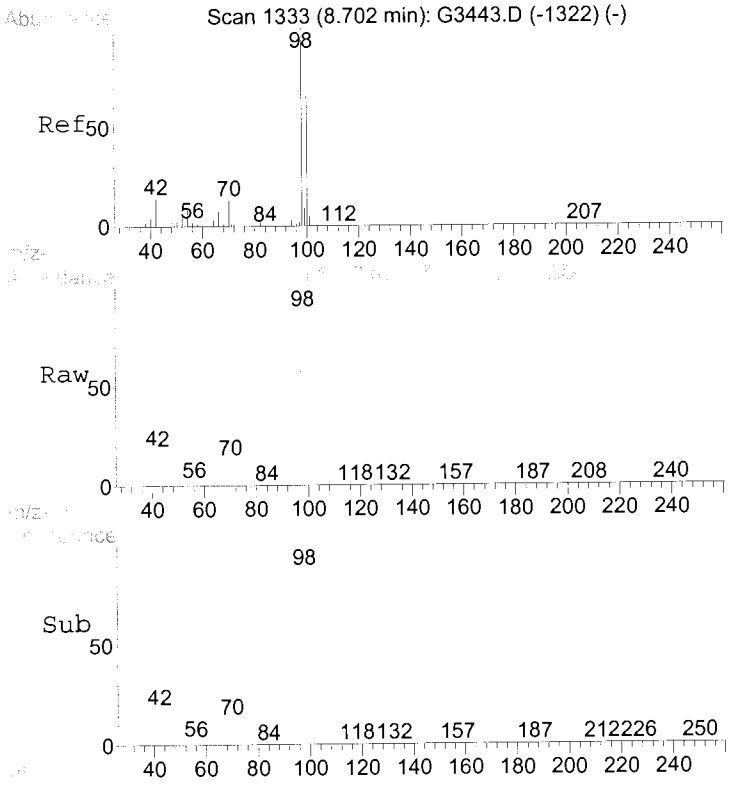


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1011
Delta R.T. 0.00 min
Lab File: G8292.D
Acq: 14 Nov 2015 6:03

Tgt Ion:114 Resp: 726783

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

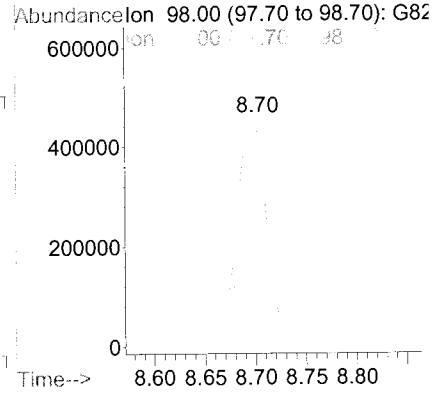


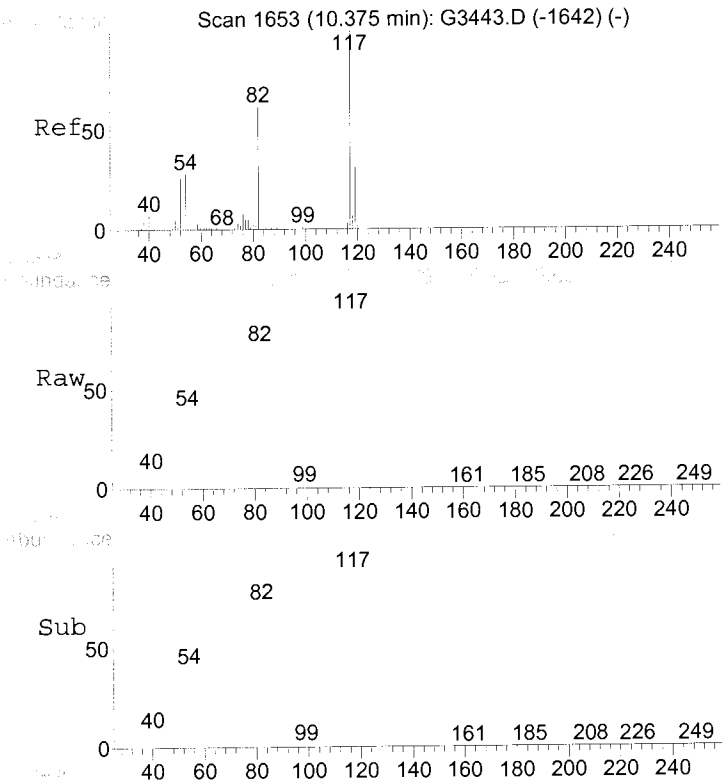


#41
Toluene-d8
Concen: 49.09 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8292.D
Acq: 14 Nov 2015 6:03

Tgt Ion: 98 Resp: 932040

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.8	53.4	80.0

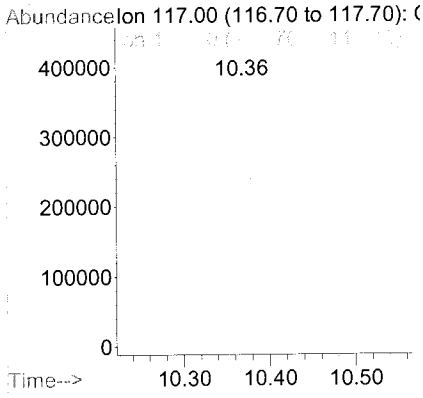


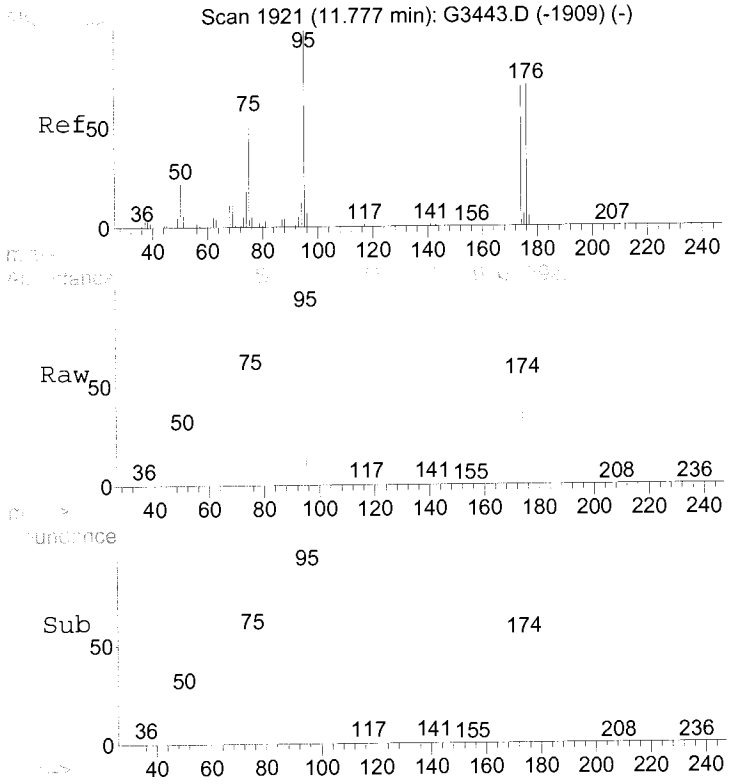


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8292.D
Acq: 14 Nov 2015 6:03

Tgt Ion:117 Resp: 716719

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

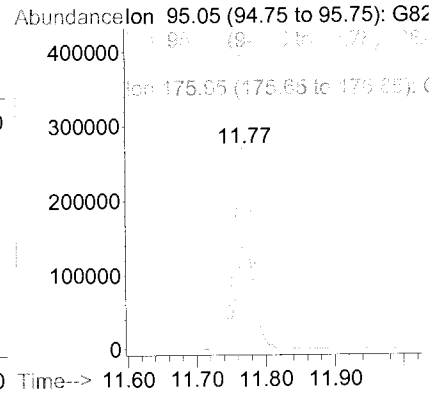


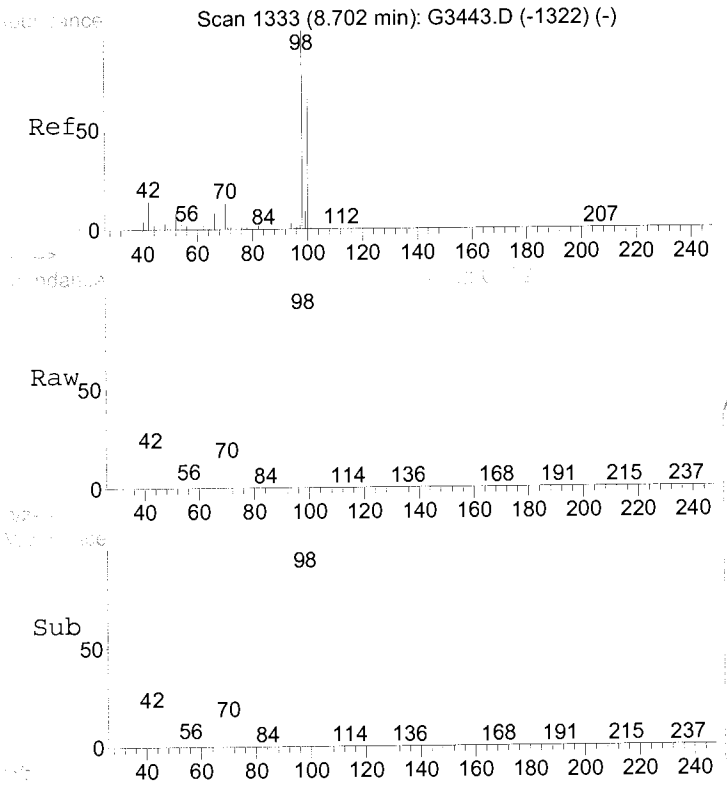


#59
Bromofluorobenzene
Concen: 51.14 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8292.D
Acq: 14 Nov 2015 6:03

Tgt Ion: 95 Resp: 503888

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.3	62.9	94.3#
176	52.1	60.5	90.7#

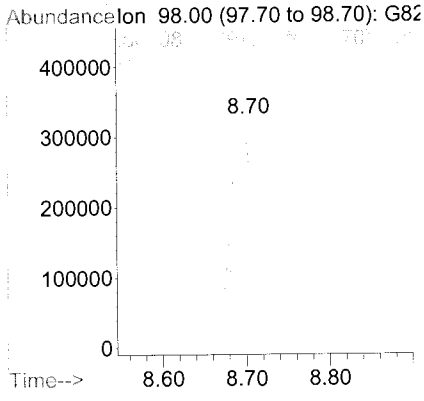


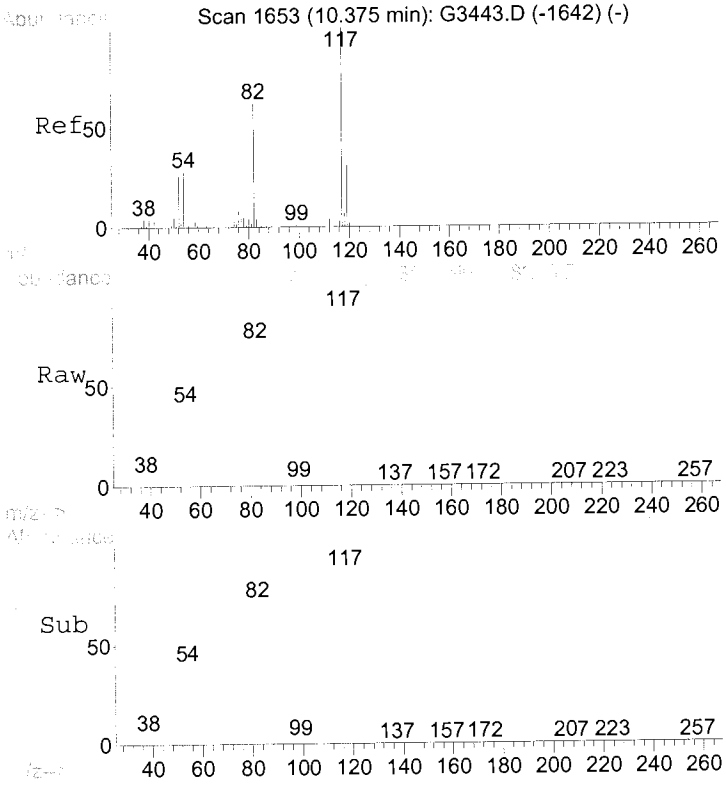


#41
Toluene-d8
Concen: 50.05 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8296.D
Acq: 14 Nov 2015 7:56

Tgt Ion: 98 Resp: 644957

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	58.9	53.4	80.0

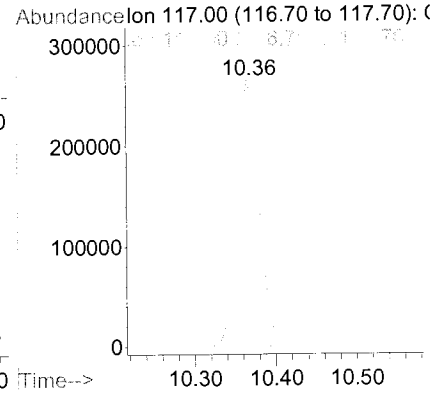


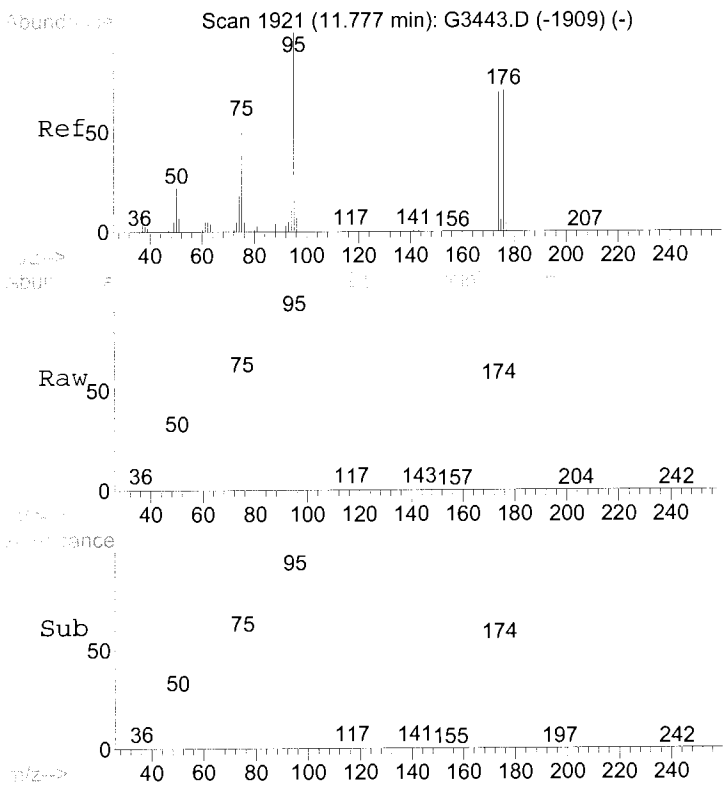


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.36 min Scan# 1651
Delta R.T. -0.01 min
Lab File: G8296.D
Acq: 14 Nov 2015 7:56

Tgt Ion:117 Resp: 499905

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

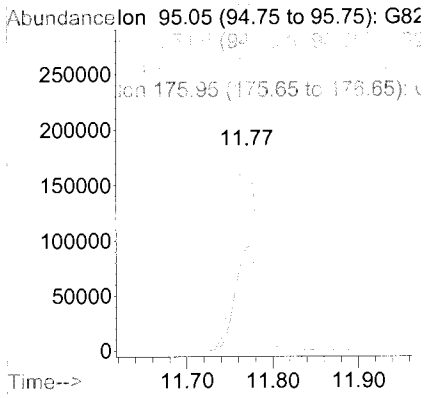




#59
Bromofluorobenzene
Concen: 50.72 UG
RT: 11.77 min Scan# 1919
Delta R.T. -0.01 min
Lab File: G8296.D
Acq: 14 Nov 2015 7:56

Tgt Ion: 95 Resp: 348618

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	54.7	62.9	94.3#
176	52.5	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8287.D
Acq On : 14 Nov 2015 3:42
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-019,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 33 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.197	841	854	876	rBV	445800	1013988	52.32%	11.531%
2	6.516	901	915	936	rBV	337387	794741	41.01%	9.038%
3	7.018	997	1011	1035	rBV	663334	1429360	73.76%	16.255%
4	8.697	1320	1332	1365	rBV	955647	1911569	98.64%	21.739%
5	9.256	1424	1439	1454	rBV2	25565	66398	3.43%	0.755%
6	10.365	1640	1651	1677	rBV	977636	1937930	100.00%	22.039%
7	11.772	1909	1920	1939	rBV	819998	1564580	80.73%	17.793%
8	12.044	1962	1972	1991	rBV7	16986	42773	2.21%	0.486%
9	14.340	2401	2411	2423	rBV	14240	31927	1.65%	0.363%

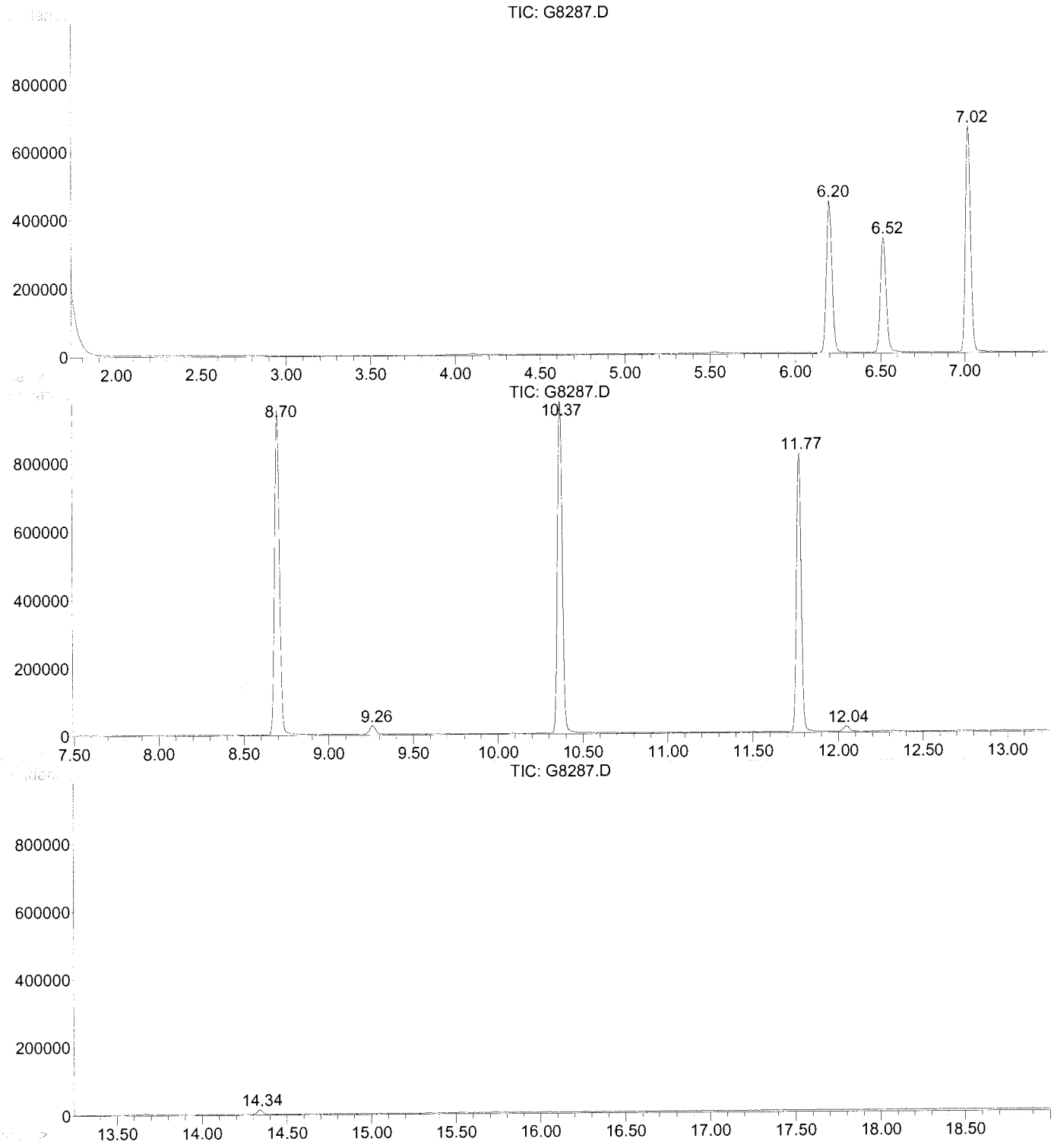
Sum of corrected areas: 8793266

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8287.D
Acq On : 14 Nov 2015 3:42
Operator : Sylvia
Sample : TRIP_BLANK,E15-10258-019,A,5mL,100
Misc : GEI/SIC,11/04/15,11/06/15,1
ALS Vial : 33 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P



VOLATILE ORGANICS STANDARDS

Response Factor Report MSD_G

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Sat Nov 14 10:01:02 2015
Response Via : Initial Calibration

Calibration Files
1 =G8256.D 2 =G8257.D 5 =G8258.D
20 =G8259.D 100 =G8260.D 150 =G8261.D 200 =G8262.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD								
2)	T	Dichlorodifluorom	0.386	0.419	0.407	0.437	0.478	0.454	0.405	0.427	7.43
3)	P	Chloromethane	0.405	0.408	0.366	0.381	0.429	0.411	0.416	0.402	5.38
4)	C	Vinyl chloride	0.343	0.327	0.355	0.381	0.403	0.405	0.409	0.375	8.90
5)	T	Bromomethane	0.277	0.229	0.234	0.233	0.238	0.231	0.222	0.238	7.65
6)	T	Chloroethane	0.238	0.217	0.230	0.241	0.252	0.246	0.244	0.238	4.92
7)	T	Trichlorofluorome	0.642	0.637	0.449	0.742	0.679	0.659	0.591	0.628	14.58
8)	T	Acrolein	0.048	0.049	0.050	0.056	0.043	0.042	0.044	0.047	10.24
9)	MC	1,1-Dichloroethen	0.440	0.455	0.441	0.496	0.471	0.463	0.474	0.463	4.27
10)	T	Acetone			0.516	0.603	0.528	0.498	0.515	0.532	7.72
11)	T	Carbon disulfide	1.360	1.360	1.332	1.528	1.501	1.501	1.564	1.449	6.56
12)	T	Vinyl acetate	2.466	2.700	2.727	3.184	2.463	2.442	2.415	2.628	10.51
13)	T	Methylene chlorid		0.609	0.502	0.625	0.606	0.597	0.611	0.592	7.57
14)	T	Acrylonitrile	0.416	0.366	0.404	0.434	0.423	0.407	0.443	0.413	6.05
15)	T	tert-Butyl alcoho		0.098	0.103	0.126	0.118	0.139	0.153	0.123	17.18
16)	T	trans-1,2-Dichlor	0.558	0.533	0.551	0.581	0.539	0.514	0.524	0.543	4.17
17)	T	Methyl tert-butyl	1.983	2.129	2.204	2.414	2.419	2.365	2.393	2.272	7.48
18)	P	1,1-Dichloroethan	1.168	1.191	1.204	1.313	1.297	1.278	1.322	1.253	5.09
19)	T	Diisopropyl ether	2.406	2.544	2.613	2.888	2.830	2.735	2.782	2.685	6.39
20)	T	cis-1,2-Dichloroe	0.628	0.664	0.666	0.689	0.658	0.639	0.646	0.656	3.11
21)	T	2,2-Dichloropropa	0.681	0.717	0.700	0.808	0.318	0.322	0.295	0.549	41.12#
22)	T	2-Butanone (MEK)	0.581	0.634	0.672	0.735	0.616	0.584	0.600	0.632	8.79
23)	T	Bromochloromethan	0.238	0.247	0.260	0.272	0.265	0.260	0.265	0.258	4.51
24)	T	Tetrahydrofuran								0.000	-1.00
25)	C	Chloroform	1.102	1.160	1.183	1.326	1.294	1.275	1.304	1.235	6.97
26)	T	1,1,1-Trichloroet	0.842	0.943	0.942	1.133	1.147	1.154	1.159	1.046	12.64
27)	T	Carbon tetrachlor	0.537	0.542	0.573	0.697	0.741	0.773	0.776	0.663	16.39
28)	T	1,1-Dichloroprope	0.849	0.927	0.859	0.950	0.852	0.827	0.834	0.871	5.48
29)	T	1,2-Dichloroethan	1.173	1.353	1.353	1.454	1.441	1.390	1.392	1.365	6.84
30)	S	1,2-Dichloroethan	1.034	1.038	1.062	1.070	1.102	1.105	1.132	1.077	3.41
31)	I	1,4-Difluorobenzene	ISTD								
32)	M	Benzene	1.378	1.416	1.369	1.459	1.277	1.211	1.198	1.330	7.66
33)	M	Trichloroethene	0.367	0.388	0.372	0.415	0.399	0.384	0.381	0.387	4.24
34)	C	1,2-Dichloropropa	0.355	0.373	0.377	0.412	0.371	0.353	0.344	0.369	6.06
35)	T	Dibromomethane	0.218	0.237	0.242	0.268	0.251	0.242	0.237	0.242	6.35
36)	T	1,4-Dioxane	0.002	0.003	0.003	0.003	0.004	0.003	0.004	0.003	17.87
37)	T	Bromodichlorometh	0.397	0.420	0.445	0.547	0.566	0.561	0.555	0.499	14.93
38)	T	2-Chloroethyl vin	0.146	0.174	0.184	0.229	0.265	0.260	0.171	0.204	22.97
39)	T	cis-1,3-Dichlorop	0.512	0.542	0.560	0.666	0.562	0.545	0.539	0.561	8.76
40)	T	4-Methyl-2-pentan	0.563	0.624	0.649	0.734	0.698	0.667	0.656	0.656	8.28
41)	S	Toluene-d8	1.306	1.286	1.303	1.312	1.312	1.308	1.316	1.306	0.76
42)	MC	Toluene	0.908	0.920	0.911	0.982	0.869	0.827	0.812	0.890	6.60
43)	T	trans-1,3-Dichlor	0.487	0.510	0.563	0.671	0.585	0.569	0.564	0.564	10.45
44)	T	1,1,2-Trichloroet	0.262	0.285	0.286	0.310	0.285	0.272	0.266	0.281	5.77
45)	T	Tetrachloroethene	0.287	0.314	0.301	0.318	0.253	0.237	0.231	0.277	13.18
46)	T	1,3-Dichloropropa	0.601	0.610	0.632	0.667	0.592	0.560	0.549	0.602	6.77
47)	T	2-Hexanone	0.439	0.495	0.545	0.617	0.531	0.504	0.499	0.518	10.57
48)	T	Dibromochlorometh	0.238	0.231	0.221	0.297	0.331	0.327	0.324	0.281	17.58
49)	T	1,2-Dibromoethane	0.293	0.333	0.333	0.362	0.344	0.329	0.325	0.331	6.29
50)	I	Chlorobenzene-d5	ISTD								
51)	MP	Chlorobenzene	0.856	0.877	0.871	0.934	0.827	0.787	0.774	0.847	6.56
52)	T	1,1,1,2-Tetrachlo	0.199	0.230	0.229	0.287	0.296	0.290	0.286	0.259	15.10
53)	C	Ethylbenzene	1.749	1.810	1.720	1.921	1.705	1.630	1.622	1.737	6.00

E15-10258 0259

Response Factor Report MSD_G

Method Path : C:\MSDCHEM\1\METHODS\
Method File : G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Sat Nov 14 10:01:02 2015
Response Via : Initial Calibration

Calibration Files
1 =G8256.D 2 =G8257.D 5 =G8258.D
20 =G8259.D 100 =G8260.D 150 =G8261.D 200 =G8262.D

		Compound	1	2	5	20	100	150	200	Avg	%RSD
54)	T	m,p-Xylene	0.612	0.629	0.600	0.641	0.518	0.488	0.482	0.567	12.08
55)	T	o-Xylene		0.611	0.602	0.657	0.534	0.501	0.489	0.566	11.94
56)	T	Styrene	0.891	0.952	0.973	1.088	0.909	0.861	0.854	0.933	8.72
57)	P	Bromoform	0.136	0.132	0.117	0.164	0.144	0.177	0.139	0.144	14.05
58)	T	Isopropylbenzene	1.444	1.570	1.502	1.657	1.442	1.385	1.368	1.481	6.99
59)	S	Bromofluorobenzen	0.674	0.682	0.678	0.693	0.699	0.696	0.690	0.687	1.36
60)	P	1,1,2,2-Tetrachlo	0.440	0.505	0.475	0.534	0.449	0.425	0.418	0.464	9.33
61)	T	Bromobenzene	0.313	0.350	0.329	0.354	0.304	0.287	0.277	0.316	9.36
62)	T	1,2,3-Trichloropr	0.476	0.544	0.528	0.574	0.519	0.497	0.485	0.517	6.72
63)	T	n-Propylbenzene	1.953	2.048	1.971	2.208	1.874	1.807	1.808	1.953	7.33
64)	T	2-Chlorotoluene	1.338	1.387	1.305	1.445	1.266	1.217	1.209	1.310	6.67
65)	T	1,3,5-Trimethylbe	1.301	1.377	1.293	1.419	1.188	1.131	1.110	1.260	9.49
66)	T	4-Chlorotoluene	1.338	1.387	1.305	1.445	1.266	1.217	1.209	1.310	6.67
67)	T	tert-Butylbenzene	1.050	1.041	0.989	1.091	0.943	0.913	0.883	0.987	7.84
68)	T	1,2,4-Trimethylbe	1.282	1.350	1.323	1.448	1.231	1.179	1.171	1.283	7.77
69)	T	sec-Butylbenzene	1.433	1.521	1.420	1.583	1.322	1.275	1.245	1.400	9.01
70)	T	1,3-Dichlorobenze	0.634	0.660	0.636	0.674	0.571	0.538	0.528	0.606	9.82
71)	T	4-Isopropyltoluen	1.108	1.178	1.090	1.227	1.012	0.961	0.952	1.075	9.83
72)	T	1,4-Dichlorobenze	0.648	0.658	0.614	0.670	0.569	0.534	0.521	0.602	10.11
73)	T	n-Butylbenzene	1.171	1.188	1.139	1.291	1.002	0.956	0.961	1.101	11.73
74)	T	1,2-Dichlorobenze	0.644	0.659	0.608	0.641	0.531	0.494	0.484	0.580	12.93
75)	T	1,2-Dibromo-3-chl	0.085	0.096	0.092	0.119	0.137	0.135	0.133	0.114	19.55
76)	T	1,2,4-Trichlorobe	0.364	0.386	0.358	0.385	0.335	0.315	0.310	0.351	8.86
77)	T	Hexachlorobutadie	0.152	0.127	0.125	0.141	0.113	0.107	0.104	0.124	14.41
78)	T	Naphthalene	1.100	1.100	1.068	1.160	1.099	1.048	1.032	1.087	3.90
79)	T	1,2,3-Trichlorobe	0.360	0.337	0.305	0.318	0.286	0.273	0.267	0.307	11.21
80)	T	1,1,2-Trichloro-1	0.249	0.245	0.241	0.265	0.213	0.211	0.191	0.231	11.32
81)	T	Methyl acetate	0.550	0.535	0.558	0.597	0.593	0.589	0.607	0.575	4.76
82)	T	Cyclohexane		0.712	0.664	0.747	0.628	0.625	0.571	0.658	9.72
83)	T	Methylcyclohexane	0.521	0.551	0.499	0.560	0.406	0.398	0.356	0.470	17.44
84)		Pentane								0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

E15-10258 0260

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8256.D
Acq On : 13 Nov 2015 13:01
Operator : Sylvia
Sample : ICC001,ICC001,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 14 08:51:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	501089	50.00	UG		-0.01
31) 1,4-Difluorobenzene	7.02	114	872511	50.00	UG		0.00
50) Chlorobenzene-d5	10.36	117	873221	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	518073	53.77	UG		-0.01
Spiked Amount 30.000	Range 69 - 166		Recovery = 179.23%#				
41) Toluene-d8	8.70	98	1139309	50.76	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 169.20%#				
59) Bromofluorobenzene	11.77	95	588667	52.82	UG		0.00
Spiked Amount 30.000	Range 66 - 120		Recovery = 176.07%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	3868m	0.60	UG		
3) Chloromethane	2.01	50	4061m	0.65	UG		
4) Vinyl chloride	2.14	62	3440	0.61	UG		99
5) Bromomethane	2.53	94	2779m	0.82	UG		
6) Chloroethane	2.65	64	2386m	0.65	UG		
7) Trichlorofluoromethane	2.96	101	6433m	0.87	UG		
8) Acrolein	3.40	56	9698m	25.96	UG		
9) 1,1-Dichloroethene	3.52	96	4409	1.04	UG	#	100
10) Acetone	3.59	43	4943	1.39	UG	#	92
11) Carbon disulfide	3.79	76	13631	0.90	UG		100
12) Vinyl acetate	5.03	43	24715	0.92	UG	#	100
13) Methylene chloride	4.10	84	5897	1.10	UG	#	68
14) Acrylonitrile	4.39	53	83392	27.55	UG	#	100
15) tert-Butyl alcohol (TBA)	4.28	59	1778m	2.20	UG		
16) trans-1,2-Dichloroethene	4.44	96	5588	1.08	UG	#	98
17) Methyl tert-butyl ether (M	4.46	73	19874	1.04	UG		100
18) 1,1-Dichloroethane	4.93	63	11706	1.01	UG	#	87
19) Diisopropyl ether (DIPE)	5.04	45	24115	1.00	UG		99
20) cis-1,2-Dichloroethene	5.60	96	6290	1.15	UG	#	100
21) 2,2-Dichloropropane	5.59	77	6828	1.01	UG	#	94
22) 2-Butanone (MEK)	5.62	43	5822	1.20	UG	#	92
23) Bromochloromethane	5.86	128	2388	0.99	UG	#	98
25) Chloroform	5.96	83	11040	0.97	UG		99
26) 1,1,1-Trichloroethane	6.18	97	8441	0.85	UG	#	1
27) Carbon tetrachloride	6.37	117	5377	0.70	UG		98
28) 1,1-Dichloropropene	6.37	75	8512	0.95	UG	#	81
29) 1,2-Dichloroethane (EDC)	6.60	62	11755	0.98	UG	#	100
32) Benzene	6.59	78	24044	1.00	UG		99
33) Trichloroethene	7.32	95	6399	0.99	UG	#	87
34) 1,2-Dichloropropane	7.56	63	6203	0.93	UG		100
35) Dibromomethane	7.69	93	3797	0.98	UG	#	91
36) 1,4-Dioxane	7.71	88	8041	152.82	UG	#	100
37) Bromodichloromethane	7.86	83	6925	0.76	UG		98
38) 2-Chloroethyl vinyl ether	8.21	63	2548m	1.06	UG		
39) cis-1,3-Dichloropropene	8.37	75	8928	0.90	UG	#	98
40) 4-Methyl-2-pentanone (MIBK	8.55	43	9825	1.13	UG		97
42) Toluene	8.77	92	15849	1.04	UG		98
43) trans-1,3-Dichloropropene	9.01	75	8494m	0.85	UG		
44) 1,1,2-Trichloroethane	9.22	83	4567	0.98	UG		97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8256.D
Acq On : 13 Nov 2015 13:01
Operator : Sylvia
Sample : ICC001,ICC001,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 14 08:51:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Tetrachloroethene	9.41	166	5009	0.90	UG	#	98
46) 1,3-Dichloropropane	9.41	76	10484	1.02	UG		100
47) 2-Hexanone	9.51	43	7662	1.14	UG	#	94
48) Dibromochloromethane	9.68	129	4150m	0.75	UG		
49) 1,2-Dibromoethane (EDB)	9.81	107	5116	0.95	UG		99
51) Chlorobenzene	10.40	112	14957	0.87	UG	#	98
52) 1,1,1,2-Tetrachloroethane	10.50	131	3473	0.60	UG	#	97
53) Ethylbenzene	10.54	91	30539m	0.97	UG		
54) m,p-Xylene	10.67	106	21386	1.84	UG	#	82
55) o-Xylene	11.15	106	10119	0.93	UG	#	11
56) Styrene	11.16	104	15558	0.87	UG	#	100
57) Bromoform	11.37	173	2367m	0.70	UG		
58) Isopropylbenzene	11.59	105	25211	0.88	UG		99
60) 1,1,2,2-Tetrachloroethane	11.93	83	7691	0.97	UG	#	69
61) Bromobenzene	11.95	156	5464	0.78	UG	#	51
62) 1,2,3-Trichloropropane	11.99	75	8307	0.93	UG	#	1
63) n-Propylbenzene	12.10	91	34102	0.91	UG		99
64) 2-Chlorotoluene	12.20	91	23375	0.94	UG		98
65) 1,3,5-Trimethylbenzene	12.31	105	22716	0.87	UG		97
66) 4-Chlorotoluene	12.20	91	23375	0.94	UG		98
67) tert-Butylbenzene	12.71	119	18345	0.95	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	22397	0.83	UG		97
69) sec-Butylbenzene	12.99	105	25019	0.86	UG		100
70) 1,3-Dichlorobenzene	13.11	146	11073	0.86	UG	#	100
71) 4-Isopropyltoluene	13.16	119	19346	0.88	UG	#	90
72) 1,4-Dichlorobenzene	13.22	146	11317	0.87	UG		99
73) n-Butylbenzene	13.67	91	20454	1.00	UG	#	89
74) 1,2-Dichlorobenzene	13.68	146	11247	0.90	UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.61	75	1483	0.88	UG	#	48
76) 1,2,4-Trichlorobenzene	15.54	180	6356	0.86	UG		96
77) Hexachlorobutadiene	15.73	225	2658	0.82	UG		100
78) Naphthalene	15.79	128	19216	1.22	UG		100
79) 1,2,3-Trichlorobenzene	16.05	180	6295	1.00	UG		94
80) 1,1,2-Trichloro-1,2,2-trif	3.60	101	4354m	1.02	UG		
81) Methyl acetate	4.00	43	9602	1.24	UG	#	72
82) Cyclohexane	6.25	56	11493	0.93	UG	#	72
83) Methylcyclohexane	7.57	83	9094	1.09	UG	#	46

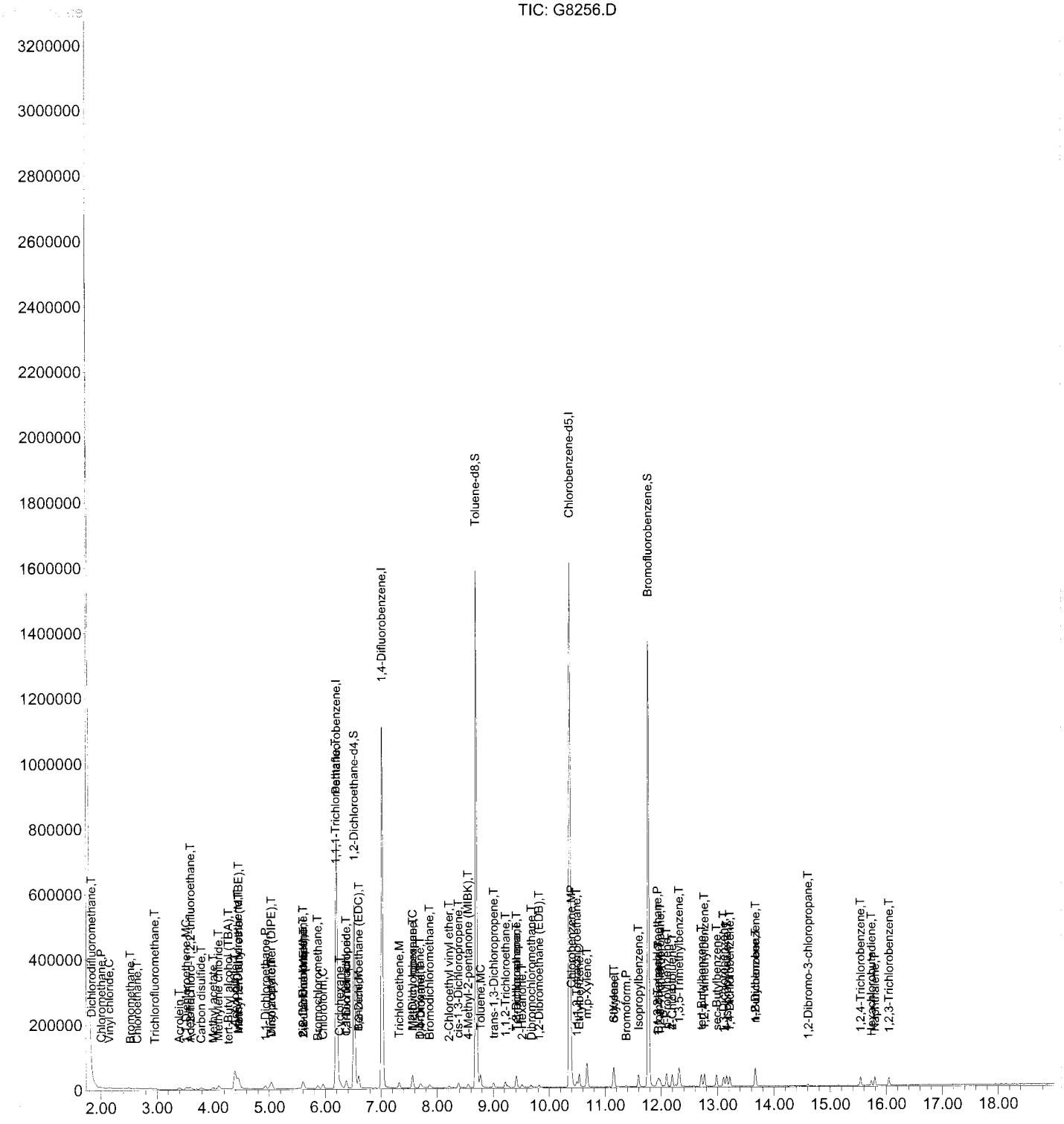
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8256.D
Acq On : 13 Nov 2015 13:01
Operator : Sylvia
Sample : ICC001,ICC001,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 14 08:51:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

TIC: G8256.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8257.D
Acq On : 13 Nov 2015 13:30
Operator : Sylvia
Sample : ICC002,ICC002,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 14 08:51:49 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	511326	50.00	UG		-0.01
31) 1,4-Difluorobenzene	7.02	114	892157	50.00	UG		0.00
50) Chlorobenzene-d5	10.37	117	883044	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	530522	53.96	UG		-0.01
Spiked Amount 30.000	Range 69 - 166		Recovery = 179.87%#				
41) Toluene-d8	8.70	98	1147391	49.99	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 166.63%#				
59) Bromofluorobenzene	11.77	95	601947	53.41	UG		0.00
Spiked Amount 30.000	Range 66 - 120		Recovery = 178.03%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.83	85	8578	1.31	UG	#	93
3) Chloromethane	2.00	50	8355	1.31	UG		100
4) Vinyl chloride	2.15	62	6681	1.17	UG		99
5) Bromomethane	2.50	94	4689	1.36	UG		97
6) Chloroethane	2.65	64	4432	1.18	UG	#	100
7) Trichlorofluoromethane	2.96	101	13026m	1.72	UG		
8) Acrolein	3.39	56	24966	65.48	UG	#	100
9) 1,1-Dichloroethene	3.52	96	9316	2.15	UG	#	100
10) Acetone	3.58	43	11756	3.24	UG		98
11) Carbon disulfide	3.78	76	27819	1.80	UG		100
12) Vinyl acetate	5.00	43	55225	2.02	UG	#	100
13) Methylene chloride	4.10	84	12451	2.27	UG	#	68
14) Acrylonitrile	4.39	53	187357	60.66	UG	#	100
15) tert-Butyl alcohol (TBA)	4.27	59	4006	4.86	UG	#	100
16) trans-1,2-Dichloroethene	4.44	96	10897	2.07	UG	#	99
17) Methyl tert-butyl ether (M	4.45	73	43554	2.23	UG		100
18) 1,1-Dichloroethane	4.93	63	24355	2.07	UG		99
19) Diisopropyl ether (DIPE)	5.04	45	52033	2.12	UG	#	48
20) cis-1,2-Dichloroethene	5.60	96	13585	2.43	UG	#	100
21) 2,2-Dichloropropane	5.61	77	14662	2.12	UG		98
22) 2-Butanone (MEK)	5.62	43	12963	2.62	UG	#	95
23) Bromochloromethane	5.86	128	5057	2.04	UG	#	95
25) Chloroform	5.96	83	23730	2.05	UG		99
26) 1,1,1-Trichloroethane	6.18	97	19294	1.91	UG	#	82
27) Carbon tetrachloride	6.38	117	11092	1.42	UG		96
28) 1,1-Dichloropropene	6.37	75	18969	2.09	UG	#	95
29) 1,2-Dichloroethane (EDC)	6.60	62	27665	2.26	UG	#	99
32) Benzene	6.60	78	50528	2.05	UG		100
33) Trichloroethene	7.33	95	13861	2.10	UG	#	56
34) 1,2-Dichloropropane	7.56	63	13323	1.96	UG		100
35) Dibromomethane	7.69	93	8474	2.14	UG	#	89
36) 1,4-Dioxane	7.71	88	25571	475.28	UG	#	100
37) Bromodichloromethane	7.87	83	14997	1.60	UG		98
38) 2-Chloroethyl vinyl ether	8.21	63	6204	2.53	UG		97
39) cis-1,3-Dichloropropene	8.38	75	19348	1.90	UG		98
40) 4-Methyl-2-pentanone (MIBK	8.56	43	22283	2.50	UG		99
42) Toluene	8.78	92	32833	2.11	UG		100
43) trans-1,3-Dichloropropene	9.01	75	18206	1.78	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	10176	2.14	UG	#	81

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8257.D
Acq On : 13 Nov 2015 13:30
Operator : Sylvia
Sample : ICC002,ICC002,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 14 08:51:49 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
45) Tetrachloroethene	9.41	166	11190	1.96 UG	#	77
46) 1,3-Dichloropropane	9.41	76	21764	2.07 UG		100
47) 2-Hexanone	9.51	43	17654	2.57 UG		96
48) Dibromochloromethane	9.67	129	8231m	1.45 UG		
49) 1,2-Dibromoethane (EDB)	9.82	107	11879	2.15 UG		95
51) Chlorobenzene	10.40	112	30968	1.78 UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.49	131	8121	1.40 UG	#	99
53) Ethylbenzene	10.54	91	63929	2.01 UG		97
54) m,p-Xylene	10.68	106	44406	3.77 UG	#	14
55) o-Xylene	11.15	106	21588	1.97 UG	#	78
56) Styrene	11.16	104	33622	1.86 UG	#	100
57) Bromoform	11.37	173	4673m	1.36 UG		
58) Isopropylbenzene	11.60	105	55453	1.92 UG		99
60) 1,1,2,2-Tetrachloroethane	11.93	83	17849	2.23 UG		99
61) Bromobenzene	11.96	156	12360	1.76 UG	#	99
62) 1,2,3-Trichloropropane	11.98	75	19200	2.12 UG	#	1
63) n-Propylbenzene	12.10	91	72334	1.92 UG	#	98
64) 2-Chlorotoluene	12.20	91	48995	1.95 UG		98
65) 1,3,5-Trimethylbenzene	12.31	105	48640	1.84 UG		97
66) 4-Chlorotoluene	12.20	91	48995	1.95 UG		98
67) tert-Butylbenzene	12.71	119	36763	1.88 UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	47682	1.75 UG		98
69) sec-Butylbenzene	12.98	105	53728	1.83 UG		99
70) 1,3-Dichlorobenzene	13.11	146	23322	1.78 UG	#	99
71) 4-Isopropyltoluene	13.16	119	41608	1.87 UG	#	100
72) 1,4-Dichlorobenzene	13.22	146	23228	1.76 UG		100
73) n-Butylbenzene	13.67	91	41951	2.03 UG		98
74) 1,2-Dichlorobenzene	13.68	146	23263	1.84 UG	#	95
75) 1,2-Dibromo-3-chloropropan	14.60	75	3396	1.99 UG	#	29
76) 1,2,4-Trichlorobenzene	15.54	180	13647	1.82 UG		100
77) Hexachlorobutadiene	15.74	225	4484	1.37 UG		100
78) Naphthalene	15.79	128	38868	2.44 UG		100
79) 1,2,3-Trichlorobenzene	16.05	180	11915	1.88 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.59	101	8651	2.01 UG	#	55
81) Methyl acetate	4.01	43	18891	2.42 UG	#	82
82) Cyclohexane	6.26	56	25159	2.00 UG	#	74
83) Methylcyclohexane	7.56	83	19446	2.31 UG	#	50

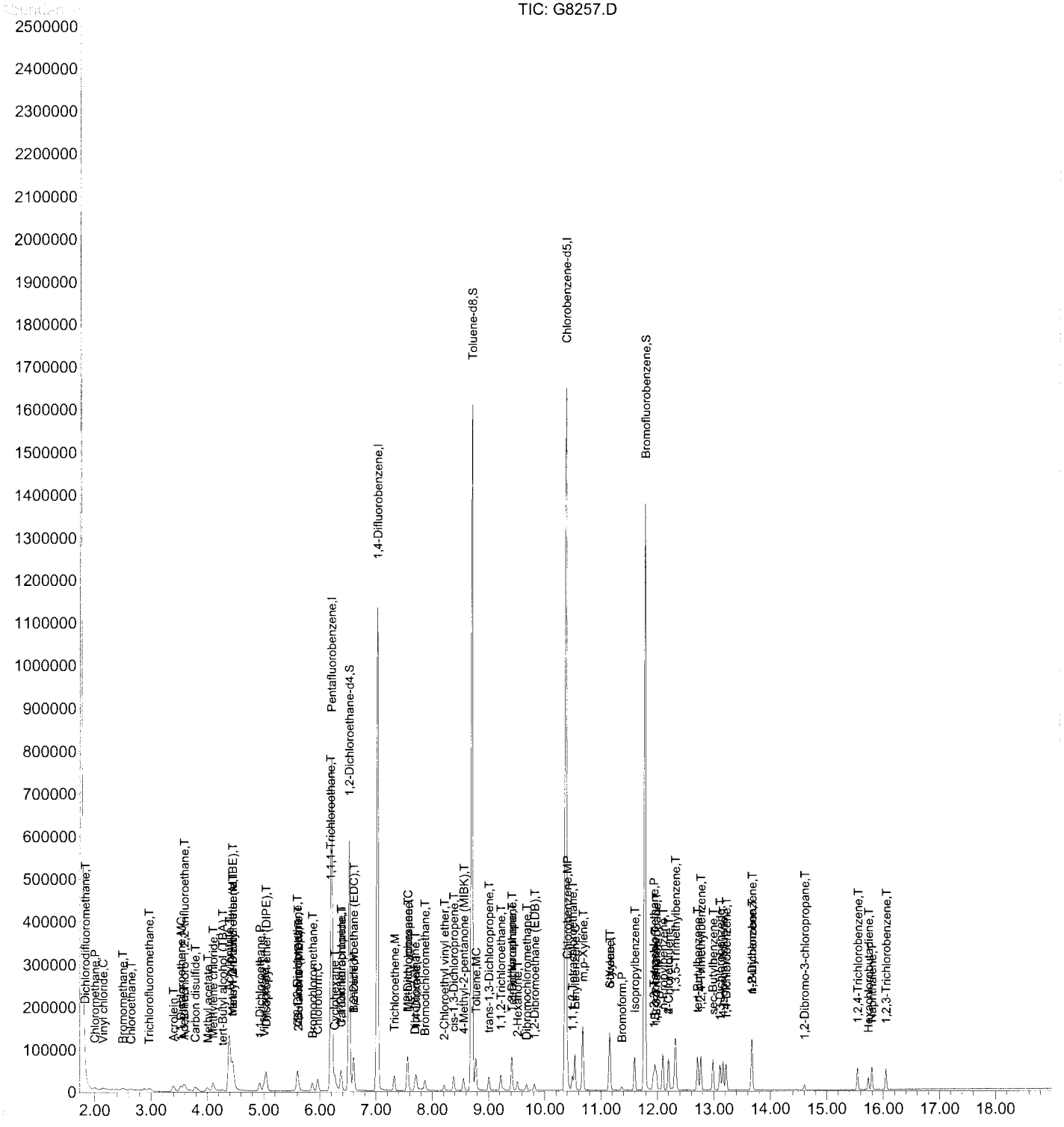
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8257.D
Acq On : 13 Nov 2015 13:30
Operator : Sylvia
Sample : ICC002,ICC002,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 14 08:51:49 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

TIC: G8257.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8258.D
Acq On : 13 Nov 2015 13:58
Operator : Sylvia
Sample : ICC005,ICC005,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 14 08:45:17 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	501399	50.00	UG		-0.01
31) 1,4-Difluorobenzene	7.02	114	877644	50.00	UG		0.00
50) Chlorobenzene-d5	10.37	117	879423	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	532405	55.22	UG		-0.01
Spiked Amount 30.000	Range 69 - 166		Recovery = 184.07%#				
41) Toluene-d8	8.70	98	1143331	50.64	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 168.80%#				
59) Bromofluorobenzene	11.77	95	596684	53.16	UG		0.00
Spiked Amount 30.000	Range 66 - 120		Recovery = 177.20%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	20420	3.17	UG	#	97
3) Chloromethane	2.00	50	18332	2.94	UG		99
4) Vinyl chloride	2.15	62	17794	3.17	UG		100
5) Bromomethane	2.51	94	11732	3.48	UG	#	52
6) Chloroethane	2.65	64	11521	3.13	UG	#	100
7) Trichlorofluoromethane	2.97	101	22496	3.03	UG		99
8) Acrolein	3.39	56	49742	133.05	UG	#	100
9) 1,1-Dichloroethene	3.51	96	22127	5.21	UG	#	100
10) Acetone	3.59	43	25883	7.27	UG		98
11) Carbon disulfide	3.79	76	66795	4.40	UG		100
12) Vinyl acetate	5.01	43	136731	5.11	UG	#	100
13) Methylene chloride	4.10	84	25172	4.68	UG	#	99
14) Acrylonitrile	4.38	53	404636	133.60	UG	#	100
15) tert-Butyl alcohol (TBA)	4.26	59	10360	12.82	UG	#	100
16) trans-1,2-Dichloroethene	4.44	96	27615	5.35	UG	#	68
17) Methyl tert-butyl ether (M	4.46	73	110494	5.77	UG		100
18) 1,1-Dichloroethane	4.93	63	60391	5.23	UG		99
19) Diisopropyl ether (DIPE)	5.04	45	131039	5.46	UG	#	48
20) cis-1,2-Dichloroethene	5.59	96	33383	6.08	UG	#	100
21) 2,2-Dichloropropane	5.61	77	35108	5.19	UG		98
22) 2-Butanone (MEK)	5.61	43	33697	6.95	UG	#	94
23) Bromochloromethane	5.86	128	13022	5.37	UG	#	100
25) Chloroform	5.96	83	59294	5.23	UG		99
26) 1,1,1-Trichloroethane	6.18	97	47237	4.77	UG	#	82
27) Carbon tetrachloride	6.38	117	28751	3.74	UG		98
28) 1,1-Dichloropropene	6.37	75	43059	4.83	UG	#	95
29) 1,2-Dichloroethane (EDC)	6.60	62	67822	5.66	UG	#	99
32) Benzene	6.59	78	120121	4.95	UG		100
33) Trichloroethene	7.32	95	32629	5.03	UG	#	85
34) 1,2-Dichloropropane	7.57	63	33068	4.94	UG		100
35) Dibromomethane	7.69	93	21268	5.47	UG	#	63
36) 1,4-Dioxane	7.71	88	51906	980.72	UG	#	100
37) Bromodichloromethane	7.87	83	39041	4.24	UG	#	68
38) 2-Chloroethyl vinyl ether	8.21	63	16152m	6.68	UG		
39) cis-1,3-Dichloropropene	8.38	75	49120	4.90	UG	#	98
40) 4-Methyl-2-pentanone (MIBK	8.55	43	56985	6.50	UG		98
42) Toluene	8.77	92	79986	5.22	UG		99
43) trans-1,3-Dichloropropene	9.01	75	49444	4.92	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	25106	5.37	UG		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8258.D
Acq On : 13 Nov 2015 13:58
Operator : Sylvia
Sample : ICC005,ICC005,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 14 08:45:17 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Tetrachloroethene	9.41	166	26434	4.71	UG	#	99
46) 1,3-Dichloropropane	9.41	76	55502	5.36	UG		99
47) 2-Hexanone	9.51	43	47791	7.08	UG		94
48) Dibromochloromethane	9.68	129	19428	3.48	UG		99
49) 1,2-Dibromoethane (EDB)	9.82	107	29267	5.38	UG		99
51) Chlorobenzene	10.40	112	76629	4.43	UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.50	131	20097	3.47	UG	#	98
53) Ethylbenzene	10.54	91	151283	4.77	UG		98
54) m,p-Xylene	10.67	106	105529	9.01	UG	#	14
55) o-Xylene	11.14	106	52953	4.85	UG	#	80
56) Styrene	11.16	104	85556	4.76	UG	#	100
57) Bromoform	11.37	173	10325	3.02	UG	#	63
58) Isopropylbenzene	11.59	105	132046	4.59	UG		99
60) 1,1,2,2-Tetrachloroethane	11.92	83	41803	5.25	UG	#	99
61) Bromobenzene	11.96	156	28959	4.13	UG	#	100
62) 1,2,3-Trichloropropane	11.98	75	46459	5.14	UG	#	1
63) n-Propylbenzene	12.09	91	173369	4.61	UG		98
64) 2-Chlorotoluene	12.20	91	114740	4.60	UG		98
65) 1,3,5-Trimethylbenzene	12.31	105	113714	4.31	UG		97
66) 4-Chlorotoluene	12.20	91	114740	4.60	UG		98
67) tert-Butylbenzene	12.71	119	86936	4.48	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	116346	4.28	UG		97
69) sec-Butylbenzene	12.98	105	124919	4.27	UG		99
70) 1,3-Dichlorobenzene	13.11	146	55900	4.29	UG	#	99
71) 4-Isopropyltoluene	13.16	119	95832	4.32	UG	#	100
72) 1,4-Dichlorobenzene	13.22	146	54029	4.11	UG		99
73) n-Butylbenzene	13.67	91	100125	4.85	UG	#	97
74) 1,2-Dichlorobenzene	13.68	146	53491	4.26	UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	8090	4.76	UG	#	29
76) 1,2,4-Trichlorobenzene	15.54	180	31459	4.22	UG		98
77) Hexachlorobutadiene	15.74	225	10955	3.36	UG		100
78) Naphthalene	15.79	128	93928	5.91	UG		100
79) 1,2,3-Trichlorobenzene	16.05	180	26794	4.24	UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.60	101	21200	4.94	UG		88
81) Methyl acetate	3.99	43	49112	6.32	UG	#	83
82) Cyclohexane	6.26	56	58382	4.67	UG	#	74
83) Methylcyclohexane	7.55	83	43887	5.24	UG	#	44

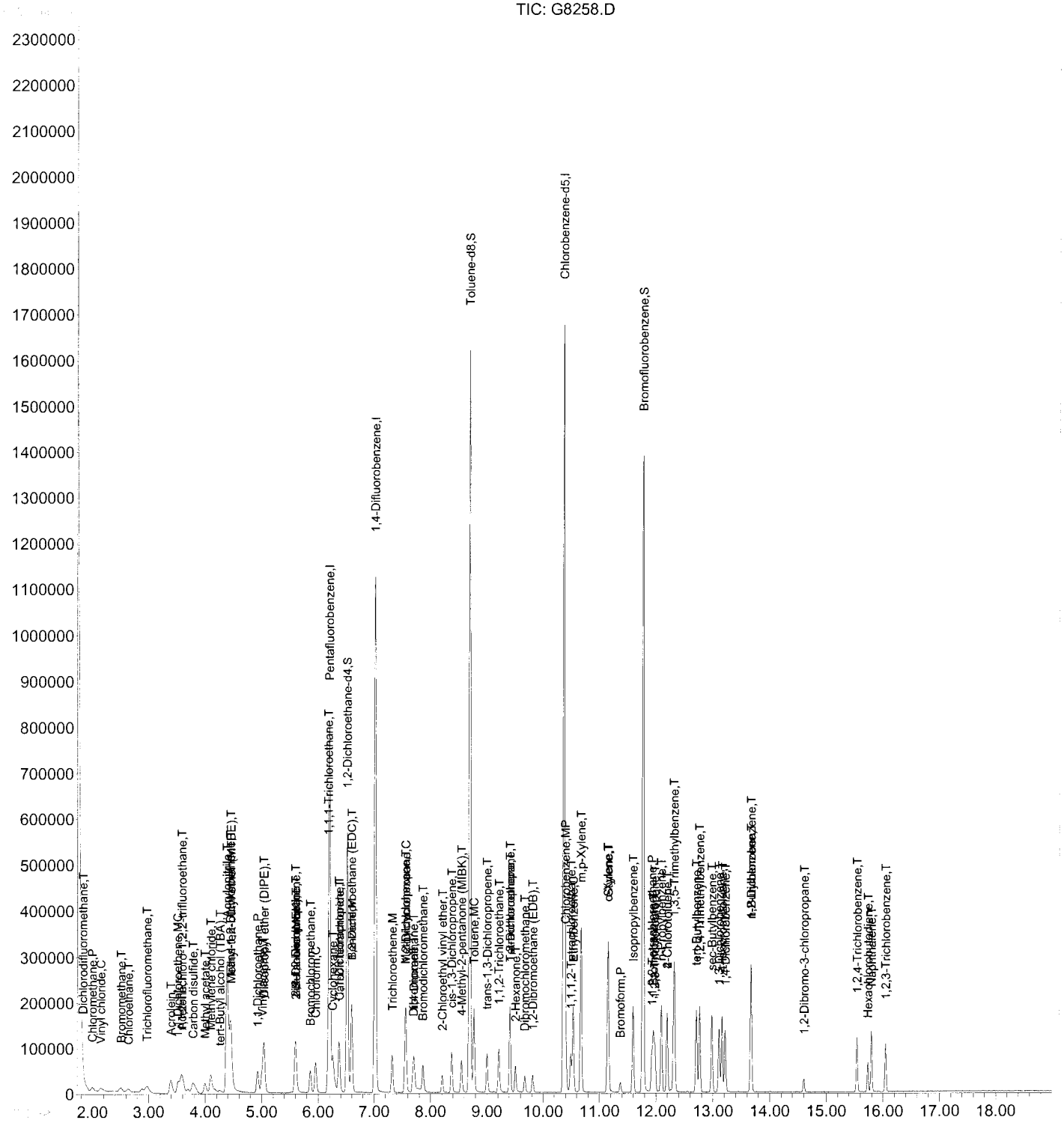
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8258.D
Acq On : 13 Nov 2015 13:58
Operator : Sylvia
Sample : ICC005,ICC005,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 14 08:45:17 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

TIC: G8258.D



E15-10258 0269

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8259.D
Acq On : 13 Nov 2015 14:27
Operator : Sylvia
Sample : ICC020,ICC020,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 14 08:45:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	472817	50.00	UG		-0.01
31) 1,4-Difluorobenzene	7.02	114	832673	50.00	UG		-0.01
50) Chlorobenzene-d5	10.37	117	837084	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	505996	55.66	UG		-0.01
Spiked Amount 30.000	Range 69 - 166		Recovery = 185.53%#				
41) Toluene-d8	8.70	98	1092691	51.01	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 170.03%#				
59) Bromofluorobenzene	11.77	95	579914	54.28	UG		0.00
Spiked Amount 30.000	Range 66 - 120		Recovery = 180.93%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	82722	13.63	UG		99
3) Chloromethane	2.00	50	72113	12.25	UG		99
4) Vinyl chloride	2.15	62	72043	13.61	UG		99
5) Bromomethane	2.51	94	44006	13.84	UG		100
6) Chloroethane	2.63	64	45561	13.11	UG	#	100
7) Trichlorofluoromethane	2.96	101	140329m	20.03	UG		
8) Acrolein	3.39	56	105141	298.24	UG	#	100
9) 1,1-Dichloroethene	3.52	96	93857	23.42	UG	#	100
10) Acetone	3.58	43	114099	33.98	UG	#	97
11) Carbon disulfide	3.79	76	288894	20.18	UG		100
12) Vinyl acetate	4.99	43	602123	23.86	UG	#	100
13) Methylene chloride	4.10	84	118140	23.30	UG	#	100
14) Acrylonitrile	4.38	53	820207	287.19	UG	#	100
15) tert-Butyl alcohol (TBA)	4.26	59	47704	62.61	UG	#	100
16) trans-1,2-Dichloroethene	4.43	96	109952	22.57	UG	#	99
17) Methyl tert-butyl ether (M	4.45	73	456490	25.29	UG		100
18) 1,1-Dichloroethane	4.92	63	248303	22.78	UG		99
19) Diisopropyl ether (DIPE)	5.04	45	546112	24.11	UG	#	48
20) cis-1,2-Dichloroethene	5.60	96	130390	25.18	UG	#	100
21) 2,2-Dichloropropane	5.61	77	152811	23.94	UG	#	97
22) 2-Butanone (MEK)	5.61	43	139096	30.43	UG	#	95
23) Bromochloromethane	5.86	128	51500	22.52	UG	#	99
25) Chloroform	5.96	83	250855	23.47	UG		99
26) 1,1,1-Trichloroethane	6.18	97	214203	22.93	UG	#	91
27) Carbon tetrachloride	6.37	117	131898	18.22	UG		100
28) 1,1-Dichloropropene	6.37	75	179629	21.35	UG	#	95
29) 1,2-Dichloroethane (EDC)	6.60	62	275070	24.33	UG	#	99
32) Benzene	6.60	78	485896	21.09	UG		100
33) Trichloroethene	7.32	95	138234	22.45	UG	#	83
34) 1,2-Dichloropropane	7.56	63	137377	21.65	UG	#	100
35) Dibromomethane	7.69	93	89403	24.24	UG	#	90
36) 1,4-Dioxane	7.71	88	109271	2176.08	UG	#	100
37) Bromodichloromethane	7.86	83	182040	20.85	UG	#	99
38) 2-Chloroethyl vinyl ether	8.20	63	76380m	33.32	UG		
39) cis-1,3-Dichloropropene	8.38	75	221663	23.30	UG	#	98
40) 4-Methyl-2-pentanone (MIBK	8.55	43	244548	29.40	UG		97
42) Toluene	8.78	92	327093	22.52	UG		100
43) trans-1,3-Dichloropropene	9.01	75	223640	23.44	UG	#	78
44) 1,1,2-Trichloroethane	9.21	83	103274	23.28	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8259.D
Acq On : 13 Nov 2015 14:27
Operator : Sylvia
Sample : ICC020,ICC020,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 14 08:45:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Tetrachloroethene	9.41	166	106012	19.89	UG	#	100
46) 1,3-Dichloropropane	9.41	76	222232	22.60	UG		100
47) 2-Hexanone	9.51	43	205475	32.07	UG		95
48) Dibromochloromethane	9.67	129	98966	18.71	UG		99
49) 1,2-Dibromoethane (EDB)	9.81	107	120597	23.35	UG		100
51) Chlorobenzene	10.40	112	312626	18.97	UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.49	131	96019	17.44	UG	#	100
53) Ethylbenzene	10.53	91	643073	21.29	UG		98
54) m,p-Xylene	10.67	106	429039	38.46	UG	#	14
55) o-Xylene	11.14	106	220093	21.16	UG	#	11
56) Styrene	11.16	104	364351	21.31	UG	#	100
57) Bromoform	11.36	173	55006	16.91	UG	#	63
58) Isopropylbenzene	11.59	105	554963	20.25	UG		99
60) 1,1,2,2-Tetrachloroethane	11.92	83	178854	23.61	UG		99
61) Bromobenzene	11.96	156	118425	17.74	UG	#	100
62) 1,2,3-Trichloropropane	11.98	75	192208	22.35	UG	#	1
63) n-Propylbenzene	12.09	91	739198	20.67	UG	#	98
64) 2-Chlorotoluene	12.20	91	483801	20.36	UG		98
65) 1,3,5-Trimethylbenzene	12.31	105	474983	18.92	UG		96
66) 4-Chlorotoluene	12.20	91	483801	20.36	UG		98
67) tert-Butylbenzene	12.71	119	365346	19.76	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	484961	18.75	UG		97
69) sec-Butylbenzene	12.98	105	530135	19.06	UG		99
70) 1,3-Dichlorobenzene	13.11	146	225687	18.18	UG	#	100
71) 4-Isopropyltoluene	13.16	119	410871	19.44	UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	224408	17.93	UG		100
73) n-Butylbenzene	13.67	91	432180	22.01	UG	#	97
74) 1,2-Dichlorobenzene	13.68	146	214674	17.95	UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	39719	24.53	UG	#	29
76) 1,2,4-Trichlorobenzene	15.54	180	128885	18.18	UG		100
77) Hexachlorobutadiene	15.73	225	47305	15.24	UG		100
78) Naphthalene	15.79	128	388392	25.69	UG		100
79) 1,2,3-Trichlorobenzene	16.05	180	106546	17.70	UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.60	101	88847	21.76	UG		88
81) Methyl acetate	3.99	43	199741	27.02	UG	#	83
82) Cyclohexane	6.26	56	250051	21.02	UG	#	75
83) Methylcyclohexane	7.56	83	187447	23.53	UG	#	45

(#) = qualifier out of range (m) = manual integration (+) = signals summed

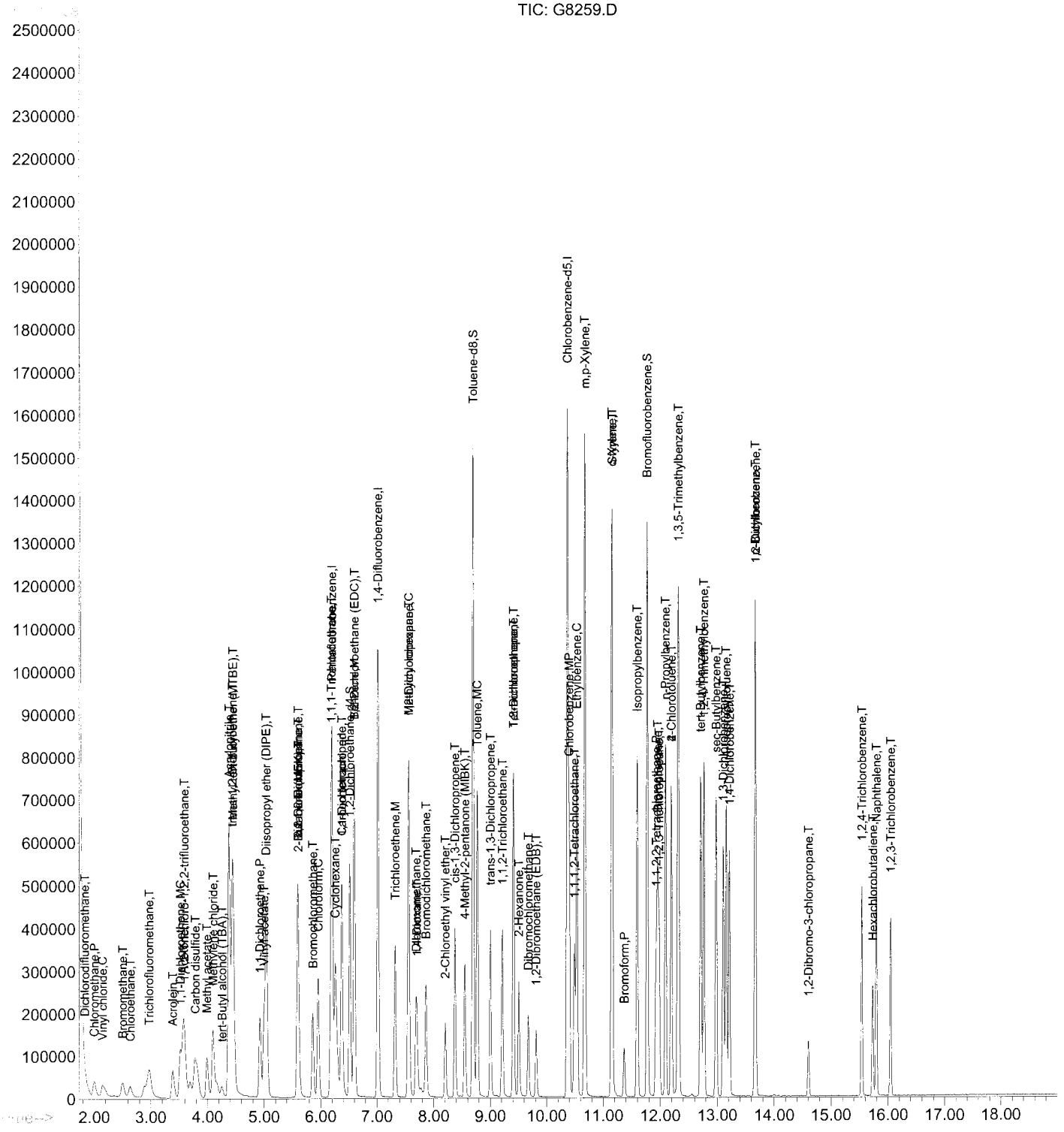
E15-10258 0271

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8259.D
Acq On : 13 Nov 2015 14:27
Operator : Sylvia
Sample : ICC020,ICC020,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 14 08:45:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

TIC: G8259.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8260.D
Acq On : 13 Nov 2015 14:56
Operator : Sylvia
Sample : ICC100,ICC100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 14 08:52:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	449295	50.00	UG		-0.02
31) 1,4-Difluorobenzene	7.02	114	822134	50.00	UG		-0.01
50) Chlorobenzene-d5	10.36	117	817362	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.51	65	495219	57.32	UG		-0.02
Spiked Amount 30.000	Range 69 - 166		Recovery = 191.07%#				
41) Toluene-d8	8.70	98	1078786	51.01	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 170.03%#				
59) Bromofluorobenzene	11.77	95	570977	54.74	UG		0.00
Spiked Amount 30.000	Range 66 - 120		Recovery = 182.47%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.83	85	429373	74.44	UG		99
3) Chloromethane	2.01	50	385809	68.96	UG		100
4) Vinyl chloride	2.17	62	362113	72.00	UG		99
5) Bromomethane	2.50	94	213834	70.75	UG		99
6) Chloroethane	2.63	64	226151	68.47	UG	#	100
7) Trichlorofluoromethane	2.95	101	609858m	91.62	UG		
8) Acrolein	3.38	56	115893	345.95	UG	#	100
9) 1,1-Dichloroethene	3.52	96	423176	111.13	UG	#	100
10) Acetone	3.58	43	474277	148.62	UG	#	97
11) Carbon disulfide	3.78	76	1348821	99.16	UG		100
12) Vinyl acetate	5.04	43	2212890m	92.29	UG		
13) Methylene chloride	4.09	84	544336	112.97	UG	#	100
14) Acrylonitrile	4.38	53	1139336	419.81	UG	#	100
15) tert-Butyl alcohol (TBA)	4.25	59	211983m	292.77	UG		
16) trans-1,2-Dichloroethene	4.43	96	484333	104.63	UG	#	100
17) Methyl tert-butyl ether (M	4.45	73	2173382	126.70	UG		100
18) 1,1-Dichloroethane	4.93	63	1165722	112.56	UG	#	87
19) Diisopropyl ether (DIPE)	5.04	45	2542642	118.14	UG	#	48
20) cis-1,2-Dichloroethene	5.59	96	590827	120.08	UG	#	100
21) 2,2-Dichloropropane	5.60	77	285454	47.06	UG		99
22) 2-Butanone (MEK)	5.61	43	553719	127.46	UG	#	95
23) Bromochloromethane	5.86	128	238336	109.66	UG	#	100
25) Chloroform	5.96	83	1162968	114.52	UG		99
26) 1,1,1-Trichloroethane	6.18	97	1030591	116.10	UG	#	82
27) Carbon tetrachloride	6.37	117	666102	96.82	UG		100
28) 1,1-Dichloropropene	6.36	75	765662	95.79	UG	#	95
29) 1,2-Dichloroethane (EDC)	6.60	62	1295118	120.57	UG	#	99
32) Benzene	6.59	78	2099852	92.32	UG		100
33) Trichloroethene	7.32	95	656009	107.92	UG	#	82
34) 1,2-Dichloropropane	7.56	63	609543	97.28	UG	#	100
35) Dibromomethane	7.69	93	412532	113.28	UG	#	90
36) 1,4-Dioxane	7.71	88	196713	3967.66	UG	#	100
37) Bromodichloromethane	7.86	83	930093	107.88	UG	#	99
38) 2-Chloroethyl vinyl ether	8.20	63	434923m	192.14	UG		
39) cis-1,3-Dichloropropene	8.38	75	923955	98.36	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.55	43	1147926	139.75	UG		97
42) Toluene	8.77	92	1428767	99.63	UG		100
43) trans-1,3-Dichloropropene	9.01	75	961863	102.11	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	468014	106.85	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8260.D
Acq On : 13 Nov 2015 14:56
Operator : Sylvia
Sample : ICC100,ICC100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 14 08:52:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

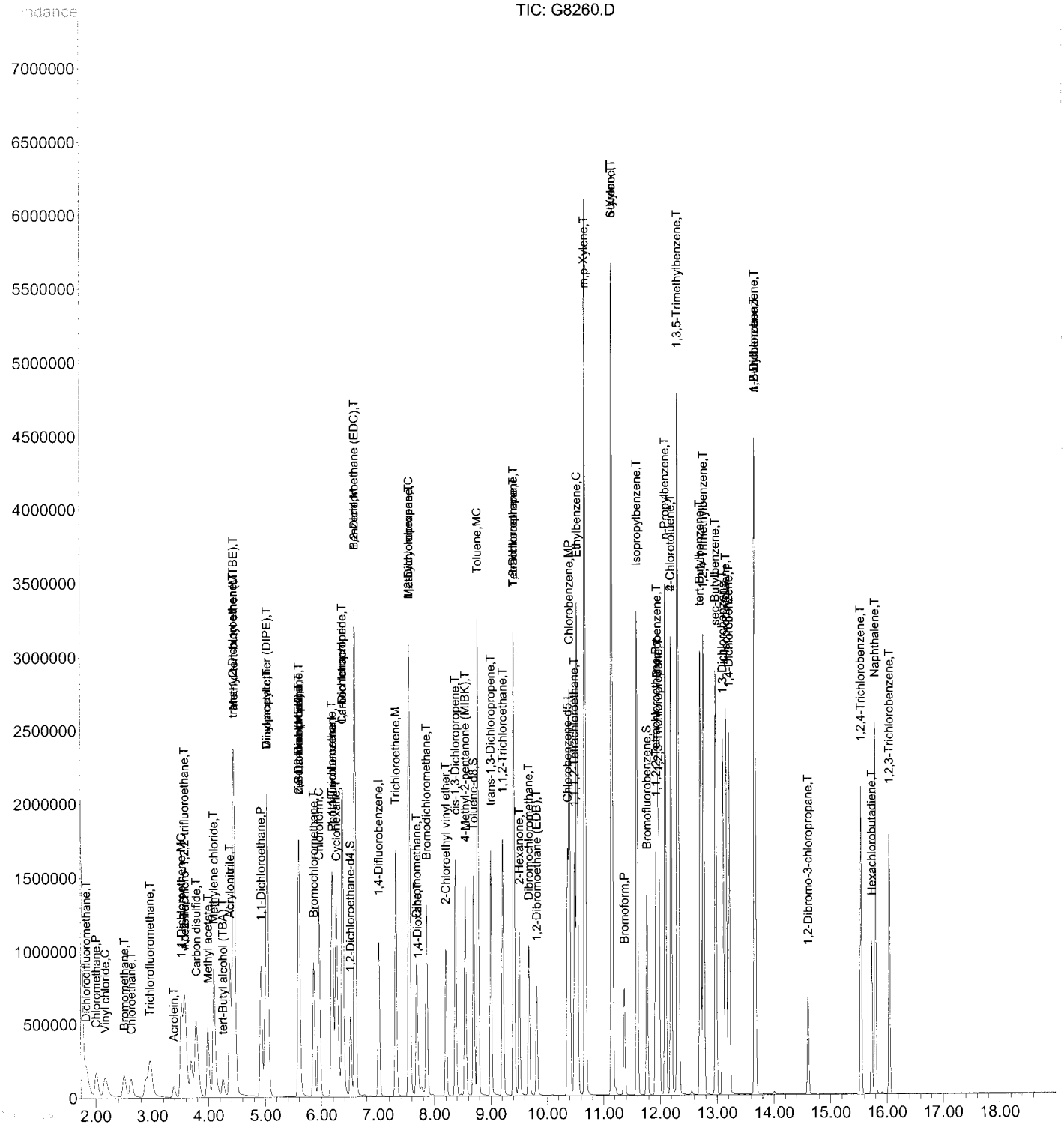
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Tetrachloroethene	9.41	166	416466	79.14	UG	#	100
46) 1,3-Dichloropropane	9.41	76	973168	100.25	UG		100
47) 2-Hexanone	9.51	43	872731	137.96	UG		95
48) Dibromochloromethane	9.67	129	543707	104.11	UG		100
49) 1,2-Dibromoethane (EDB)	9.82	107	565290	110.85	UG		100
51) Chlorobenzene	10.40	112	1352124	84.01	UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.49	131	483201	89.88	UG	#	100
53) Ethylbenzene	10.54	91	2786647m	94.48	UG		
54) m,p-Xylene	10.67	106	1693919	155.53	UG	#	14
55) o-Xylene	11.15	106	873209	85.97	UG	#	11
56) Styrene	11.16	104	1486694	89.04	UG	#	100
57) Bromoform	11.37	173	235837m	74.26	UG		
58) Isopropylbenzene	11.59	105	2357347	88.07	UG		99
60) 1,1,2,2-Tetrachloroethane	11.93	83	733912	99.22	UG		99
61) Bromobenzene	11.95	156	496680	76.21	UG	#	100
62) 1,2,3-Trichloropropane	11.98	75	848000	100.97	UG	#	1
63) n-Propylbenzene	12.10	91	3063421	87.73	UG	#	98
64) 2-Chlorotoluene	12.20	91	2069697	89.19	UG	#	97
65) 1,3,5-Trimethylbenzene	12.31	105	1942069	79.24	UG		96
66) 4-Chlorotoluene	12.20	91	2069697	89.19	UG	#	97
67) tert-Butylbenzene	12.71	119	1541127	85.35	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	2012030	79.68	UG		96
69) sec-Butylbenzene	12.98	105	2161471	79.58	UG		99
70) 1,3-Dichlorobenzene	13.11	146	933276	77.00	UG	#	68
71) 4-Isopropyltoluene	13.16	119	1654709	80.18	UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	930281	76.14	UG		99
73) n-Butylbenzene	13.67	91	1637489	85.42	UG	#	97
74) 1,2-Dichlorobenzene	13.68	146	868516	74.36	UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	223671	141.49	UG	#	69
76) 1,2,4-Trichlorobenzene	15.54	180	548371	79.21	UG		99
77) Hexachlorobutadiene	15.73	225	184000	60.71	UG		100
78) Naphthalene	15.79	128	1796307	121.69	UG		100
79) 1,2,3-Trichlorobenzene	16.04	180	467567	79.55	UG		100
80) 1,1,2-Trichloro-1,2,2-trif	3.58	101	348292	87.38	UG		88
81) Methyl acetate	3.99	43	968818	134.19	UG	#	84
82) Cyclohexane	6.26	56	1026356	88.36	UG	#	74
83) Methylcyclohexane	7.56	83	663722	85.32	UG	#	35

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8260.D
Acq On : 13 Nov 2015 14:56
Operator : Sylvia
Sample : ICC100,ICC100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 14 08:52:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8261.D
Acq On : 13 Nov 2015 15:24
Operator : Sylvia
Sample : ICC150,ICC150,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 14 08:53:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	474832	50.00	UG		-0.01
31) 1,4-Difluorobenzene	7.02	114	877108	50.00	UG		-0.01
50) Chlorobenzene-d5	10.36	117	865444	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	524733	57.47	UG		-0.01
Spiked Amount 30.000	Range 69 - 166		Recovery = 191.57%#				
41) Toluene-d8	8.70	98	1147318	50.85	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 169.50%#				
59) Bromofluorobenzene	11.77	95	602592	54.56	UG		0.00
Spiked Amount 30.000	Range 66 - 120		Recovery = 181.87%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	646481	106.05	UG		100
3) Chloromethane	2.02	50	585039	98.94	UG		100
4) Vinyl chloride	2.17	62	577591	108.66	UG		99
5) Bromomethane	2.50	94	329332	103.10	UG		99
6) Chloroethane	2.62	64	350739	100.48	UG	#	100
7) Trichlorofluoromethane	2.96	101	938649m	133.44	UG		
8) Acrolein	3.38	56	157932	446.08	UG	#	100
9) 1,1-Dichloroethene	3.52	96	659291	163.82	UG	#	100
10) Acetone	3.57	43	710086	210.55	UG	#	97
11) Carbon disulfide	3.77	76	2137555	148.70	UG		100
12) Vinyl acetate	5.03	43	3478263m	137.26	UG		
13) Methylene chloride	4.09	84	850234	166.97	UG	#	100
14) Acrylonitrile	4.38	53	1546089	539.05	UG	#	100
15) tert-Butyl alcohol (TBA)	4.25	59	396203	517.77	UG	#	100
16) trans-1,2-Dichloroethene	4.43	96	732093	149.65	UG	#	100
17) Methyl tert-butyl ether (M	4.45	73	3369447	185.86	UG		100
18) 1,1-Dichloroethane	4.93	63	1821166	166.40	UG		99
19) Diisopropyl ether (DIPE)	5.04	45	3895658	171.27	UG	#	48
20) cis-1,2-Dichloroethene	5.59	96	909836	174.97	UG	#	100
21) 2,2-Dichloropropane	5.60	77	457979	71.44	UG		99
22) 2-Butanone (MEK)	5.61	43	831903	181.20	UG	#	95
23) Bromochloromethane	5.86	128	370772	161.42	UG	#	100
25) Chloroform	5.96	83	1815639	169.17	UG		99
26) 1,1,1-Trichloroethane	6.18	97	1643930	175.24	UG	#	96
27) Carbon tetrachloride	6.37	117	1101748	151.54	UG		99
28) 1,1-Dichloropropene	6.37	75	1177666	139.41	UG	#	94
29) 1,2-Dichloroethane (EDC)	6.60	62	1980490	174.45	UG	#	99
32) Benzene	6.60	78	3186877	131.33	UG		100
33) Trichloroethene	7.32	95	1011364	155.95	UG	#	81
34) 1,2-Dichloropropane	7.56	63	930017	139.13	UG	#	100
35) Dibromomethane	7.69	93	636698	163.88	UG	#	90
36) 1,4-Dioxane	7.71	88	232195	4389.79	UG	#	100
37) Bromodichloromethane	7.86	83	1476864	160.57	UG	#	99
38) 2-Chloroethyl vinyl ether	8.20	63	682943m	282.80	UG		
39) cis-1,3-Dichloropropene	8.38	75	1433364	143.02	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.55	43	1755874	200.37	UG		97
42) Toluene	8.77	92	2175841	142.21	UG		99
43) trans-1,3-Dichloropropene	9.00	75	1497043	148.97	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	716619	153.36	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8261.D
Acq On : 13 Nov 2015 15:24
Operator : Sylvia
Sample : ICC150,ICC150,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 14 08:53:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
45) Tetrachloroethene	9.41	166	624086	111.15 UG	#	100
46) 1,3-Dichloropropane	9.41	76	1472928	142.23 UG		100
47) 2-Hexanone	9.51	43	1325391	196.39 UG		95
48) Dibromochloromethane	9.67	129	860823	154.50 UG		99
49) 1,2-Dibromoethane (EDB)	9.82	107	866390	159.24 UG		99
51) Chlorobenzene	10.40	112	2042421	119.85 UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.50	131	754103	132.47 UG	#	100
53) Ethylbenzene	10.54	91	4232604m	135.54 UG		
54) m,p-Xylene	10.68	106	2534437	219.77 UG	#	14
55) o-Xylene	11.15	106	1299608	120.85 UG	#	11
56) Styrene	11.16	104	2236473	126.50 UG	#	100
57) Bromoform	11.37	173	460721m	137.01 UG		
58) Isopropylbenzene	11.60	105	3594903	126.85 UG		98
60) 1,1,2,2-Tetrachloroethane	11.93	83	1102402	140.75 UG		99
61) Bromobenzene	11.95	156	746191	108.14 UG	#	99
62) 1,2,3-Trichloropropane	11.99	75	1289686	145.03 UG	#	1
63) n-Propylbenzene	12.10	91	4691933	126.90 UG	#	97
64) 2-Chlorotoluene	12.20	91	3160178	128.61 UG	#	97
65) 1,3,5-Trimethylbenzene	12.31	105	2936600	113.17 UG		95
66) 4-Chlorotoluene	12.20	91	3160178	128.61 UG	#	97
67) tert-Butylbenzene	12.71	119	2370045	123.97 UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	3060160	114.46 UG		96
69) sec-Butylbenzene	12.99	105	3311298	115.14 UG		99
70) 1,3-Dichlorobenzene	13.11	146	1396245	108.80 UG	#	100
71) 4-Isopropyltoluene	13.16	119	2494848	114.17 UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	1386249	107.15 UG		99
73) n-Butylbenzene	13.67	91	2482649	122.31 UG	#	97
74) 1,2-Dichlorobenzene	13.68	146	1282724	103.73 UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	349296	208.68 UG	#	68
76) 1,2,4-Trichlorobenzene	15.54	180	818741	111.69 UG		100
77) Hexachlorobutadiene	15.73	225	278177	86.68 UG		100
78) Naphthalene	15.79	128	2719750	174.01 UG		100
79) 1,2,3-Trichlorobenzene	16.04	180	708954	113.91 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.58	101	548267	129.90 UG	#	87
81) Methyl acetate	3.98	43	1528323	199.93 UG	#	84
82) Cyclohexane	6.26	56	1622869	131.95 UG	#	74
83) Methylcyclohexane	7.56	83	1032444	125.34 UG	#	36

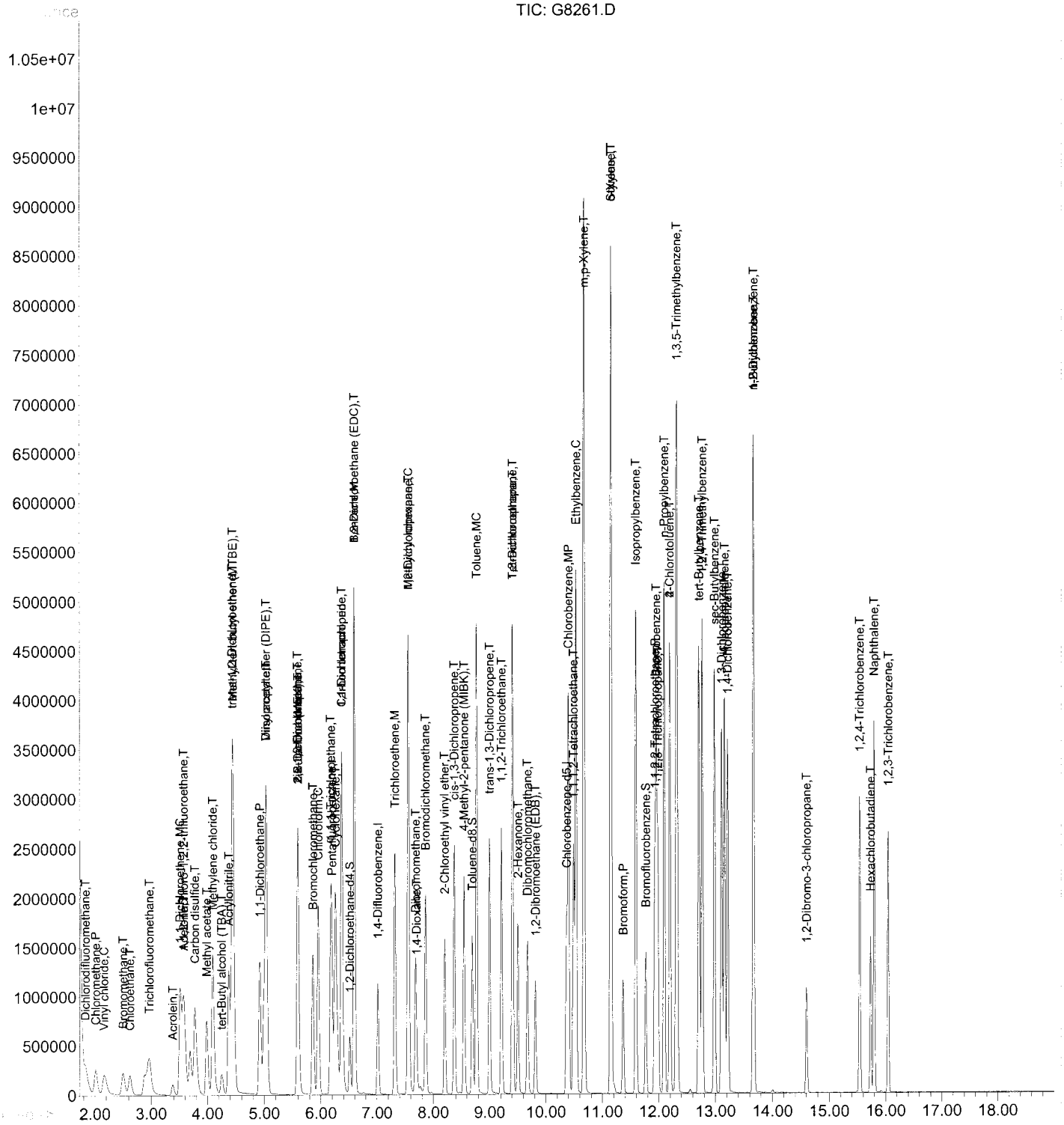
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8261.D
Acq On : 13 Nov 2015 15:24
Operator : Sylvia
Sample : ICC150,ICC150,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 14 08:53:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Oct 16 08:00:32 2015
Response via : Initial Calibration

TIC: G8261.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8262.D
Acq On : 13 Nov 2015 15:52
Operator : Sylvia
Sample : ICC200,ICC200,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 14 08:53:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Nov 13 16:06:31 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	469758	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.02	114	895900	50.00	UG		0.00
50) Chlorobenzene-d5	10.37	117	879232	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.51	65	531555	52.51	UG		0.00
Spiked Amount 30.000	Range 69 - 166		Recovery = 175.03%#				
41) Toluene-d8	8.70	98	1178915	50.37	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 167.90%#				
59) Bromofluorobenzene	11.77	95	606807	50.20	UG		0.00
Spiked Amount 30.000	Range 66 - 120		Recovery = 167.33%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	760778	198.20	UG		99
3) Chloromethane	2.02	50	780875	228.03	UG		100
4) Vinyl chloride	2.16	62	768996	218.40	UG		99
5) Bromomethane	2.50	94	416296	213.84	UG		99
6) Chloroethane	2.62	64	459262	218.70	UG	#	100
7) Trichlorofluoromethane	2.96	101	1110507m	357.06	UG		
8) Acrolein	3.38	56	206230	509.38	UG	#	100
9) 1,1-Dichloroethene	3.51	96	890584	204.75	UG	#	100
10) Acetone	3.58	43	968245	193.64	UG		98
11) Carbon disulfide	3.77	76	2938522	215.80	UG		100
12) Vinyl acetate	5.04	43	4538073m	228.32	UG		
13) Methylene chloride	4.09	84	1148288	206.62	UG	#	100
14) Acrylonitrile	4.38	53	2082608	536.42	UG	#	100
15) tert-Butyl alcohol (TBA)	4.26	59	576408	523.60	UG	#	100
16) trans-1,2-Dichloroethene	4.43	96	984386	193.04	UG	#	100
17) Methyl tert-butyl ether (M	4.45	73	4496939	210.63	UG		100
18) 1,1-Dichloroethane	4.93	63	2483889	210.93	UG	#	96
19) Diisopropyl ether (DIPE)	5.04	45	5227979	207.21	UG	#	48
20) cis-1,2-Dichloroethene	5.59	96	1213451	197.01	UG	#	100
21) 2,2-Dichloropropane	5.61	77	554226	107.52	UG		99
22) 2-Butanone (MEK)	5.61	43	1127463	189.95	UG	#	86
23) Bromochloromethane	5.86	128	497375	204.99	UG	#	38
25) Chloroform	5.96	83	2451180	211.28	UG		100
26) 1,1,1-Trichloroethane	6.18	97	2177021	221.59	UG	#	96
27) Carbon tetrachloride	6.37	117	1458112	234.12	UG		99
28) 1,1-Dichloropropene	6.36	75	1567956	191.56	UG	#	94
29) 1,2-Dichloroethane (EDC)	6.60	62	2614907	203.88	UG	#	99
32) Benzene	6.59	78	4291412	180.14	UG		100
33) Trichloroethene	7.32	95	1367077	197.31	UG	#	81
34) 1,2-Dichloropropane	7.56	63	1233558	186.32	UG	#	100
35) Dibromomethane	7.69	93	849425	195.70	UG	#	90
36) 1,4-Dioxane	7.71	88	341318	5922.43	UG	#	100
37) Bromodichloromethane	7.86	83	1987199	222.45	UG	#	99
38) 2-Chloroethyl vinyl ether	8.20	63	611343m	1225.14	UG		
39) cis-1,3-Dichloropropene	8.38	75	1930484	192.18	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.55	43	2349127	199.86	UG		97
42) Toluene	8.77	92	2908894	182.43	UG		98
43) trans-1,3-Dichloropropene	9.00	75	2021113	227.55	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	952990	189.38	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8262.D
Acq On : 13 Nov 2015 15:52
Operator : Sylvia
Sample : ICC200,ICC200,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 14 08:53:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Nov 13 16:06:31 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
45) Tetrachloroethene	9.41	166	826993	166.42 UG	#	100
46) 1,3-Dichloropropane	9.41	76	1966540	182.46 UG		100
47) 2-Hexanone	9.51	43	1787361	192.44 UG		95
48) Dibromochloromethane	9.67	129	1161792	238.31 UG		99
49) 1,2-Dibromoethane (EDB)	9.82	107	1164405	196.11 UG		99
51) Chlorobenzene	10.40	112	2720741	182.78 UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.50	131	1005289	220.37 UG	#	53
53) Ethylbenzene	10.54	91	5704808m	151.74 UG		
54) m,p-Xylene	10.68	106	3392377	340.16 UG	#	14
55) o-Xylene	11.15	106	1721464	172.43 UG	#	11
56) Styrene	11.16	104	3003741	183.15 UG	#	100
57) Bromoform	11.37	173	489869m	172.99 UG		
58) Isopropylbenzene	11.59	105	4812512	184.78 UG		98
60) 1,1,2,2-Tetrachloroethane	11.93	83	1468757	180.10 UG		99
61) Bromobenzene	11.95	156	973796	175.10 UG	#	100
62) 1,2,3-Trichloropropane	11.99	75	1704109	187.31 UG	#	1
63) n-Propylbenzene	12.10	91	6357028	185.14 UG	#	97
64) 2-Chlorotoluene	12.20	91	4250987	184.60 UG	#	87
65) 1,3,5-Trimethylbenzene	12.31	105	3904691	176.26 UG		95
66) 4-Chlorotoluene	12.20	91	4250987	184.60 UG	#	87
67) tert-Butylbenzene	12.71	119	3107094	179.00 UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	4117712	182.45 UG		96
69) sec-Butylbenzene	12.99	105	4377531	177.82 UG		99
70) 1,3-Dichlorobenzene	13.11	146	1856257	174.26 UG	#	100
71) 4-Isopropyltoluene	13.16	119	3349045	177.10 UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	1833469	173.18 UG		100
73) n-Butylbenzene	13.67	91	3381398	163.92 UG	#	96
74) 1,2-Dichlorobenzene	13.68	146	1702926	154.78 UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	466719	232.70 UG	#	29
76) 1,2,4-Trichlorobenzene	15.54	180	1091118	162.85 UG		100
77) Hexachlorobutadiene	15.74	225	365582	153.84 UG		100
78) Naphthalene	15.79	128	3629274	182.37 UG		100
79) 1,2,3-Trichlorobenzene	16.05	180	939174	160.53 UG		100
80) 1,1,2-Trichloro-1,2,2-trif	3.58	101	672829	178.50 UG	#	87
81) Methyl acetate	3.98	43	2134178	210.93 UG	#	84
82) Cyclohexane	6.26	56	2008233	173.61 UG	#	74
83) Methylcyclohexane	7.56	83	1251969	154.27 UG	#	34

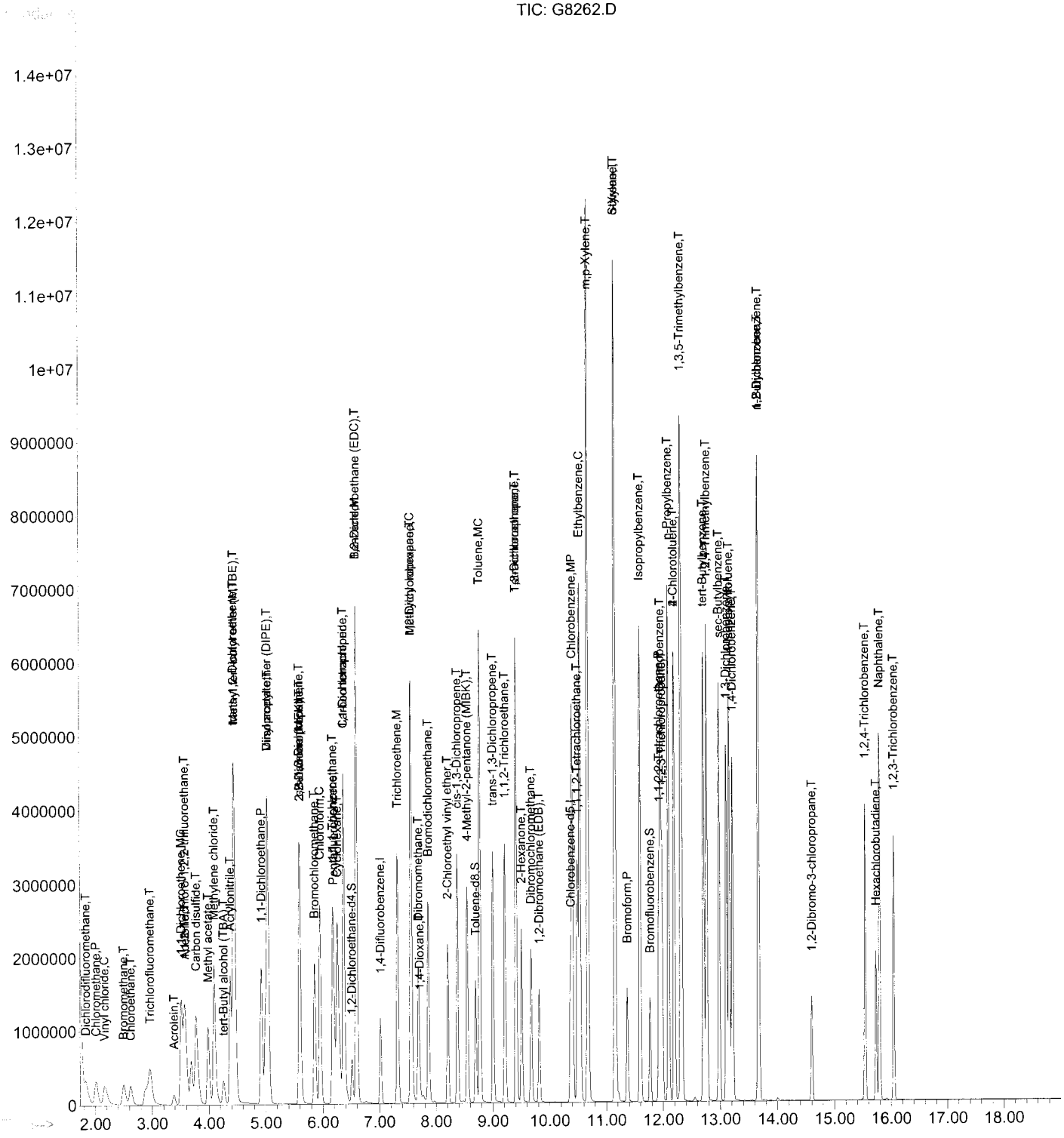
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8262.D
Acq On : 13 Nov 2015 15:52
Operator : Sylvia
Sample : ICC200,ICC200,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 14 08:53:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Fri Nov 13 16:06:31 2015
Response via : Initial Calibration

TIC: G8262.D



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\11-13-15\
Data File : G8264.D
Acq On : 13 Nov 2015 16:49
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 14 10:09:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	111	0.00
2	T	Dichlorodifluoromethane	0.427	0.504	-18.0	117	0.00
3	P	Chloromethane	0.402	0.419	-4.2	108	-0.02
4	C	Vinyl chloride	0.375	0.422	-12.5	116	0.00
5	T	Bromomethane	0.238	0.229	3.8	107	0.00
6	T	Chloroethane	0.238	0.249	-4.6	110	0.00
7	T	Trichlorofluoromethane	0.628	0.702	-11.8	115	0.00
8	T	Acrolein	0.047	0.040	14.9	103	0.00
9	MC	1,1-Dichloroethene	0.463	0.491	-6.0	116	0.00
10	T	Acetone	0.532	0.462	13.2	97	0.00
11	T	Carbon disulfide	1.449	1.570	-8.4	116	0.00
12	T	Vinyl acetate	2.628	2.423	7.8	109	0.00
13	T	Methylene chloride	0.592	0.613	-3.5	112	0.00
14	T	Acrylonitrile	0.413	0.374	9.4	98	0.00
15	T	tert-Butyl alcohol (TBA)	0.123	0.128	-4.1	121	0.00
16	T	trans-1,2-Dichloroethene	0.543	0.546	-0.6	113	0.00
17	T	Methyl tert-butyl ether (MT	2.272	2.346	-3.3	108	0.00
18	P	1,1-Dichloroethane	1.253	1.304	-4.1	112	0.00
19	T	Diisopropyl ether (DIPE)	2.685	2.776	-3.4	109	0.00
20	T	cis-1,2-Dichloroethene	0.656	0.662	-0.9	112	0.00
21	T	2,2-Dichloropropane	0.549	0.301	45.2#	105	0.00
22	T	2-Butanone (MEK)	0.632	0.544	13.9	98	0.00
23	T	Bromochloromethane	0.258	0.263	-1.9	110	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	121	0.00
25	C	Chloroform	1.235	1.278	-3.5	110	0.00
26	T	1,1,1-Trichloroethane	1.046	1.141	-9.1	111	0.00
27	T	Carbon tetrachloride	0.663	0.779	-17.5	117	0.00
28	T	1,1-Dichloropropene	0.871	0.869	0.2	113	0.00
29	T	1,2-Dichloroethane (EDC)	1.365	1.362	0.2	105	0.00
30	S	1,2-Dichloroethane-d4	1.077	1.081	-0.4	109	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	110	0.00
32	M	Benzene	1.330	1.300	2.3	112	0.00
33	M	Trichloroethene	0.387	0.402	-3.9	111	0.00
34	C	1,2-Dichloropropane	0.369	0.373	-1.1	111	0.00
35	T	Dibromomethane	0.242	0.247	-2.1	109	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	86	0.00
37	T	Bromodichloromethane	0.499	0.560	-12.2	109	0.00
38	T	2-Chloroethyl vinyl ether	0.204	0.237	-16.2	99	0.00
39	T	cis-1,3-Dichloropropene	0.561	0.557	0.7	109	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.656	0.673	-2.6	106	0.00
41	S	Toluene-d8	1.306	1.307	-0.1	110	0.00
42	MC	Toluene	0.890	0.867	2.6	110	0.00
43	T	trans-1,3-Dichloropropene	0.564	0.568	-0.7	107	0.00
44	T	1,1,2-Trichloroethane	0.281	0.284	-1.1	110	0.00
45	T	Tetrachloroethene	0.277	0.255	7.9	111	0.00
46	T	1,3-Dichloropropane	0.602	0.584	3.0	109	0.00
47	T	2-Hexanone	0.518	0.508	1.9	106	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\11-13-15\
Data File : G8264.D
Acq On : 13 Nov 2015 16:49
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 14 10:09:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	T	Dibromochloromethane	0.281	0.327	-16.4	109	0.00
49	T	1,2-Dibromoethane (EDB)	0.331	0.337	-1.8	108	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	109	0.00
51	MP	Chlorobenzene	0.847	0.829	2.1	110	0.00
52	T	1,1,1,2-Tetrachloroethane	0.259	0.295	-13.9	109	0.00
53	C	Ethylbenzene	1.737	1.695	2.4	109	0.00
54	T	m,p-Xylene	0.567	0.516	9.0	109	0.00
55	T	o-Xylene	0.566	0.528	6.7	108	0.00
56	T	Styrene	0.933	0.909	2.6	109	0.00
57	P	Bromoform	0.144	0.148	-2.8	112	0.00
58	T	Isopropylbenzene	1.481	1.442	2.6	109	0.00
59	S	Bromofluorobenzene	0.687	0.686	0.1	107	0.00
60	P	1,1,2,2-Tetrachloroethane	0.464	0.443	4.5	108	0.00
61	T	Bromobenzene	0.316	0.299	5.4	108	0.00
62	T	1,2,3-Trichloropropane	0.517	0.510	1.4	108	0.00
63	T	n-Propylbenzene	1.953	1.867	4.4	109	0.00
64	T	2-Chlorotoluene	1.310	1.257	4.0	109	0.00
65	T	1,3,5-Trimethylbenzene	1.260	1.162	7.8	107	0.00
66	T	4-Chlorotoluene	1.310	1.257	4.0	109	0.00
67	T	tert-Butylbenzene	0.987	0.928	6.0	108	0.00
68	T	1,2,4-Trimethylbenzene	1.283	1.203	6.2	107	0.00
69	T	sec-Butylbenzene	1.400	1.319	5.8	109	0.00
70	T	1,3-Dichlorobenzene	0.606	0.556	8.3	107	0.00
71	T	4-Isopropyltoluene	1.075	0.991	7.8	107	0.00
72	T	1,4-Dichlorobenzene	0.602	0.546	9.3	105	0.00
73	T	n-Butylbenzene	1.101	0.993	9.8	108	0.00
74	T	1,2-Dichlorobenzene	0.580	0.514	11.4	106	0.00
75	T	1,2-Dibromo-3-chloropropane	0.114	0.128	-12.3	102	0.00
76	T	1,2,4-Trichlorobenzene	0.351	0.318	9.4	104	0.00
77	T	Hexachlorobutadiene	0.124	0.110	11.3	107	0.00
78	T	Naphthalene	1.087	1.051	3.3	105	0.00
79	T	1,2,3-Trichlorobenzene	0.307	0.274	10.7	105	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.231	0.237	-2.6	121	0.00
81	T	Methyl acetate	0.575	0.544	5.4	100	0.00
82	T	Cyclohexane	0.658	0.699	-6.2	122	0.00
83	T	Methylcyclohexane	0.470	0.448	4.7	121	0.00
84		Pentane	0.000	0.000	0.0	557#	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8264.D
Acq On : 13 Nov 2015 16:49
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 14 10:09:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	499569	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.02	114	906810	50.00	UG		0.00
50) Chlorobenzene-d5	10.36	117	893968	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	539878	50.15	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 100.30%				
41) Toluene-d8	8.70	98	1184774	50.01	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.02%				
59) Bromofluorobenzene	11.77	95	613440	49.91	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 99.82%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	503449	118.10	UG		99
3) Chloromethane	2.00	50	418249	104.05	UG		99
4) Vinyl chloride	2.16	62	421436	112.55	UG		99
5) Bromomethane	2.50	94	228585	96.25	UG		99
6) Chloroethane	2.62	64	248605	104.44	UG	#	100
7) Trichlorofluoromethane	2.95	101	701645m	111.77	UG		
8) Acrolein	3.39	56	119759m	253.58	UG		
9) 1,1-Dichloroethene	3.52	96	490661	106.08	UG	#	100
10) Acetone	3.58	43	461852m	86.85	UG		
11) Carbon disulfide	3.78	76	1568285	108.30	UG		100
12) Vinyl acetate	5.04	43	2421104m	92.20	UG		
13) Methylene chloride	4.10	84	612190	103.58	UG	#	68
14) Acrylonitrile	4.38	53	1119840m	271.23	UG		
15) tert-Butyl alcohol (TBA)	4.25	59	255822m	208.23	UG		
16) trans-1,2-Dichloroethene	4.44	96	545131	100.52	UG	#	68
17) Methyl tert-butyl ether (M	4.45	73	2344396	103.25	UG		100
18) 1,1-Dichloroethane	4.93	63	1302837	104.03	UG		99
19) Diisopropyl ether (DIPE)	5.04	45	2773184	103.36	UG	#	48
20) cis-1,2-Dichloroethene	5.59	96	661077	100.93	UG	#	100
21) 2,2-Dichloropropane	5.60	77	300346	54.79	UG		99
22) 2-Butanone (MEK)	5.61	43	544019	86.18	UG	#	95
23) Bromochloromethane	5.86	128	262665	101.80	UG	#	100
25) Chloroform	5.96	83	1276412	103.45	UG		100
26) 1,1,1-Trichloroethane	6.18	97	1139722	109.09	UG	#	95
27) Carbon tetrachloride	6.37	117	778667	117.56	UG		99
28) 1,1-Dichloropropene	6.37	75	868244	99.74	UG	#	95
29) 1,2-Dichloroethane (EDC)	6.60	62	1360751	99.77	UG	#	99
32) Benzene	6.59	78	2358110	97.79	UG		100
33) Trichloroethene	7.32	95	728910	103.94	UG	#	82
34) 1,2-Dichloropropane	7.56	63	675800	100.85	UG	#	100
35) Dibromomethane	7.69	93	447786	101.92	UG	#	91
36) 1,4-Dioxane	7.71	88	168581m	2889.97	UG		
37) Bromodichloromethane	7.86	83	1014925	112.25	UG	#	99
38) 2-Chloroethyl vinyl ether	8.20	63	430142m	116.27	UG		
39) cis-1,3-Dichloropropene	8.38	75	1010274	99.36	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.55	43	1219916	102.54	UG		97
42) Toluene	8.77	92	1572189	97.41	UG		99
43) trans-1,3-Dichloropropene	9.00	75	1030087	100.66	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	515799	101.27	UG		99

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8264.D
Acq On : 13 Nov 2015 16:49
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 14 10:09:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

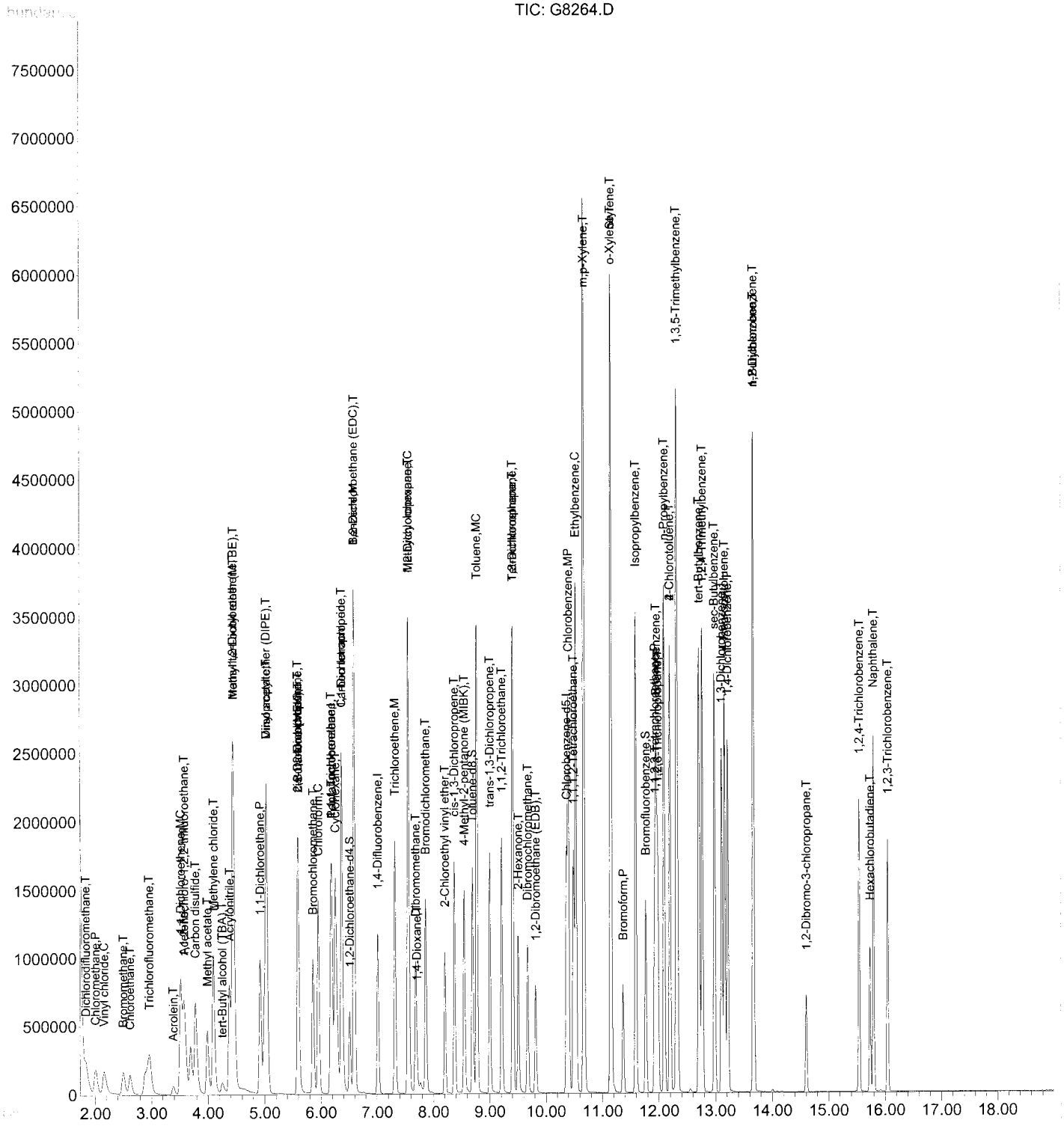
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Tetrachloroethene	9.41	166	462533	91.96	UG	#	100
46) 1,3-Dichloropropane	9.41	76	1058676	97.04	UG		100
47) 2-Hexanone	9.51	43	921023	97.97	UG		95
48) Dibromochloromethane	9.67	129	593102	116.26	UG		100
49) 1,2-Dibromoethane (EDB)	9.82	107	611705	101.79	UG		100
51) Chlorobenzene	10.40	112	1481695	97.90	UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.50	131	528186	113.88	UG	#	99
53) Ethylbenzene	10.54	91	3029884m	97.58	UG		
54) m,p-Xylene	10.68	106	1846722	182.12	UG	#	14
55) o-Xylene	11.14	106	944397	93.35	UG	#	70
56) Styrene	11.16	104	1625728	97.49	UG	#	100
57) Bromoform	11.37	173	263974m	102.27	UG		
58) Isopropylbenzene	11.59	105	2577890	97.35	UG		99
60) 1,1,2,2-Tetrachloroethane	11.93	83	791528	95.46	UG		100
61) Bromobenzene	11.95	156	535373	94.68	UG	#	99
62) 1,2,3-Trichloropropane	11.99	75	911959	98.59	UG	#	1
63) n-Propylbenzene	12.10	91	3338116	95.62	UG	#	98
64) 2-Chlorotoluene	12.20	91	2247587	95.99	UG	#	97
65) 1,3,5-Trimethylbenzene	12.31	105	2078290	92.27	UG		96
66) 4-Chlorotoluene	12.20	91	2247587	95.99	UG	#	97
67) tert-Butylbenzene	12.71	119	1659805	94.04	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	2150186	93.70	UG		96
69) sec-Butylbenzene	12.98	105	2358053	94.21	UG		99
70) 1,3-Dichlorobenzene	13.11	146	994797	91.85	UG	#	100
71) 4-Isopropyltoluene	13.16	119	1771162	92.11	UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	975661	90.64	UG		100
73) n-Butylbenzene	13.67	91	1776213	90.23	UG	#	97
74) 1,2-Dichlorobenzene	13.68	146	919382	88.62	UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	228455	112.40	UG	#	29
76) 1,2,4-Trichlorobenzene	15.54	180	569033	90.78	UG		100
77) Hexachlorobutadiene	15.73	225	196802	88.70	UG		100
78) Naphthalene	15.79	128	1879258	96.72	UG		100
79) 1,2,3-Trichlorobenzene	16.04	180	489453	89.26	UG		100
80) 1,1,2-Trichloro-1,2,2-trif	3.59	101	423165	102.51	UG	#	88
81) Methyl acetate	3.99	43	972441	94.53	UG	#	85
82) Cyclohexane	6.26	56	1249939	106.28	UG	#	74
83) Methylcyclohexane	7.56	83	801280	95.36	UG	#	40

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8264.D
Acq On : 13 Nov 2015 16:49
Operator : Sylvia
Sample : ICV100,ICV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 14 10:09:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8279.D
Acq On : 13 Nov 2015 23:54
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 14 15:44:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	84	0.00
2	T	Dichlorodifluoromethane	0.427	0.468	-9.6	82	0.00
3	P	Chloromethane	0.402	0.368	8.5	72	0.00
4	C	Vinyl chloride	0.375	0.308	17.9	64	0.00
5	T	Bromomethane	0.238	0.219	8.0	77	0.01
6	T	Chloroethane	0.238	0.212	10.9	70	0.02
7	T	Trichlorofluoromethane	0.628	0.585	6.8	72	0.01
8	T	Acrolein	0.047	0.048	-2.1	93	0.00
9	MC	1,1-Dichloroethene	0.463	0.375	19.0	67	0.02
10	T	Acetone	0.532	0.438	17.7	69	0.00
11	T	Carbon disulfide	1.449	1.192	17.7	66	0.01
12	T	Vinyl acetate	2.628	2.750	-4.6	94	-0.04
13	T	Methylene chloride	0.592	0.489	17.4	68	0.01
14	T	Acrylonitrile	0.413	0.382	7.5	76	0.00
15	T	tert-Butyl alcohol (TBA)	0.123	0.118	4.1	84	0.00
16	T	trans-1,2-Dichloroethene	0.543	0.450	17.1	70	0.00
17	T	Methyl tert-butyl ether (MT	2.272	2.065	9.1	72	0.00
18	P	1,1-Dichloroethane	1.253	1.100	12.2	71	0.00
19	T	Diisopropyl ether (DIPE)	2.685	2.422	9.8	72	0.00
20	T	cis-1,2-Dichloroethene	0.656	0.547	16.6	70	0.00
21	T	2,2-Dichloropropane	0.549	0.616	-12.2	162	0.00
22	T	2-Butanone (MEK)	0.632	0.543	14.1	74	0.00
23	T	Bromochloromethane	0.258	0.224	13.2	71	0.00
24	T	Tetrahydrofuran	0.000	0.000	0.0	67	0.01
25	C	Chloroform	1.235	1.148	7.0	74	0.00
26	T	1,1,1-Trichloroethane	1.046	1.071	-2.4	78	0.00
27	T	Carbon tetrachloride	0.663	0.712	-7.4	80	0.00
28	T	1,1-Dichloropropene	0.871	0.751	13.8	74	0.00
29	T	1,2-Dichloroethane (EDC)	1.365	1.332	2.4	77	0.00
30	S	1,2-Dichloroethane-d4	1.077	1.202	-11.6	91	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	83	0.00
32	M	Benzene	1.330	1.077	19.0	70	0.00
33	M	Trichloroethene	0.387	0.328	15.2	68	0.00
34	C	1,2-Dichloropropane	0.369	0.313	15.2	70	0.00
35	T	Dibromomethane	0.242	0.221	8.7	73	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	67	0.00
37	T	Bromodichloromethane	0.499	0.514	-3.0	76	0.00
38	T	2-Chloroethyl vinyl ether	0.204	0.211	-3.4	66	0.00
39	T	cis-1,3-Dichloropropene	0.561	0.548	2.3	81	0.00
40	T	4-Methyl-2-pentanone (MIBK)	0.656	0.589	10.2	70	0.00
41	S	Toluene-d8	1.306	1.303	0.2	82	0.00
42	MC	Toluene	0.890	0.745	16.3	71	0.00
43	T	trans-1,3-Dichloropropene	0.564	0.582	-3.2	83	0.00
44	T	1,1,2-Trichloroethane	0.281	0.245	12.8	71	0.00
45	T	Tetrachloroethene	0.277	0.230	17.0	76	0.00
46	T	1,3-Dichloropropane	0.602	0.516	14.3	72	0.00
47	T	2-Hexanone	0.518	0.486	6.2	76	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8279.D
Acq On : 13 Nov 2015 23:54
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 14 15:44:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
48	T	Dibromochloromethane	0.281	0.295	-5.0	74	0.00
49	T	1,2-Dibromoethane (EDB)	0.331	0.295	10.9	71	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	83	0.00
51	MP	Chlorobenzene	0.847	0.719	15.1	72	0.00
52	T	1,1,1,2-Tetrachloroethane	0.259	0.273	-5.4	77	0.00
53	C	Ethylbenzene	1.737	1.515	12.8	74	0.00
54	T	m,p-Xylene	0.567	0.464	18.2	74	0.00
55	T	o-Xylene	0.566	0.473	16.4	74	0.00
56	T	Styrene	0.933	0.805	13.7	74	0.00
57	P	Bromoform	0.144	0.125	13.2	72	0.00
58	T	Isopropylbenzene	1.481	1.300	12.2	75	0.00
59	S	Bromofluorobenzene	0.687	0.718	-4.5	85	0.00
60	P	1,1,2,2-Tetrachloroethane	0.464	0.417	10.1	77	0.00
61	T	Bromobenzene	0.316	0.272	13.9	74	0.00
62	T	1,2,3-Trichloropropane	0.517	0.455	12.0	73	0.00
63	T	n-Propylbenzene	1.953	1.721	11.9	76	0.00
64	T	2-Chlorotoluene	1.310	1.161	11.4	76	0.00
65	T	1,3,5-Trimethylbenzene	1.260	1.095	13.1	77	0.00
66	T	4-Chlorotoluene	1.310	1.161	11.4	76	0.00
67	T	tert-Butylbenzene	0.987	0.861	12.8	76	0.00
68	T	1,2,4-Trimethylbenzene	1.283	1.145	10.8	77	0.00
69	T	sec-Butylbenzene	1.400	1.211	13.5	76	0.00
70	T	1,3-Dichlorobenzene	0.606	0.525	13.4	76	0.00
71	T	4-Isopropyltoluene	1.075	0.945	12.1	78	0.00
72	T	1,4-Dichlorobenzene	0.602	0.517	14.1	76	0.00
73	T	n-Butylbenzene	1.101	0.992	9.9	82	0.00
74	T	1,2-Dichlorobenzene	0.580	0.476	17.9	74	0.00
75	T	1,2-Dibromo-3-chloropropane	0.114	0.118	-3.5	72	0.00
76	T	1,2,4-Trichlorobenzene	0.351	0.314	10.5	78	0.00
77	T	Hexachlorobutadiene	0.124	0.115	7.3	85	0.00
78	T	Naphthalene	1.087	0.943	13.2	71	0.00
79	T	1,2,3-Trichlorobenzene	0.307	0.263	14.3	76	0.00
80	T	1,1,2-Trichloro-1,2,2-trifl	0.231	0.188	18.6	73	0.02
81	T	Methyl acetate	0.575	0.473	17.7	66	0.00
82	T	Cyclohexane	0.658	0.511	22.3#	68	0.00
83	T	Methylcyclohexane	0.470	0.401	14.7	82	0.00
84		Pentane	0.000	0.000	0.0	243#	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8279.D
Acq On : 13 Nov 2015 23:54
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 14 15:44:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	376254	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.02	114	682954	50.00	UG		0.00
50) Chlorobenzene-d5	10.36	117	679001	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.52	65	452257	55.78	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 111.56%				
41) Toluene-d8	8.70	98	889953	49.88	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.76%				
59) Bromofluorobenzene	11.77	95	487602	52.23	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 104.46%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	352106m	109.67	UG		
3) Chloromethane	2.02	50	277010m	91.50	UG		
4) Vinyl chloride	2.16	62	231820	82.20	UG		99
5) Bromomethane	2.51	94	164766	92.11	UG		98
6) Chloroethane	2.64	64	159241	88.82	UG	#	100
7) Trichlorofluoromethane	2.97	101	440279m	93.12	UG		
8) Acrolein	3.39	56	108052	303.78	UG	#	100
9) 1,1-Dichloroethene	3.53	96	282465	81.08	UG	#	100
10) Acetone	3.58	43	329536	82.28	UG	#	96
11) Carbon disulfide	3.79	76	896631	82.21	UG		100
12) Vinyl acetate	5.00	43	2069093	104.62	UG	#	100
13) Methylene chloride	4.10	84	367751	82.62	UG	#	100
14) Acrylonitrile	4.38	53	862979m	277.52	UG		
15) tert-Butyl alcohol (TBA)	4.25	59	177270m	191.58	UG		
16) trans-1,2-Dichloroethene	4.44	96	338905	82.98	UG	#	68
17) Methyl tert-butyl ether (M	4.46	73	1554243	90.89	UG		100
18) 1,1-Dichloroethane	4.93	63	827883	87.77	UG		100
19) Diisopropyl ether (DIPE)	5.04	45	1822659	90.20	UG	#	48
20) cis-1,2-Dichloroethene	5.60	96	411339	83.38	UG	#	100
21) 2,2-Dichloropropane	5.61	77	463324m	112.22	UG		
22) 2-Butanone (MEK)	5.61	43	408689	85.96	UG	#	94
23) Bromochloromethane	5.87	128	168882	86.90	UG	#	38
25) Chloroform	5.96	83	863620	92.94	UG		100
26) 1,1,1-Trichloroethane	6.18	97	805657	102.39	UG	#	95
27) Carbon tetrachloride	6.37	117	536017	107.45	UG		99
28) 1,1-Dichloropropene	6.37	75	565362	86.24	UG	#	81
29) 1,2-Dichloroethane (EDC)	6.60	62	1002244	97.56	UG	#	86
32) Benzene	6.59	78	1470946	81.00	UG		100
33) Trichloroethene	7.32	95	448110	84.84	UG	#	32
34) 1,2-Dichloropropane	7.56	63	427730	84.75	UG	#	100
35) Dibromomethane	7.69	93	301842	91.22	UG	#	37
36) 1,4-Dioxane	7.71	88	131622m	2995.97	UG		
37) Bromodichloromethane	7.86	83	702505	103.16	UG	#	68
38) 2-Chloroethyl vinyl ether	8.20	63	288175	103.43	UG	#	86
39) cis-1,3-Dichloropropene	8.38	75	748787	97.78	UG	#	98
40) 4-Methyl-2-pentanone (MIBK	8.55	43	804950	89.84	UG		96
42) Toluene	8.77	92	1018238	83.77	UG		99
43) trans-1,3-Dichloropropene	9.01	75	795370	103.20	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	334367	87.16	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8279.D
Acq On : 13 Nov 2015 23:54
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 14 15:44:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

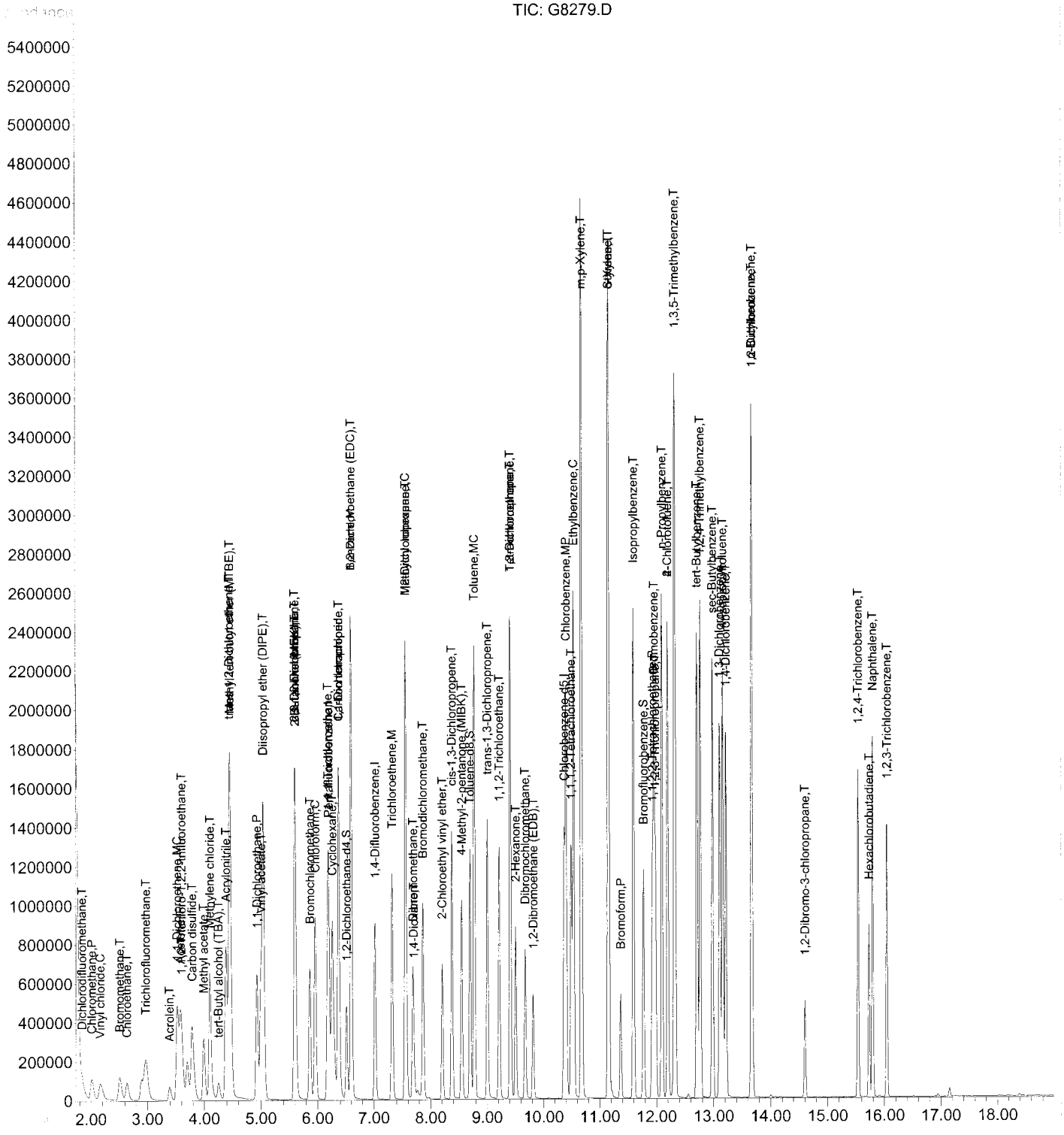
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
45) Tetrachloroethene	9.41	166	314729	83.08	UG	#	99
46) 1,3-Dichloropropane	9.41	76	704384	85.73	UG		100
47) 2-Hexanone	9.51	43	663890	93.77	UG		94
48) Dibromochloromethane	9.67	129	402832	104.85	UG		100
49) 1,2-Dibromoethane (EDB)	9.82	107	403060	89.05	UG		99
51) Chlorobenzene	10.40	112	975822	84.89	UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.50	131	370286	105.11	UG	#	53
53) Ethylbenzene	10.54	91	2057039m	87.22	UG		
54) m,p-Xylene	10.67	106	1259931	163.59	UG	#	14
55) o-Xylene	11.15	106	642010	83.56	UG	#	11
56) Styrene	11.16	104	1093321	86.32	UG	#	100
57) Bromoform	11.37	173	169575m	86.50	UG		
58) Isopropylbenzene	11.59	105	1765703	87.79	UG		99
60) 1,1,2,2-Tetrachloroethane	11.92	83	566899	90.01	UG		99
61) Bromobenzene	11.95	156	369794	86.10	UG	#	100
62) 1,2,3-Trichloropropane	11.98	75	618539	88.04	UG	#	1
63) n-Propylbenzene	12.10	91	2337678	88.16	UG	#	98
64) 2-Chlorotoluene	12.20	91	1577300	88.69	UG	#	97
65) 1,3,5-Trimethylbenzene	12.31	105	1487445	86.94	UG		95
66) 4-Chlorotoluene	12.20	91	1577300	88.69	UG	#	97
67) tert-Butylbenzene	12.71	119	1169366	87.23	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	1555014	89.22	UG		96
69) sec-Butylbenzene	12.98	105	1645132	86.53	UG		99
70) 1,3-Dichlorobenzene	13.11	146	712675	86.63	UG	#	100
71) 4-Isopropyltoluene	13.16	119	1283014	87.85	UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	702743	85.95	UG		100
73) n-Butylbenzene	13.67	91	1347448	90.11	UG	#	97
74) 1,2-Dichlorobenzene	13.68	146	646675	82.07	UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	160549	104.00	UG	#	67
76) 1,2,4-Trichlorobenzene	15.54	180	426672	89.62	UG		100
77) Hexachlorobutadiene	15.73	225	155518	92.29	UG		100
78) Naphthalene	15.79	128	1279937	86.73	UG		100
79) 1,2,3-Trichlorobenzene	16.05	180	357299	85.79	UG		100
80) 1,1,2-Trichloro-1,2,2-trif	3.60	101	255082m	81.36	UG		
81) Methyl acetate	3.99	43	642109	82.18	UG	#	83
82) Cyclohexane	6.26	56	693751	77.66	UG	#	72
83) Methylcyclohexane	7.56	83	544767m	85.36	UG		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8279.D
Acq On : 13 Nov 2015 23:54
Operator : Sylvia
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Nov 14 15:44:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

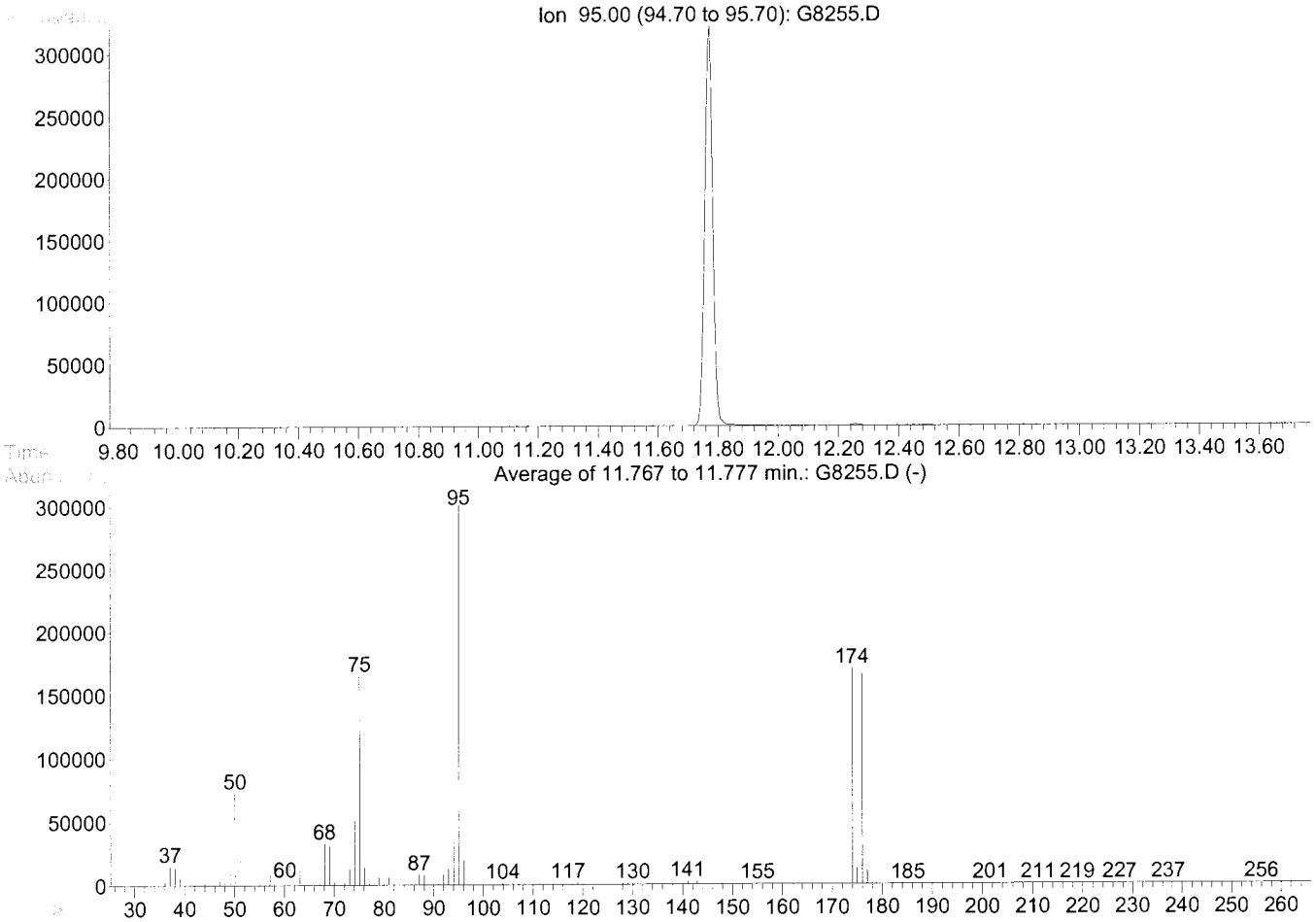


VOLATILE ORGANICS RAW QC DATA

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8255.D
Acq On : 13 Nov 2015 12:33
Operator : Sylvia
Sample : BFBA151113a,BFBA151113a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Sat Nov 14 10:01:02 2015



Spectrum Information: Average of 11.767 to 11.777 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.2	72781	PASS
75	95	30	60	54.8	165290	PASS
95	95	100	100	100.0	301354	PASS
96	95	5	9	6.5	19648	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	56.5	170304	PASS
175	174	5	9	7.2	12315	PASS
176	174	95	101	97.5	165994	PASS
177	176	5	9	6.5	10796	PASS

Average of 11.767 to 11.777 min.: G8255.D
BFBA151113a,BFBA151113a,A,5mL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.20	33	44.00	1573	56.05	5097	66.30	16
36.10	2709	45.10	2937	57.05	8860	67.10	881
37.10	15092	46.05	123	58.00	328	68.05	32864
38.10	13831	47.05	3673	60.05	3161	69.05	31450
39.10	5674	48.05	2117	61.05	15946	70.05	2251
40.00	158	49.10	14611	62.05	15929	71.05	115
41.25	90	50.10	72781	63.05	11390	72.05	1679
42.00	21	51.10	22346	64.05	1078	73.05	12608
42.50	22	52.00	825	64.75	71	74.05	51093
42.95	108	53.00	18	65.30	29	75.10	165290
43.15	72	55.05	922	65.75	55	76.10	13845

Average of 11.767 to 11.777 min.: G8255.D
BFBA151113a,BFBA151113a,A,5mL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
77.05	1362	88.00	7669	103.10	87	112.90	278
77.95	864	90.20	16	103.90	1219	113.50	38
78.95	6237	91.00	938	104.90	281	114.00	24
80.00	1721	92.05	8332	105.90	1065	114.95	257
80.90	6402	93.00	12641	106.95	283	115.90	861
81.95	1119	94.10	33994	108.60	17	117.00	1413
83.00	107	95.10	301354	109.10	19	118.00	702
83.20	54	96.10	19648	109.95	135	118.95	1130
85.40	16	97.05	459	110.80	63	119.85	57
86.10	197	100.80	22	111.05	125	122.05	56
87.00	8203	102.80	52	111.90	161	123.00	85

Average of 11.767 to 11.777 min.: G8255.D
BFBA151113a,BFBA151113a,A,5mL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
123.85	171	130.95	351	141.00	2409	149.90	252
124.75	67	131.80	24	141.95	380	151.00	23
125.00	17	132.40	18	142.95	2345	151.85	127
125.80	37	132.90	37	144.05	190	153.05	201
126.05	63	133.80	40	145.00	250	153.95	158
126.30	28	134.95	403	146.00	362	155.00	461
126.80	20	135.80	66	146.70	39	155.90	28
127.00	53	136.05	52	146.95	247	156.90	336
128.00	790	136.95	311	147.95	533	158.95	234
129.05	368	138.75	72	148.80	116	160.95	292
130.00	905	139.80	156	149.00	95	161.80	23

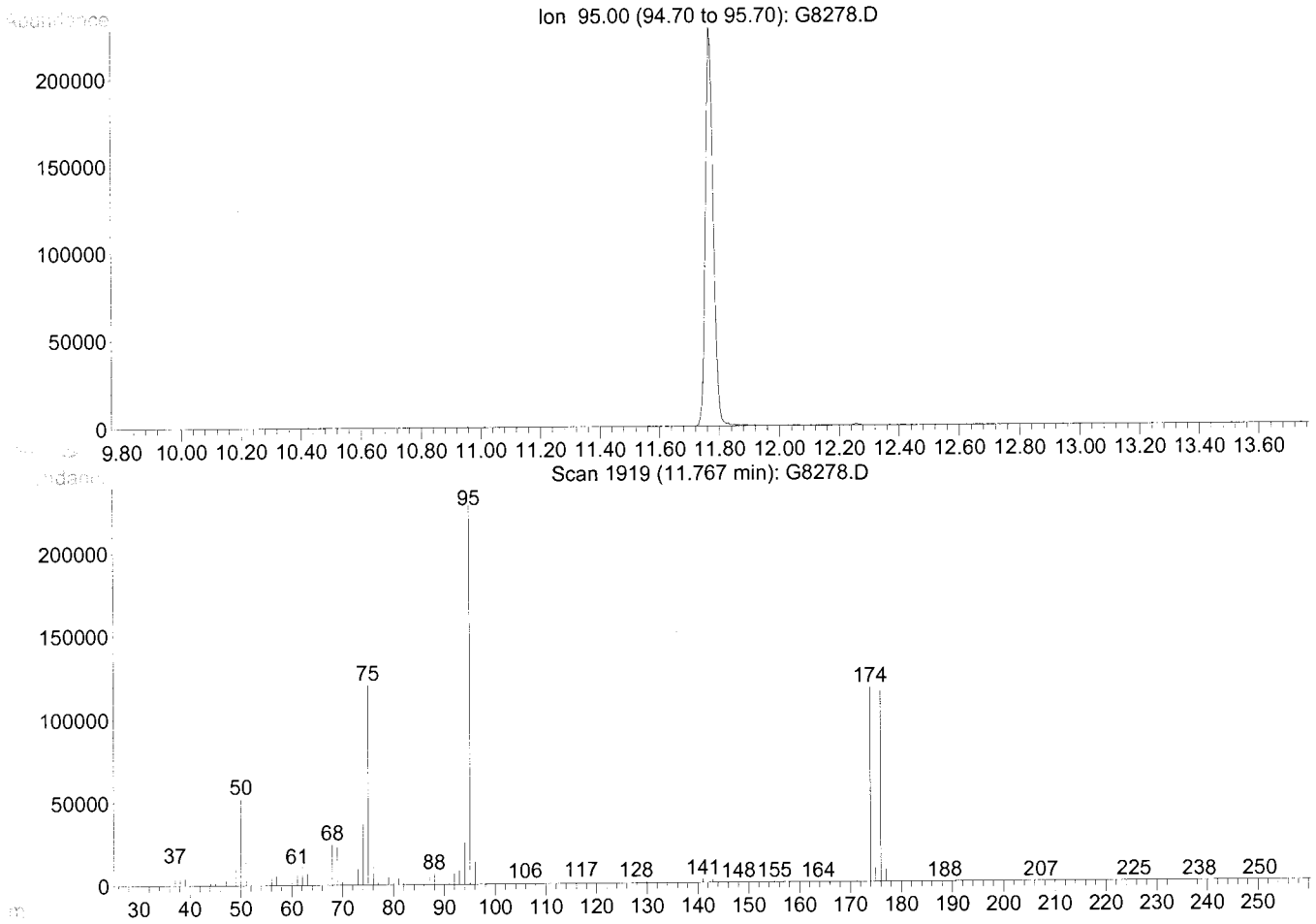
Average of 11.767 to 11.777 min.: G8255.D
BFBA151113a,BFBA151113a,A,5mL,100
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
167.40	22	174.00	170304	194.60	30	227.00	18
169.20	24	174.95	12315	194.90	26	227.40	30
169.40	80	176.00	165994	201.50	35	228.10	18
169.95	82	177.00	10796	206.20	23	237.20	20
170.20	19	177.70	71	207.00	27	250.50	20
170.90	24	178.10	261	207.20	24	256.00	25
171.05	117	178.90	19	211.10	25		
171.40	69	179.20	17	215.70	16		
171.60	56	180.50	16	218.90	31		
172.10	121	180.95	36	219.50	19		
172.40	149	185.10	20	223.00	17		

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8278.D
Acq On : 13 Nov 2015 23:26
Operator : Sylvia
Sample : BFBA151113b,BFBA151113b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 24 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C
Last Update : Sat Nov 14 10:01:02 2015



Spectrum Information: Scan 1919

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.0	52432	PASS
75	95	30	60	52.7	120256	PASS
95	95	100	100	100.0	228352	PASS
96	95	5	9	6.1	13819	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	51.3	117056	PASS
175	174	5	9	7.3	8568	PASS
176	174	95	101	98.2	114904	PASS
177	176	5	9	6.7	7652	PASS

Scan 1919 (11.767 min): G8278.D
BFBA151113b,BFBA151113b,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	99	46.00	166	58.80	55	71.20	73
36.10	1909	47.10	2906	60.10	2298	72.10	915
37.10	11427	48.00	1416	61.10	10506	73.10	9839
38.10	9801	49.10	10979	62.10	11386	74.10	36928
39.10	4274	50.10	52432	63.10	7251	75.10	120256
40.10	174	51.10	16164	64.00	749	76.10	10854
41.10	79	52.10	749	66.10	61	77.00	1276
42.10	65	55.00	602	67.10	557	78.00	428
42.90	137	56.10	4227	68.00	24696	79.00	4606
44.10	1326	57.00	5748	69.00	23232	80.00	989
45.10	2032	58.10	412	70.00	1926	81.00	4072

Scan 1919 (11.767 min): G8278.D
BFBA151113b,BFBA151113b,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.90	782	95.10	228352	112.20	55	124.80	80
83.00	331	96.10	13819	113.00	115	126.00	135
85.60	97	97.10	474	115.00	136	126.80	87
85.80	93	101.50	62	115.90	623	127.90	939
86.10	148	103.00	108	117.00	1337	129.00	271
87.00	6164	103.90	721	118.00	437	129.90	611
88.00	6621	105.10	314	118.90	930	131.00	133
91.00	633	105.90	792	119.90	106	134.00	148
92.00	6773	106.90	193	121.90	92	135.00	207
93.00	8502	110.20	67	122.80	53	136.00	78
94.10	25288	110.90	115	123.90	94	137.00	204

Scan 1919 (11.767 min): G8278.D
BFBA151113b,BFBA151113b,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
137.90	66	150.90	53	161.90	64	177.00	7652
141.00	2169	152.00	54	163.70	81	177.80	186
142.00	114	152.90	146	168.50	61	188.50	88
143.00	1821	153.50	52	168.70	55	193.10	51
143.90	129	154.00	72	170.30	69	207.20	89
145.10	96	155.10	402	170.70	115	209.10	79
146.10	218	157.10	324	171.30	250	211.00	69
146.90	167	158.10	220	172.20	192	219.60	56
148.00	256	159.00	215	174.00	117056	225.50	61
149.00	60	160.20	74	175.00	8568	238.40	51
149.90	192	161.00	182	176.00	114904	250.40	51

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA151113b
Client ID: BLKA151113b
Date Received: NA
Date Analyzed: 11/14/2015
Data file: G8281.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.685
Chloromethane	ND		1.00	0.493
Vinyl chloride	ND		1.00	0.463
Bromomethane	ND		1.00	0.684
Chloroethane	ND		1.00	0.829
Trichlorofluoromethane	ND		1.00	0.813
1,1-Dichloroethene	ND		1.00	0.491
Acetone	ND		5.00	1.43
Carbon disulfide	ND		1.00	0.505
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.544
Methyl tert-butyl ether (MTBE)	ND		1.00	0.491
1,1-Dichloroethane	ND		1.00	0.358
cis-1,2-Dichloroethene	ND		1.00	0.479
2-Butanone (MEK)	ND		1.00	0.872
Bromochloromethane	ND		1.00	0.636
Chloroform	ND		1.00	0.511
1,1,1-Trichloroethane	ND		1.00	0.485
Carbon tetrachloride	ND		1.00	0.668
1,2-Dichloroethane (EDC)	ND		1.00	0.573
Benzene	ND		1.00	0.388
Trichloroethene	ND		1.00	0.357
1,2-Dichloropropane	ND		1.00	0.556
1,4-Dioxane	ND		200	82.7
Bromodichloromethane	ND		1.00	0.526
cis-1,3-Dichloropropene	ND		1.00	0.441
4-Methyl-2-pentanone (MIBK)	ND		1.00	0.867

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA151113b
Client ID: BLKA151113b
Date Received: NA
Date Analyzed: 11/14/2015
Data file: G8281.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
Toluene	ND		1.00	0.370
trans-1,3-Dichloropropene	ND		1.00	0.416
1,1,2-Trichloroethane	ND		1.00	0.633
Tetrachloroethene	ND		1.00	0.495
2-Hexanone	ND		1.00	0.693
Dibromochloromethane	ND		1.00	0.516
1,2-Dibromoethane (EDB)	ND		1.00	0.677
Chlorobenzene	ND		1.00	0.395
Ethylbenzene	ND		1.00	0.420
Total Xylenes	ND		2.00	1.04
Styrene	ND		1.00	0.370
Bromoform	ND		1.00	0.663
Isopropylbenzene	ND		1.00	0.581
1,1,2,2-Tetrachloroethane	ND		1.00	0.691
1,3-Dichlorobenzene	ND		1.00	0.416
1,4-Dichlorobenzene	ND		1.00	0.409
1,2-Dichlorobenzene	ND		1.00	0.401
1,2-Dibromo-3-chloropropane	ND		1.00	0.930
1,2,4-Trichlorobenzene	ND		1.00	0.483
1,2,3-Trichlorobenzene	ND		1.00	0.449
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.972
Methyl acetate	ND		1.00	0.897
Cyclohexane	ND		2.00	0.818
Methylcyclohexane	ND		1.00	0.773
1,3-Dichloropropene (cis- and trans-)	ND		1.00	0.441

Total Target Compounds (52): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA151113b
Client ID: BLKA151113b
Date Received: NA
Date Analyzed: 11/14/2015
Data file: G8281.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8281.D
Acq On : 14 Nov 2015 00:51
Operator : Sylvia
Sample : BLKA151113b,BLKA151113b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Nov 14 13:52:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.20	168	479616	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	843360	50.00	UG	0.00
50) Chlorobenzene-d5	10.37	117	824728	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	477075	46.16	UG	0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 92.32%			
41) Toluene-d8	8.70	98	1084690	49.23	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.46%			
59) Bromofluorobenzene	11.77	95	554281	48.88	UG	0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 97.76%			

Target Compounds	Qvalue

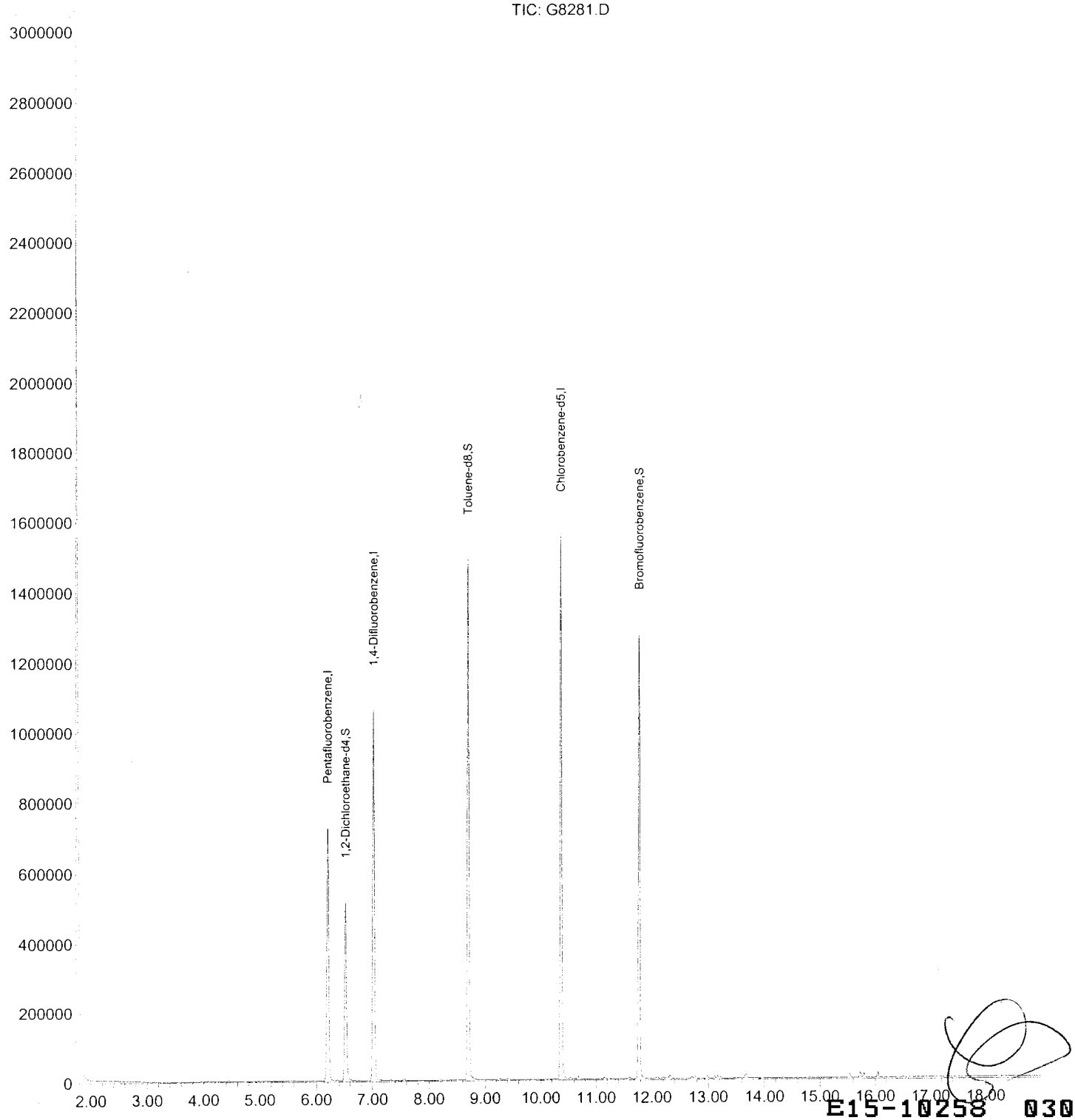
(#) = qualifier out of range (m) = manual integration (+) = signals summed

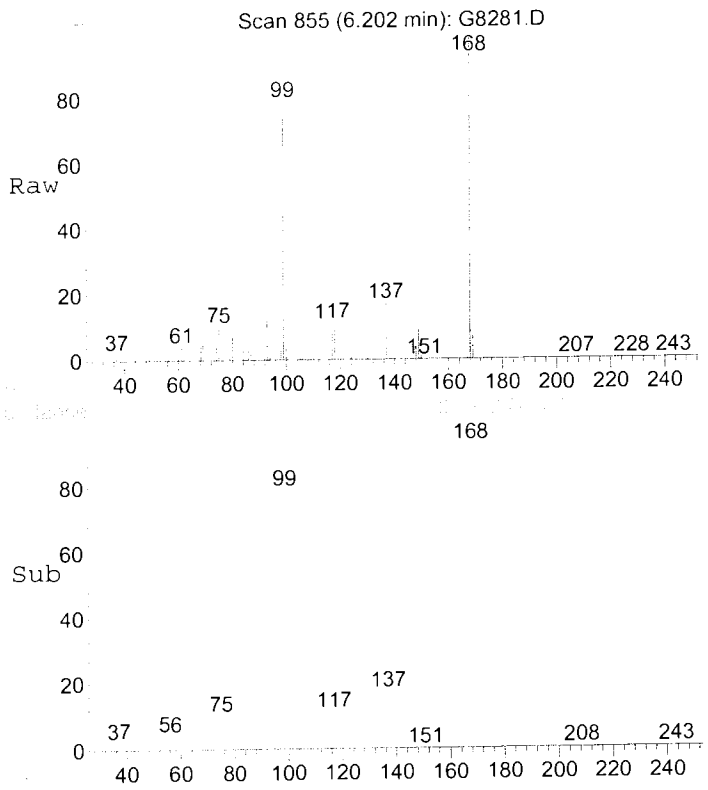
E15-10258 0300

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8281.D
Acq On : 14 Nov 2015 00:51
Operator : Sylvia
Sample : BLKA151113b,BLKA151113b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Nov 14 13:52:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

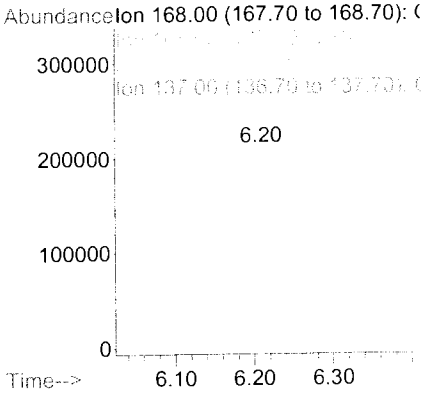


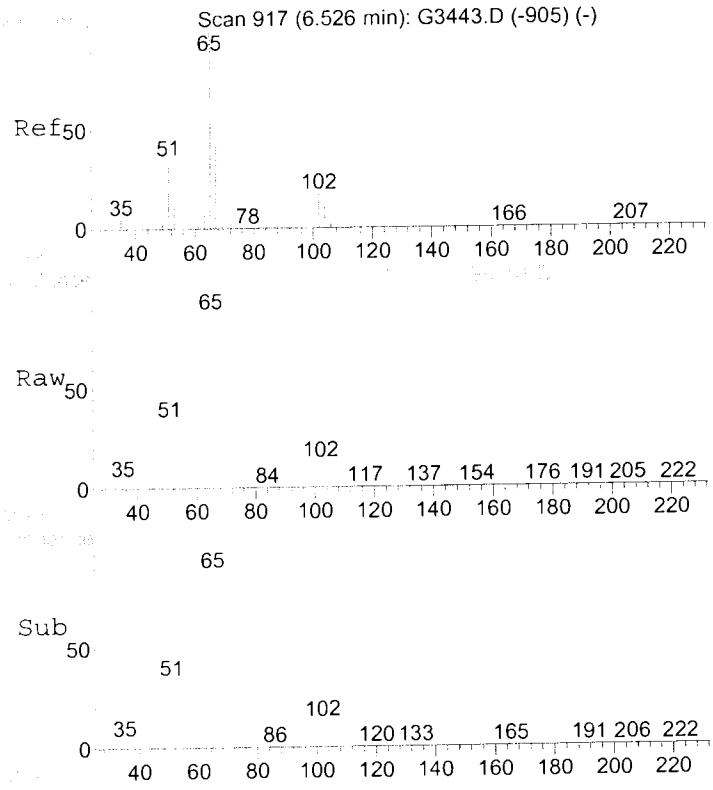


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.20 min Scan# 855
Delta R.T. 0.01 min
Lab File: G8281.D
Acq: 14 Nov 2015 00:51

Tgt Ion:168 Resp: 479616

Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	81.6	0.0	0.0#
137	17.1	0.0	0.0#

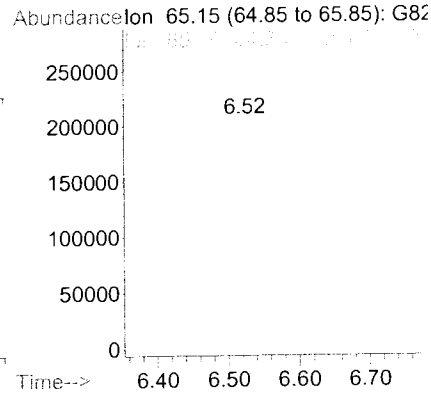


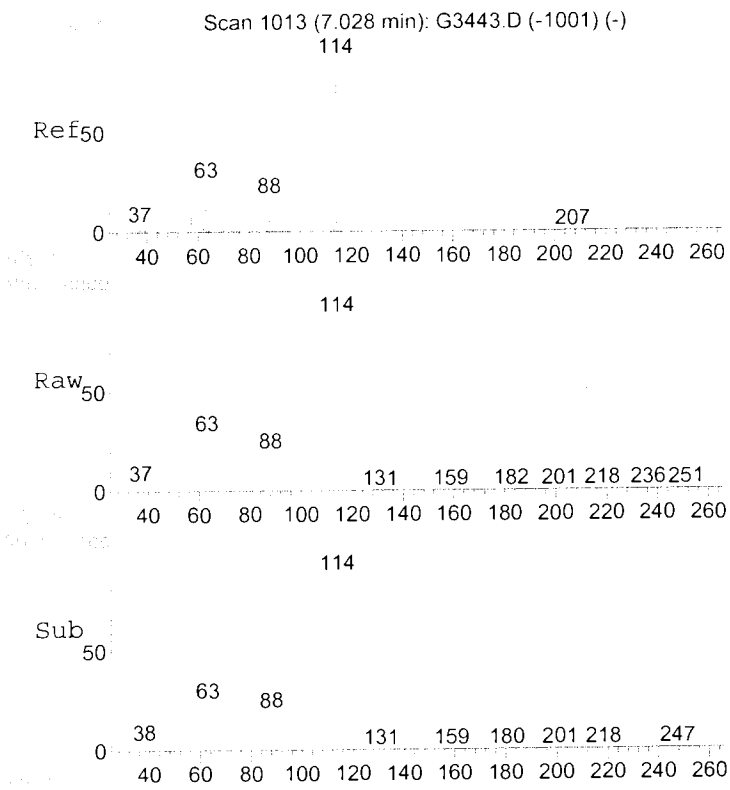


#30
1,2-Dichloroethane-d4
Concen: 46.16 UG
RT: 6.52 min Scan# 915
Delta R.T. 0.01 min
Lab File: G8281.D
Acq: 14 Nov 2015 00:51

Tgt Ion: 65 Resp: 477075

Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	45.9	43.2	64.8

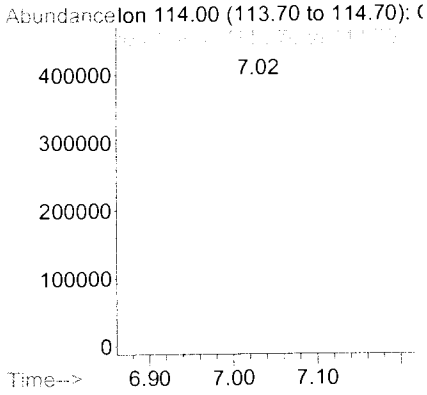


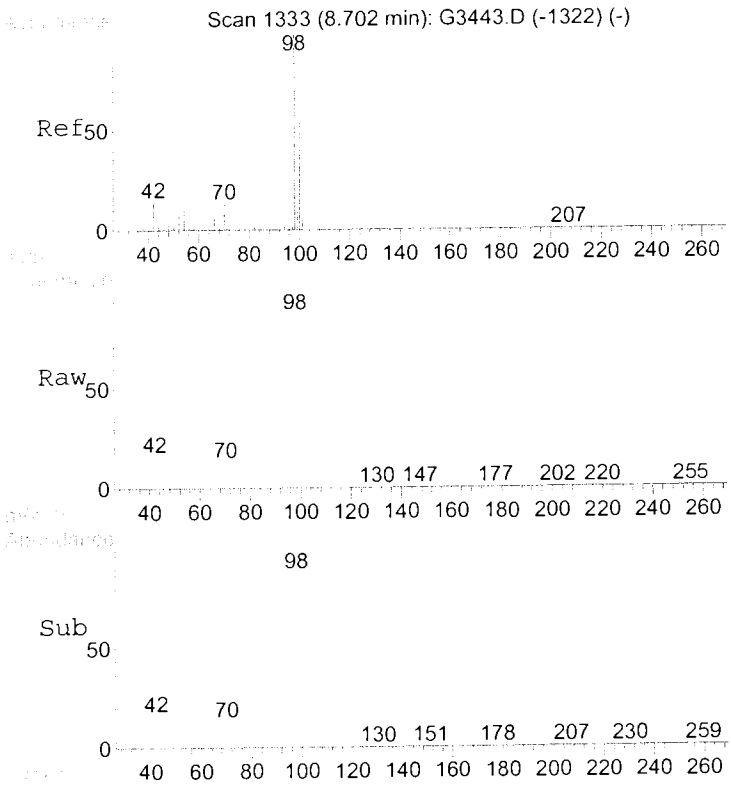


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.02 min Scan# 1012
Delta R.T. 0.01 min
Lab File: G8281.D
Acq: 14 Nov 2015 00:51

Tgt Ion:114 Resp: 843360

Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

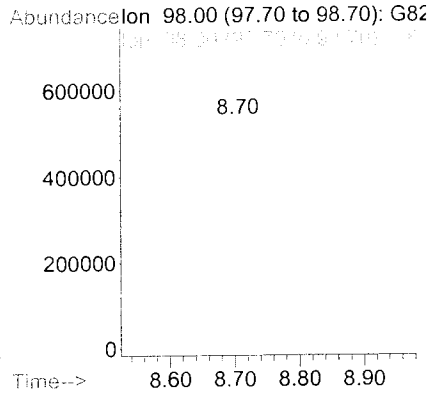


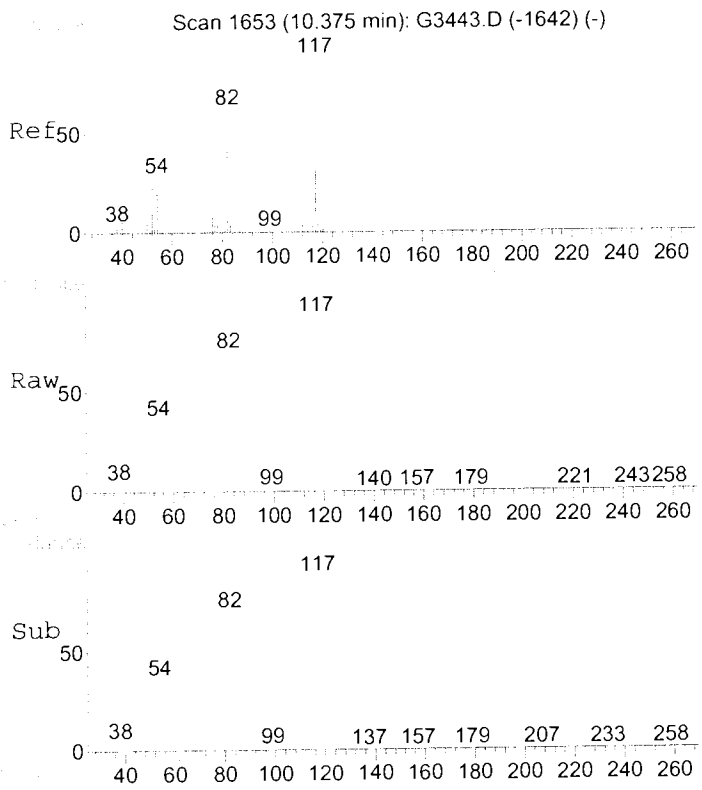


#41
Toluene-d8
Concen: 49.23 UG
RT: 8.70 min Scan# 1332
Delta R.T. 0.00 min
Lab File: G8281.D
Acq: 14 Nov 2015 00:51

Tgt Ion: 98 Resp: 1084690

Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	59.5	53.4	80.0

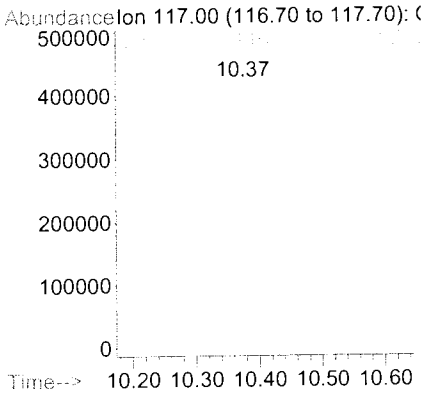


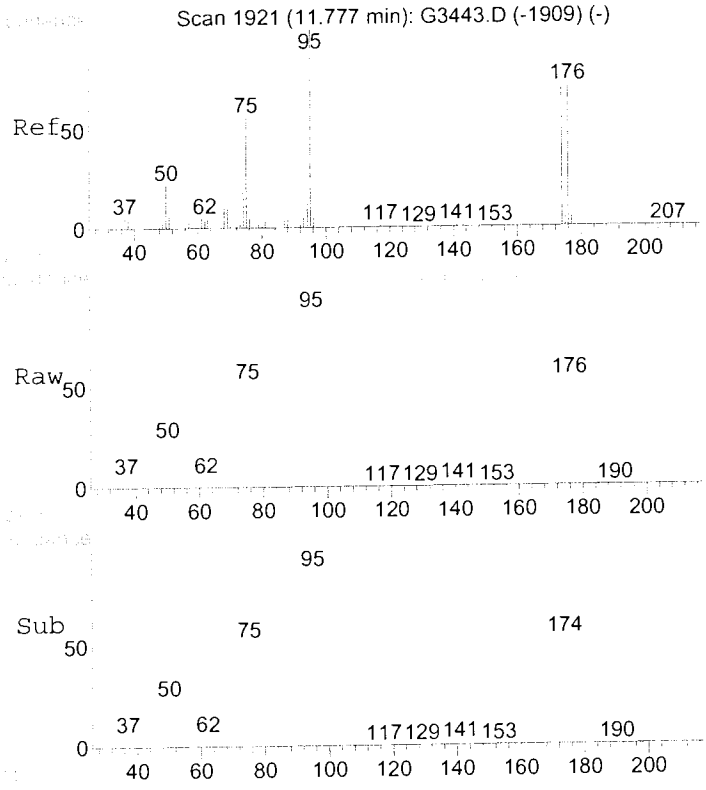


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.37 min Scan# 1652
Delta R.T. 0.00 min
Lab File: G8281.D
Acq: 14 Nov 2015 00:51

Tgt Ion:117 Resp: 824728

Ion	Ratio	Lower	Upper
117	100		
117	100.0	80.0	120.0

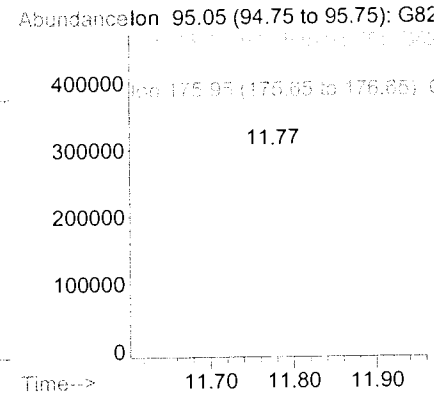




#59
Bromofluorobenzene
Concen: 48.88 UG
RT: 11.77 min Scan# 1920
Delta R.T. 0.00 min
Lab File: G8281.D
Acq: 14 Nov 2015 00:51

Tgt Ion: 95 Resp: 554281

Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	55.6	62.9	94.3#
176	53.7	60.5	90.7#



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8281.D
Acq On : 14 Nov 2015 00:51
Operator : Sylvia
Sample : BLKA151113b,BLKA151113b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 27 Sample Multiplier: 1

Integration Parameters: LSCINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.1 Max Peaks: 100
Stop Thrs : 0.1 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 1

Method : C:\MSDCHEM\1\METHODS\G8111315.M
Title : VOLATILE ORGANICS BY EPA METHOD 8260C

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.196	842	854	877	rBV	724611	1686402	55.48%	12.269%
2	6.516	902	915	944	rBV	512178	1188567	39.10%	8.647%
3	7.023	1000	1012	1032	rBV	1059756	2283129	75.10%	16.611%
4	8.697	1318	1332	1366	rBV	1488794	3039919	100.00%	22.117%
5	10.365	1640	1651	1678	rBV	1552104	3031311	99.72%	22.054%
6	11.772	1909	1920	1943	rBV	1271683	2416366	79.49%	17.580%
7	13.665	2269	2282	2299	rBV4	14665	36474	1.20%	0.265%
8	15.731	2667	2677	2683	rBV4	17571	31528	1.04%	0.229%
9	16.045	2728	2737	2754	rVB3	16927	31143	1.02%	0.227%

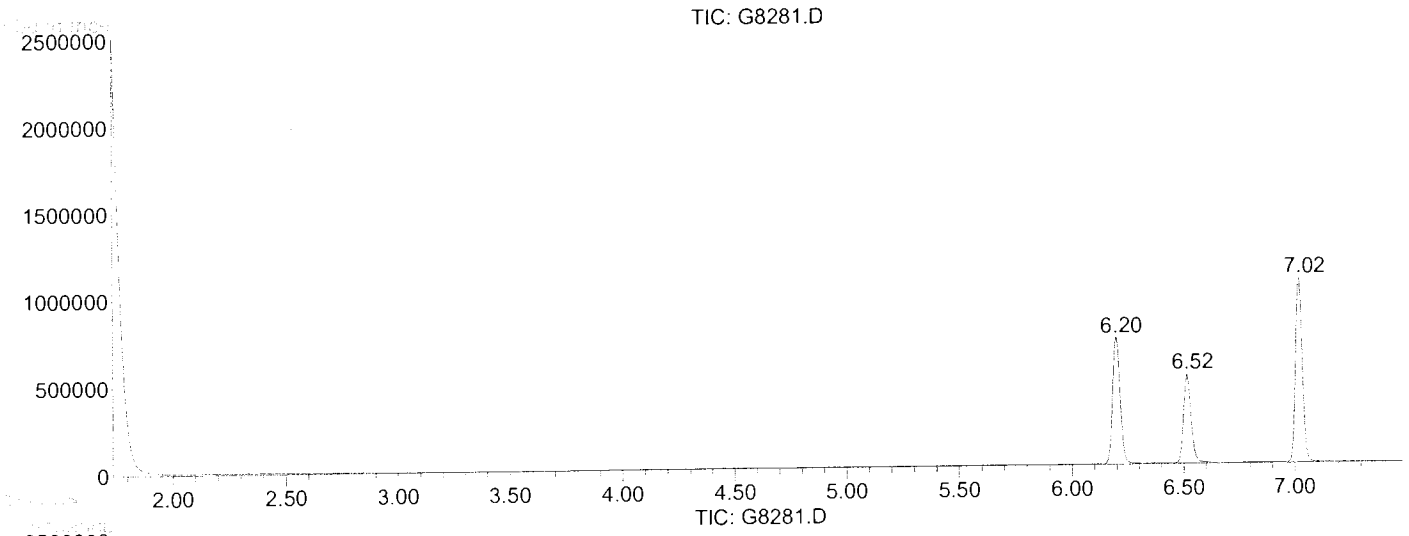
Sum of corrected areas: 13744839

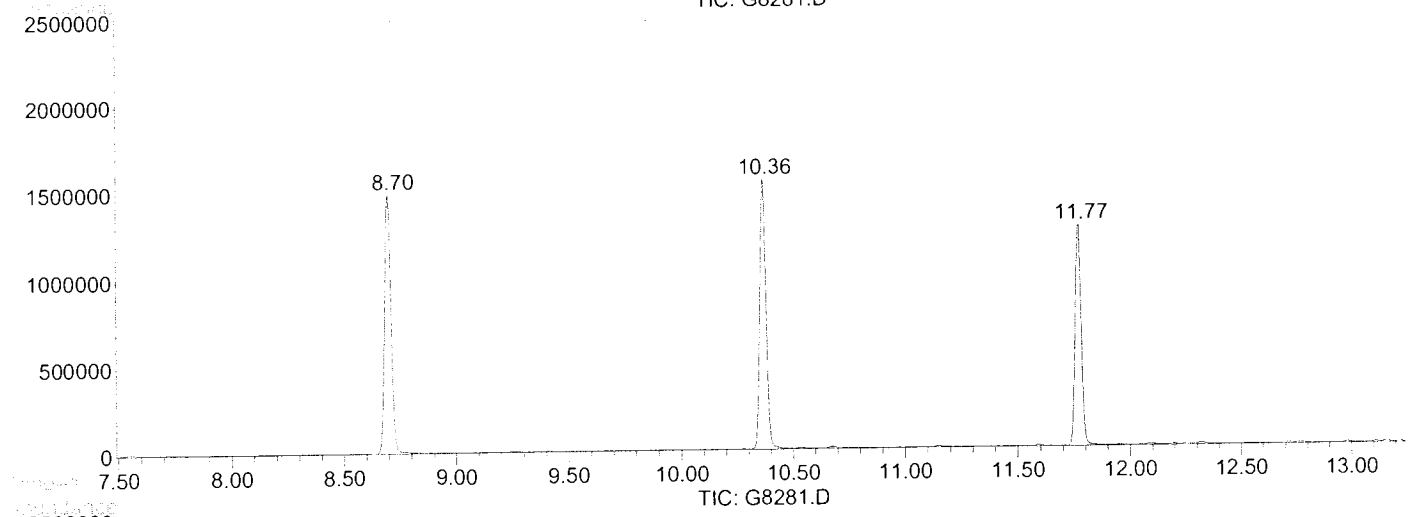
LSC Report - Integrated Chromatogram

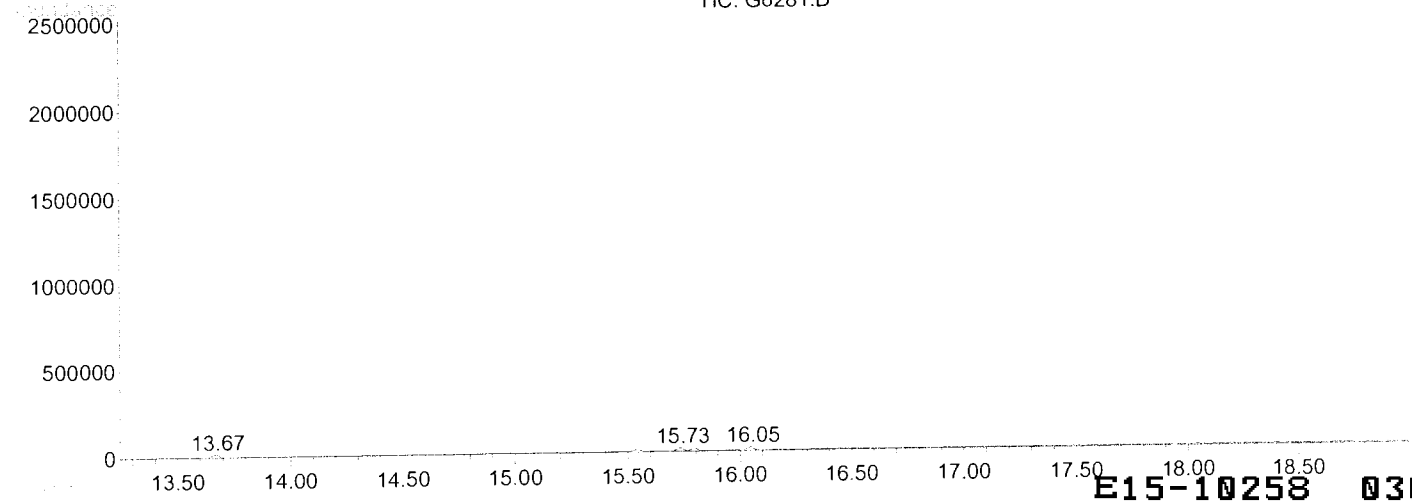
Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8281.D
Acq On : 14 Nov 2015 00:51
Operator : Sylvia
Sample : BLKA151113b,BLKA151113b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 27 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P







Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8300.D
Acq On : 14 Nov 2015 9:49
Operator : Sylvia
Sample : LCSA151113b,LCSA151113b,A,5mL,100
Misc : NA
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Nov 14 15:00:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	355199	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.02	114	626422	50.00	UG		0.00
50) Chlorobenzene-d5	10.36	117	620083	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.51	65	425524	55.59	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 111.18%				
41) Toluene-d8	8.70	98	818412	50.01	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.02%				
59) Bromofluorobenzene	11.77	95	454425	53.30	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 106.60%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	160645	53.00	UG		100
3) Chloromethane	2.00	50	132952	46.52	UG		100
4) Vinyl chloride	2.15	62	140110	52.63	UG		99
5) Bromomethane	2.49	94	86258	51.08	UG		99
6) Chloroethane	2.62	64	90567	53.51	UG	#	100
7) Trichlorofluoromethane	2.95	101	161354	36.15	UG	#	75
8) Acrolein	3.38	56	46700	139.08	UG	#	100
9) 1,1-Dichloroethene	3.52	96	170471	51.83	UG	#	100
10) Acetone	3.58	43	168263	44.50	UG	#	86
11) Carbon disulfide	3.78	76	515704	50.09	UG		100
12) Vinyl acetate	5.04	43	920241m	49.29	UG		
13) Methylene chloride	4.09	84	212850	50.65	UG	#	68
14) Acrylonitrile	4.38	53	558458	190.24	UG	#	100
15) tert-Butyl alcohol (TBA)	4.25	59	72367	82.85	UG	#	100
16) trans-1,2-Dichloroethene	4.43	96	198257	51.42	UG	#	68
17) Methyl tert-butyl ether (M	4.45	73	881798	54.62	UG		100
18) 1,1-Dichloroethane	4.93	63	481145	54.04	UG	#	97
19) Diisopropyl ether (DIPE)	5.04	45	1051865	55.14	UG	#	48
20) cis-1,2-Dichloroethene	5.59	96	241123	51.77	UG	#	100
21) 2,2-Dichloropropane	5.60	77	162765	41.76	UG		98
22) 2-Butanone (MEK)	5.61	43	209893	46.77	UG	#	94
23) Bromochloromethane	5.86	128	98083	53.46	UG	#	100
25) Chloroform	5.96	83	498595	56.84	UG		100
26) 1,1,1-Trichloroethane	6.18	97	471020	63.41	UG	#	94
27) Carbon tetrachloride	6.37	117	263323m	55.92	UG		
28) 1,1-Dichloropropene	6.37	75	337634	54.55	UG	#	94
29) 1,2-Dichloroethane (EDC)	6.60	62	588021	60.63	UG	#	99
32) Benzene	6.59	78	855832	51.38	UG		100
33) Trichloroethene	7.32	95	282701	58.36	UG	#	81
34) 1,2-Dichloropropane	7.56	63	246979	53.35	UG	#	100
35) Dibromomethane	7.69	93	171401	56.48	UG	#	90
36) 1,4-Dioxane	7.71	88	56893	1411.86	UG	#	100
37) Bromodichloromethane	7.86	83	390905	62.58	UG	#	100
38) 2-Chloroethyl vinyl ether	8.20	63	149276	58.41	UG	#	96
39) cis-1,3-Dichloropropene	8.38	75	373953	53.24	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.55	43	455190	55.39	UG		96
42) Toluene	8.77	92	589486	52.87	UG		100
43) trans-1,3-Dichloropropene	9.01	75	393512	55.67	UG	#	70
44) 1,1,2-Trichloroethane	9.21	83	192791	54.79	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8300.D
Acq On : 14 Nov 2015 9:49
Operator : Sylvia
Sample : LCSA151113b,LCSA151113b,A,5mL,100
Misc : NA
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Nov 14 15:00:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
45) Tetrachloroethene	9.41	166	186266	53.61 UG	#	100
46) 1,3-Dichloropropane	9.41	76	404485	53.67 UG		100
47) 2-Hexanone	9.51	43	345262	53.17 UG		94
48) Dibromochloromethane	9.67	129	221480	62.85 UG		100
49) 1,2-Dibromoethane (EDB)	9.81	107	231658	55.80 UG		99
51) Chlorobenzene	10.40	112	564403	53.76 UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.49	131	209870	65.23 UG	#	99
53) Ethylbenzene	10.53	91	1176953m	54.65 UG		
54) m,p-Xylene	10.67	106	734269	104.40 UG	#	14
55) o-Xylene	11.15	106	375668	53.54 UG	#	11
56) Styrene	11.16	104	630729	54.53 UG	#	100
57) Bromoform	11.37	173	83165m	46.45 UG		
58) Isopropylbenzene	11.59	105	1025754	55.85 UG		99
60) 1,1,2,2-Tetrachloroethane	11.92	83	297564	51.74 UG		100
61) Bromobenzene	11.95	156	214831	54.77 UG	#	99
62) 1,2,3-Trichloropropane	11.98	75	357019	55.64 UG	#	1
63) n-Propylbenzene	12.09	91	1332313	55.02 UG	#	98
64) 2-Chlorotoluene	12.20	91	902173	55.55 UG	#	97
65) 1,3,5-Trimethylbenzene	12.31	105	858676	54.96 UG		96
66) 4-Chlorotoluene	12.20	91	902173	55.55 UG	#	97
67) tert-Butylbenzene	12.71	119	691627	56.50 UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	883596	55.51 UG		96
69) sec-Butylbenzene	12.98	105	964006	55.52 UG		99
70) 1,3-Dichlorobenzene	13.11	146	406581	54.12 UG	#	100
71) 4-Isopropyltoluene	13.16	119	741295	55.58 UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	402386	53.89 UG		99
73) n-Butylbenzene	13.67	91	744968	54.56 UG	#	97
74) 1,2-Dichlorobenzene	13.67	146	385768	53.61 UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	87816	62.29 UG	#	66
76) 1,2,4-Trichlorobenzene	15.54	180	235572	54.18 UG		100
77) Hexachlorobutadiene	15.73	225	84746	55.07 UG		100
78) Naphthalene	15.79	128	721661	53.55 UG		100
79) 1,2,3-Trichlorobenzene	16.04	180	200704	52.77 UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.58	101	157996	55.18 UG	#	87
81) Methyl acetate	3.99	43	357643	50.12 UG	#	83
82) Cyclohexane	6.26	56	447632	54.87 UG	#	73
83) Methylcyclohexane	7.56	83	301731	51.77 UG	#	33

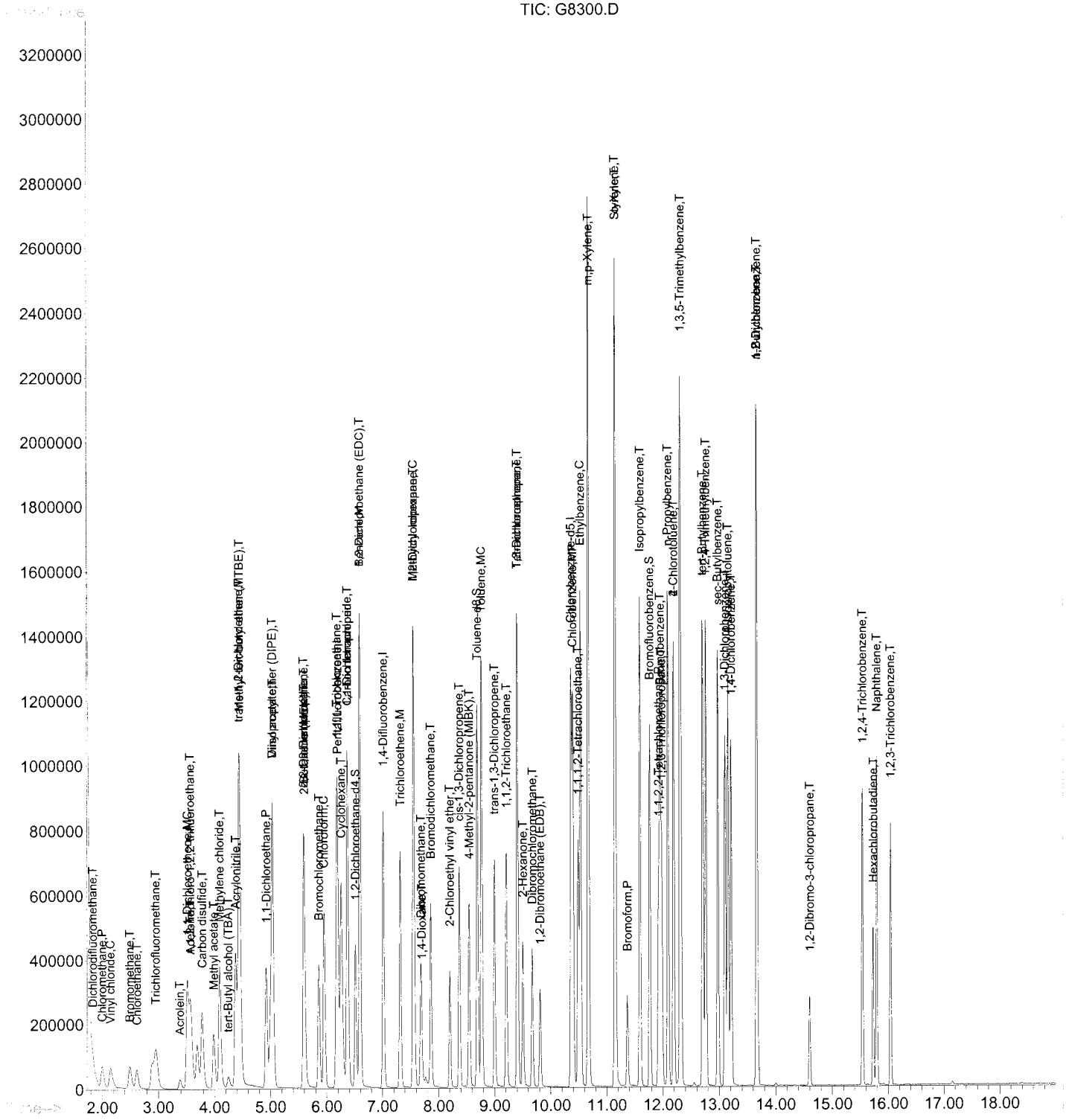
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8300.D
Acq On : 14 Nov 2015 9:49
Operator : Sylvia
Sample : LCSA151113b,LCSA151113b,A,5mL,100
Misc : NA
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Nov 14 15:00:09 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

TIC: G8300.D



E15-10258

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8301.D
Acq On : 14 Nov 2015 10:18
Operator : Sylvia
Sample : 10258-001MS,10258-001MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Nov 14 15:35:05 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	380455	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.02	114	657970	50.00	UG		0.00
50) Chlorobenzene-d5	10.36	117	668074	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.51	65	448409	54.69	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 109.38%				
41) Toluene-d8	8.70	98	861764	50.14	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.28%				
59) Bromofluorobenzene	11.77	95	481531	52.42	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 104.84%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	119067	36.68	UG		100
3) Chloromethane	2.00	50	129974	42.46	UG		99
4) Vinyl chloride	2.16	62	136485	47.86	UG		99
5) Bromomethane	2.50	94	86300	47.71	UG		98
6) Chloroethane	2.62	64	88470	48.80	UG	#	100
7) Trichlorofluoromethane	2.95	101	247123m	51.69	UG		
8) Acrolein	3.38	56	48765	135.58	UG	#	100
9) 1,1-Dichloroethene	3.52	96	160512	45.57	UG	#	100
10) Acetone	3.57	43	192202	47.46	UG	#	96
11) Carbon disulfide	3.78	76	497649	45.13	UG		100
12) Vinyl acetate	5.04	43	905627	45.29	UG	#	100
13) Methylene chloride	4.10	84	211116	46.90	UG	#	68
14) Acrylonitrile	4.38	53	532801m	169.45	UG		
15) tert-Butyl alcohol (TBA)	4.25	59	86150	92.08	UG	#	100
16) trans-1,2-Dichloroethene	4.44	96	195925	47.44	UG	#	100
17) Methyl tert-butyl ether (M	4.45	73	885635	51.22	UG		100
18) 1,1-Dichloroethane	4.93	63	472411	49.53	UG		100
19) Diisopropyl ether (DIPE)	5.04	45	1037570	50.78	UG		92
20) cis-1,2-Dichloroethene	5.59	96	237501	47.61	UG	#	100
21) 2,2-Dichloropropane	5.60	77	148581	35.59	UG		98
22) 2-Butanone (MEK)	5.61	43	221122	46.00	UG	#	94
23) Bromochloromethane	5.86	128	97558	49.65	UG	#	99
25) Chloroform	5.96	83	495662	52.75	UG		100
26) 1,1,1-Trichloroethane	6.18	97	455042	57.19	UG	#	82
27) Carbon tetrachloride	6.37	117	299580	59.39	UG		100
28) 1,1-Dichloropropene	6.36	75	320898	48.41	UG	#	81
29) 1,2-Dichloroethane (EDC)	6.60	62	581943	56.02	UG	#	99
32) Benzene	6.59	78	842552	48.16	UG		100
33) Trichloroethene	7.32	95	277130	54.46	UG	#	81
34) 1,2-Dichloropropane	7.56	63	247761	50.96	UG	#	100
35) Dibromomethane	7.69	93	173303	54.37	UG	#	89
36) 1,4-Dioxane	7.71	88	66871m	1579.91	UG		
37) Bromodichloromethane	7.86	83	396396	60.42	UG	#	69
39) cis-1,3-Dichloropropene	8.38	75	376109	50.98	UG	#	97
40) 4-Methyl-2-pentanone (MIBK	8.54	43	462813	53.61	UG		96
42) Toluene	8.77	92	576875	49.26	UG		99
43) trans-1,3-Dichloropropene	9.01	75	397432	53.53	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	190872	51.65	UG		99
45) Tetrachloroethene	9.41	166	180071	49.34	UG	#	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8301.D
Acq On : 14 Nov 2015 10:18
Operator : Sylvia
Sample : 10258-001MS,10258-001MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Nov 14 15:35:05 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) 1,3-Dichloropropane	9.41	76	408489	51.60	UG		100
47) 2-Hexanone	9.51	43	357278	52.38	UG		94
48) Dibromochloromethane	9.67	129	227226	61.39	UG		100
49) 1,2-Dibromoethane (EDB)	9.81	107	230955	52.96	UG		100
51) Chlorobenzene	10.40	112	557245	49.27	UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.49	131	206575	59.60	UG	#	100
53) Ethylbenzene	10.53	91	1156078	49.82	UG		97
54) m,p-Xylene	10.67	106	731575	96.54	UG	#	14
55) o-Xylene	11.14	106	378250	50.03	UG	#	11
56) Styrene	11.16	104	639170	51.29	UG	#	100
57) Bromoform	11.36	173	116037m	60.16	UG		
58) Isopropylbenzene	11.59	105	1010162	51.05	UG		99
60) 1,1,2,2-Tetrachloroethane	11.92	83	301237	48.61	UG		99
61) Bromobenzene	11.95	156	214513	50.76	UG	#	100
62) 1,2,3-Trichloropropane	11.98	75	363220	52.54	UG	#	1
63) n-Propylbenzene	12.10	91	1321452	50.65	UG	#	98
64) 2-Chlorotoluene	12.20	91	895966	51.20	UG	#	97
65) 1,3,5-Trimethylbenzene	12.31	105	861344	51.17	UG		96
66) 4-Chlorotoluene	12.20	91	895966	51.20	UG	#	97
67) tert-Butylbenzene	12.71	119	681209	51.65	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	890336	51.92	UG		96
69) sec-Butylbenzene	12.98	105	950665	50.82	UG		99
70) 1,3-Dichlorobenzene	13.11	146	411787	50.87	UG	#	99
71) 4-Isopropyltoluene	13.16	119	732765	51.00	UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	403640	50.18	UG		100
73) n-Butylbenzene	13.67	91	752208	51.13	UG	#	97
74) 1,2-Dichlorobenzene	13.67	146	385554	49.73	UG	#	81
75) 1,2-Dibromo-3-chloropropan	14.60	75	90195	59.38	UG	#	29
76) 1,2,4-Trichlorobenzene	15.54	180	240420	51.33	UG		99
77) Hexachlorobutadiene	15.73	225	83957	50.64	UG		100
78) Naphthalene	15.79	128	746580	51.42	UG		100
79) 1,2,3-Trichlorobenzene	16.04	180	212275	51.80	UG		99
80) 1,1,2-Trichloro-1,2,2-trif	3.59	101	122688	39.77	UG	#	88
81) Methyl acetate	3.98	43	373803	48.62	UG	#	82
82) Cyclohexane	6.26	56	364782	41.50	UG	#	72
83) Methylcyclohexane	7.56	83	243176	38.73	UG	#	28

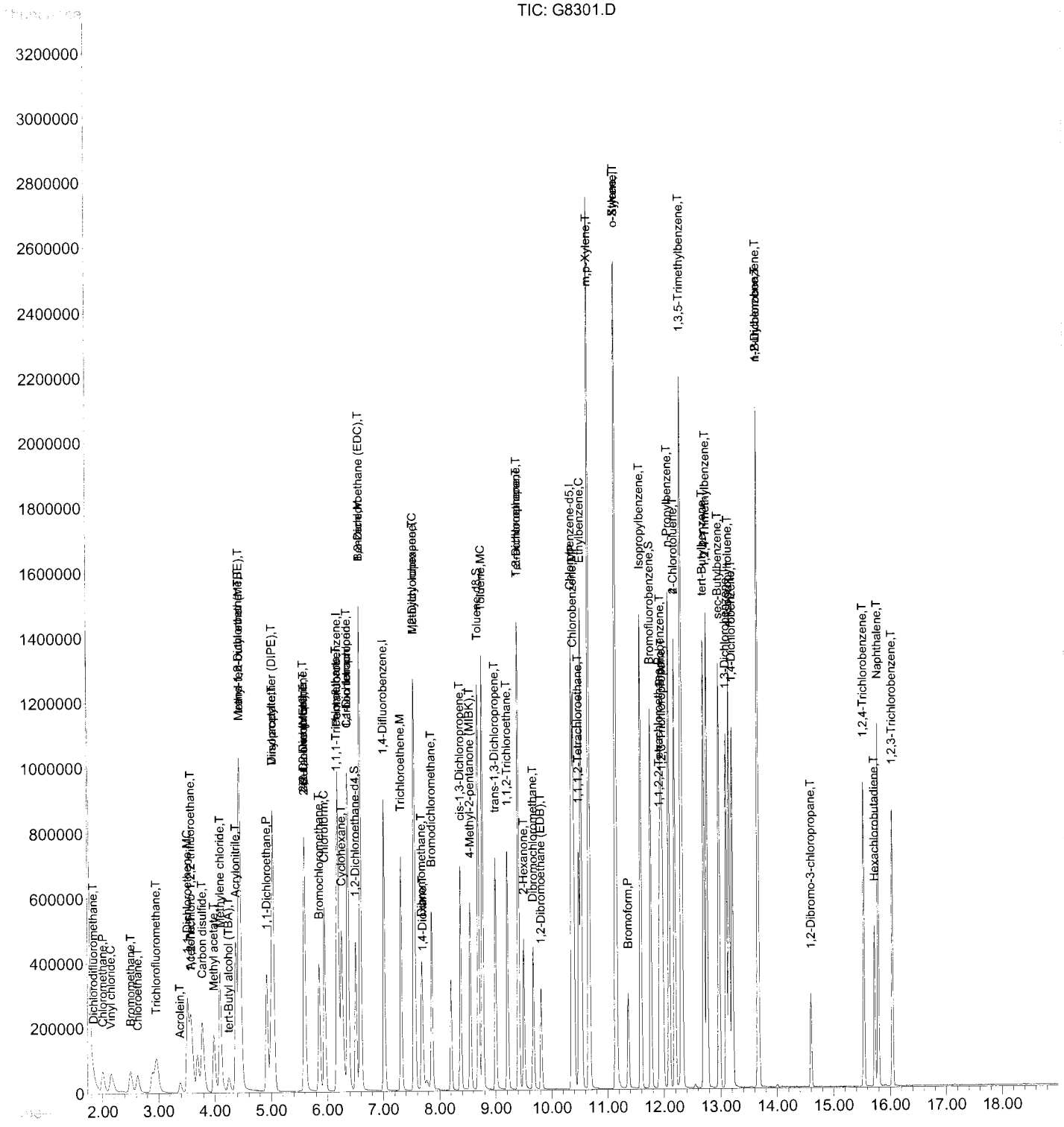
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8301.D
Acq On : 14 Nov 2015 10:18
Operator : Sylvia
Sample : 10258-001MS,10258-001MS,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Nov 14 15:35:05 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

TIC: G8301.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8302.D
Acq On : 14 Nov 2015 10:46
Operator : Sylvia
Sample : 10258-001MSD,10258-001MSD,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 14 15:35:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.20	168	358028	50.00	UG		0.00
31) 1,4-Difluorobenzene	7.02	114	625364	50.00	UG		0.00
50) Chlorobenzene-d5	10.36	117	632094	50.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.51	65	426108	55.23	UG		0.00
Spiked Amount 50.000	Range 69 - 166		Recovery = 110.46%				
41) Toluene-d8	8.70	98	825267	50.52	UG		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.04%				
59) Bromofluorobenzene	11.77	95	460035	52.94	UG		0.00
Spiked Amount 50.000	Range 66 - 120		Recovery = 105.88%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.84	85	128623	42.10	UG		99
3) Chloromethane	2.00	50	137167	47.61	UG		100
4) Vinyl chloride	2.15	62	137586	51.27	UG		99
5) Bromomethane	2.50	94	85026	49.95	UG		99
6) Chloroethane	2.62	64	89567	52.50	UG	#	100
7) Trichlorofluoromethane	2.95	101	248327m	55.20	UG		
8) Acrolein	3.39	56	45001	132.96	UG	#	100
9) 1,1-Dichloroethene	3.52	96	160778	48.50	UG	#	100
10) Acetone	3.58	43	179170	47.01	UG	#	96
11) Carbon disulfide	3.78	76	502731	48.44	UG		100
12) Vinyl acetate	5.04	43	881654m	46.85	UG		
13) Methylene chloride	4.10	84	210487	49.69	UG	#	100
14) Acrylonitrile	4.38	53	511830m	172.97	UG		
15) tert-Butyl alcohol (TBA)	4.25	59	77381	87.89	UG	#	100
16) trans-1,2-Dichloroethene	4.44	96	191790	49.35	UG	#	100
17) Methyl tert-butyl ether (M	4.45	73	884719	54.37	UG		100
18) 1,1-Dichloroethane	4.93	63	472220	52.61	UG		99
19) Diisopropyl ether (DIPE)	5.04	45	1039265	54.05	UG	#	48
20) cis-1,2-Dichloroethene	5.60	96	241067	51.35	UG	#	100
21) 2,2-Dichloropropane	5.60	77	144166	36.70	UG		99
22) 2-Butanone (MEK)	5.61	43	220133	48.66	UG	#	86
23) Bromochloromethane	5.86	128	98612	53.33	UG	#	38
25) Chloroform	5.96	83	492206	55.66	UG		100
26) 1,1,1-Trichloroethane	6.18	97	448284	59.87	UG	#	94
27) Carbon tetrachloride	6.37	117	303871	64.02	UG		99
28) 1,1-Dichloropropene	6.36	75	326559	52.35	UG	#	81
29) 1,2-Dichloroethane (EDC)	6.60	62	578616	59.19	UG	#	99
32) Benzene	6.59	78	848858	51.05	UG		100
33) Trichloroethene	7.32	95	273131	56.48	UG	#	82
34) 1,2-Dichloropropane	7.56	63	250106	54.12	UG	#	99
35) Dibromomethane	7.69	93	173372	57.22	UG	#	89
36) 1,4-Dioxane	7.71	88	57134	1420.24	UG	#	100
37) Bromodichloromethane	7.86	83	391824	62.84	UG	#	100
39) cis-1,3-Dichloropropene	8.38	75	374825	53.46	UG	#	98
40) 4-Methyl-2-pentanone (MIBK	8.54	43	466497	56.86	UG		96
42) Toluene	8.77	92	573913	51.56	UG		99
43) trans-1,3-Dichloropropene	9.01	75	393638	55.78	UG	#	77
44) 1,1,2-Trichloroethane	9.21	83	190486	54.23	UG		99
45) Tetrachloroethene	9.41	166	180518	52.04	UG	#	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8302.D
Acq On : 14 Nov 2015 10:46
Operator : Sylvia
Sample : 10258-001MSD,10258-001MSD,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 14 15:35:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) 1,3-Dichloropropane	9.41	76	410937	54.62	UG		100
47) 2-Hexanone	9.51	43	355490	54.83	UG	#	94
48) Dibromochloromethane	9.67	129	224811	63.90	UG		100
49) 1,2-Dibromoethane (EDB)	9.81	107	234173	56.50	UG		100
51) Chlorobenzene	10.40	112	560269	52.35	UG	#	73
52) 1,1,1,2-Tetrachloroethane	10.49	131	208981	63.72	UG	#	100
53) Ethylbenzene	10.53	91	1165662m	53.10	UG		
54) m,p-Xylene	10.67	106	728669	101.63	UG	#	14
55) o-Xylene	11.14	106	371850	51.99	UG	#	11
56) Styrene	11.16	104	638778	54.18	UG	#	100
57) Bromoform	11.37	173	106066m	58.12	UG		
58) Isopropylbenzene	11.59	105	1005046	53.68	UG		99
60) 1,1,2,2-Tetrachloroethane	11.92	83	304872	52.00	UG		99
61) Bromobenzene	11.95	156	215963	54.01	UG	#	100
62) 1,2,3-Trichloropropane	11.98	75	361622	55.29	UG	#	1
63) n-Propylbenzene	12.09	91	1307480	52.97	UG	#	98
64) 2-Chlorotoluene	12.20	91	896843	54.17	UG		97
65) 1,3,5-Trimethylbenzene	12.31	105	853731	53.60	UG		95
66) 4-Chlorotoluene	12.20	91	896843	54.17	UG		97
67) tert-Butylbenzene	12.71	119	670595	53.74	UG	#	1
68) 1,2,4-Trimethylbenzene	12.77	105	871392	53.71	UG		96
69) sec-Butylbenzene	12.98	105	939106	53.06	UG		99
70) 1,3-Dichlorobenzene	13.11	146	403299	52.66	UG	#	100
71) 4-Isopropyltoluene	13.16	119	724643	53.30	UG	#	99
72) 1,4-Dichlorobenzene	13.22	146	399637	52.51	UG		100
73) n-Butylbenzene	13.67	91	733650	52.71	UG	#	97
74) 1,2-Dichlorobenzene	13.67	146	387000	52.76	UG	#	94
75) 1,2-Dibromo-3-chloropropan	14.60	75	91185	63.45	UG	#	67
76) 1,2,4-Trichlorobenzene	15.54	180	240883	54.35	UG		100
77) Hexachlorobutadiene	15.73	225	83899	53.48	UG		100
78) Naphthalene	15.79	128	762863	55.53	UG		100
79) 1,2,3-Trichlorobenzene	16.05	180	211593	54.58	UG		100
80) 1,1,2-Trichloro-1,2,2-trif	3.58	101	132830	45.51	UG	#	87
81) Methyl acetate	3.99	43	369492	50.80	UG	#	82
82) Cyclohexane	6.26	56	390707	46.98	UG	#	73
83) Methylcyclohexane	7.56	83	257219	43.29	UG	#	29

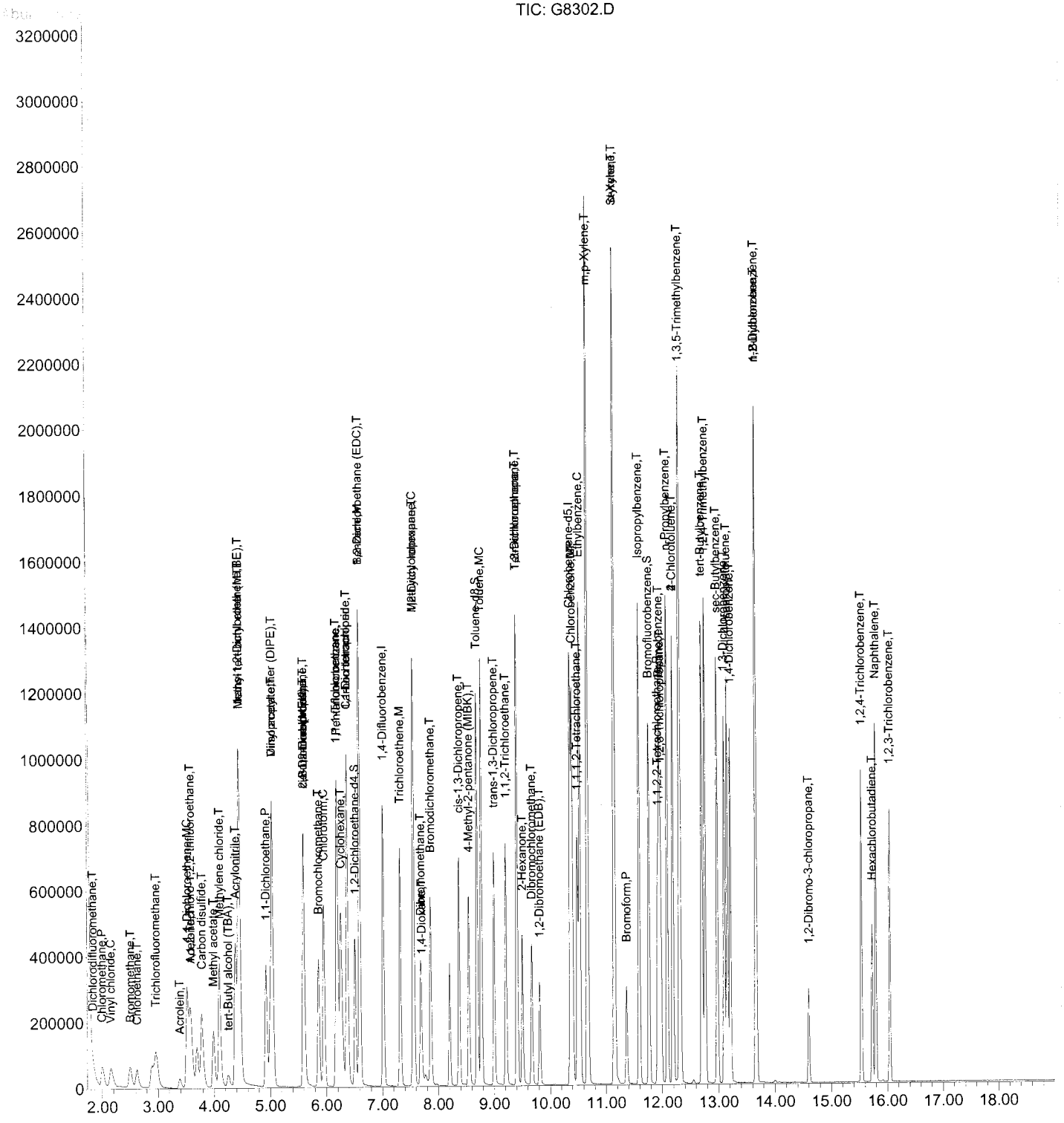
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-13-15\
Data File : G8302.D
Acq On : 14 Nov 2015 10:46
Operator : Sylvia
Sample : 10258-001MSD,10258-001MSD,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 14 15:35:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\G8111315.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 8260C
QLast Update : Sat Nov 14 10:01:02 2015
Response via : Initial Calibration

TIC: G8302.D



VOLATILE ORGANICS RUN LOGS
STANDARD PREP LOGS

LABORATORY CHRONICLE - GC/MS VOA (Aq)

DATE: 11/13/2015 8:20

INSTRUMENT: MSD-G

TUNE FILE: BFB_VO-

SEQUENCE FILE:

METHOD/CAL FILE: 8260C

ANALYST: Sylvia DeVoogt

FRACTION: 8260

BATCH:

STANDARD	LOG #	CONC.
BFB	L2593	25µg/mL
ISTD/SURR	L2594	15 150 µg/mL
Primary Mix	L2596	40 µg/mL
MTBE/TBA		200/400 µg/mL
Primary Ac/Ac	L2587	1000 µg/mL
1,4-DIOXANE	L2577	10,000 µg/mL
Secondary Mix	L2591	40 µg/mL
Secondary Ac/Ac	L2592	40 µg/mL
Nitrobenzene (524.2)		1000 µg/mL

Vial #	Data File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	VIAL #	pH<2?	Status
1	G8255	BFBA151113a		5	100		8260C			12:33
2	G8256	ICC001		5	100		8260C			OK
3	G8257	ICC002		5	100		8260C			OK
4	G8258	ICC005		5	100		8260C			OK
5	G8259	ICC020		5	100		8260C			OK
6	G8260	ICC100		5	100		8260C			OK
7	G8261	ICC150		5	100		8260C			OK
8	G8262	ICC200		5	100		8260C			OK
9	G8263	BLK		5	100		8260C			OK
10	G8264	ICV100		5	100		8260C			OK
11	G8265	BLK		5	100		8260C			OK
12	G8266	BLKA151113a		5	100		8260C			OK
13	G8267	10156	32	5	100	TCL VO + 15	8260C	2	YES	OK
14	G8268	10324	21	5	100	TCL VO + 15	8260C	2	YES	OK
15	G8269		22	5	100	TCL VO + 15	8260C	2	YES	OK
16	G8270	10355	1	5	100	TCL VO + 15	8260C	2	YES	OK
17	G8271	10201	1	5	100	y Level TCL VO for 8260+8011	8260C/8011	2	YES	OK
18	G8272	10096	1	5	100	TCL VO + 15	8260C	2	YES	OK
19	G8273	10217	1	0.25	100	TCL VO + 15	8260C	2	YES	OK
20	G8274	10295	1	5	100	TCL VO + 15	8260C	2	YES	OK
21	G8275	LCSA151113a		5	100		8260C			OK
22	G8276	10355-001MS		5	100		8260C			OK
23	G8277	10355-001MSD		5	100		8260C			OK

LABORATORY CHRONICLE - GC/MS VOA (Aq)

DATE: 11/13/2015 8:20

INSTRUMENT: MSD-G

TUNE FILE: BFB_VO-

SEQUENCE FILE:

METHOD/CAL FILE: 8260C

ANALYST: Sylvia DeVoogt

FRACTION: 8260

BATCH:

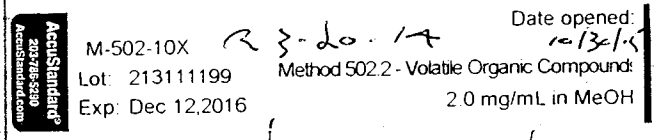
STANDARD	LOG #	CONC.
BFB	L2593	25µg/mL
ISTD/SURR	L2594	15 150 µg/mL
Primary Mix	L2596	40 µg/mL
MTBE/TBA		200/400 µg/mL
Primary Ac/Ac	L2587	1000 µg/mL
1,4-DIOXANE	L2577	10,000 µg/mL
Secondary Mix	L2591	40 µg/mL
Secondary Ac/Ac	L2592	40 µg/mL
Nitrobenzene (524.2)		1000 µg/mL

Vial #	Data File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	VIAL #	pH<2?	Status
24	G8278	BFBA151113b		5	100		8260C			23:26
25	G8279	CCV100		5	100		8260C			OK
26	G8280	BLK		5	100		8260C			
27	G8281	BLKA151113b		5	100		8260C			OK
28	G8282	10258	2	5	100	TCL VO + 15	8260C	2	YES	OK
29	G8283		10	5	100	TCL VO + 15	8260C	2	YES	OK
30	G8284		13	5	100	TCL VO + 15	8260C	2	YES	OK
31	G8285		17	5	100	TCL VO + 15	8260C	2	YES	OK
32	G8286		18	5	100	TCL VO + 15	8260C	2	YES	OK
33	G8287		19	5	100	TCL VO + 15	8260C	2	YES	OK
34	G8288		1	5	100	TCL VO + 15	8260C	2	YES	OK
35	G8289		3	5	100	TCL VO + 15	8260C	2	YES	OK
36	G8290		4	5	100	TCL VO + 15	8260C	2	YES	OK
37	G8291		5	5	100	TCL VO + 15	8260C	2	YES	OK
38	G8292		6	5	100	TCL VO + 15	8260C	2	YES	OK
39	G8293		7	5	100	TCL VO + 15	8260C	2	YES	OK
40	G8294		8	5	100	TCL VO + 15	8260C	2	YES	OK
41	G8295		9	5	100	TCL VO + 15	8260C	2	YES	OK
42	G8296		11	5	100	TCL VO + 15	8260C	2	YES	OK
43	G8297		12	5	100	TCL VO + 15	8260C	2	YES	OK
44	G8298		14	5	100	TCL VO + 15	8260C	2	YES	OK
45	G8299		15	5	100	TCL VO + 15	8260C	2	YES	OK
46	G8300	LCSA151113b		5	100		8260C			OK
47	G8301	10258-001MS		5	100		8260C			OK
48	G8302	10258-001MSD		5	100		8260C			OK
49	G8303	10258	16	5	100	TCL VO + 15	8260C	2	YES	OK

L2597 250 ppm Screen STD working solution
10/13/15 5 mL (cat# VO-I4LN1-2) (lot# TS150527001) at two ug/mL
exp 1/13/16 dilut in to 1mL MeoH.

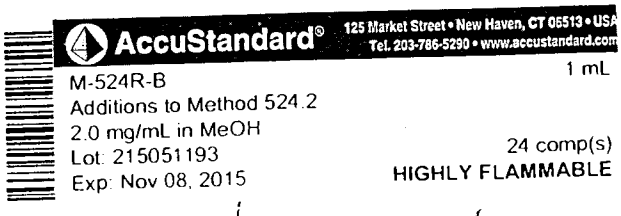
L2598 1,4-Dioxane @ 10000ppm EC5-A-DOX
5 ml of EC5-A-DOX Lot: 11712 exp.
10/13/15
11/17/15

L2599 5ml Secondary Standard @ 20 ppm
RS
10/30/15



0.1 ml of M-502-10X into 10 mls of MeOH
RS expires 1/30/16

L2600 5ml REV4 Secondary Std @ 20 ppm
RS
10/30/15



1 ml of M-524R-B into 10 mls of MeOH
expires 1/30/16

L2586 5X4.2 IS/Surr for 4100 @ 5 ppm

625 µl of ECS-A-034 5X4.2 IS/Surr
@ 2000 ppm lot ISSM12 exp 8-26-16
opened 1/21/15 received 1-21-15

into 250 mls MeOH

expires 10/21/15

L2587 primary AC/AC working std. @ 1000 ug/mL
1 ml of M-603-M5X @ 5.0 mg/ml diluted in to 5 ml MeOH,

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA
Tel. 203-786-5290 • www.accustandard.com

M-603-M-5X 1 mL
Acrolein & Acrylonitrile Standard
5.0 mg/mL in MeOH:Water 90:10
Lot: 215071307 2 comp(s)
Exp: Nov 27, 2015 HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY
H225 H320 H315 H311
H332 H301 H350 P338
P360 P331 P404 P262
P202 P264 P284 P280
Storage: Freeze (<-10 °C)
Danger

L2588 t-Butyl Alcohol @ 400 ppm

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA
Tel. 203-786-5290 • www.accustandard.com

S-410 1 mL
t-Butanol Standard
2.0 mg/mL in MeOH
Lot: 211021237
Exp: Feb 16, 2021
1 comp(s)
HIGHLY FLAMMABLE

R 7.14.15

1 ml of S-410
t-Butanol
opened 8/14/15

into 5 ml MeOH

expires 11/14/15

E15-10258 032

L 2589
pre 9/10/2015
exp 9/10/2016
yf2.

2500 ug/ml BFB from stock for screen. 8 ul to BFB from neat in to 1 ml. (1-Bromo-4 fluorobenzene)

L 2590.
pre 9/10/2015
exp 9/10/2015
yf2

100 ppm BFB cal in to for screen. 1 ml L of "2523" (2500 ppm BFB stock) into 1 ml MeoH.

L2591 Secondary standard Mix 4/40 ppm
P. 9/10/15 0.8 ml of L2550 MTBE/TBA/DIPE 800 PPM/1000 PPM/800
E. 12/10/15 2 ml of ECS-049 Add-ons Mix #3 2000 PPM Lot: A0000955 received 6/23/15 exp. 11/16/15
2 ml of ECS-5242/8260 Main Mix 2000 PPM ECS-A-033 Lot: ~~524/14/M 27~~ SM150617005 received 6/25/15
exp. ~~11/17/16~~ 6/17/18
2 ml of Volatiles gases Mix 2000 PPM ECS-A-053 Lot: SM150422015, received 06/23/15 exp 4/21/18
2 mls of M-8260-ADD-10x, received 9/10/15
exp. 01/08/16

MeOH

into 100 meOH

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

M-8260-ADD-10X
Method 8260 Additions
2.0 mg/mL in MeOH
Lot: 215071327-01
Exp: Jan 08, 2016

1 mL
8 comp(s)
HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY
H225 H320 H315 H311
H332 H301 H350 P338
P360 P331 P404 P262
P202 P264 P284 P280

Storage: Freeze (<-10 °C)
Danger

Date Opened:

AccuStandard® 203-786-5290 AccuStandard.com

M-8260-ADD-10X
Lot: 215071327-01
Exp: Jan 08, 2016

Method 8260 Additions
2.0 mg/mL in MeOH

AccuStandard® 125 Market Street • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

M-8260-ADD-10X
Method 8260 Additions
2.0 mg/mL in MeOH
Lot: 215071327-01
Exp: Jan 08, 2016

1 mL
8 comp(s)
HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY
H225 H320 H315 H311
H332 H301 H350 P338
P360 P331 P404 P262
P202 P264 P284 P280

Storage: Freeze (<-10 °C)
Danger

Date Opened:

AccuStandard® 203-786-5290 AccuStandard.com

M-8260-ADD-10X
Lot: 215071327-01
Exp: Jan 08, 2016

Method 8260 Additions
2.0 mg/mL in MeOH

L2592
9/14/15
12/14/15

Secondary Acrolein / Acrylonitrile mix of ECS-A-038 Lot: TS150804002 into 10ml of MeOH exp. 11/2/15

ECS (800) LAB-SPEX

Acrolein/Acrylonitrile Mix
Part # ECS-A-038
Lot # TS150804002
Expiry 11-2-15

[redacted]

ECS
Distributed by SPEX CertiPrep®
Serving the Chromatography Community One Peak at a Time™

Part # : ECS-A-038
Lot # : TS150804002
Date Opened: _____
Acrolein/Acrylonitrile Mix

Contains the following in **Methanol**

Concentration	Compound
10000 µg/mL	Acrylonitrile
10000 µg/mL	Acrolein

Rec. 3/27/15

ECS-A-038
TS150804002

*** END LIST ***

WARNING: CONSULT PRODUCT MSDS BEFORE USE
Contains Materials Known or Suspected to Cause Cancer

Storage: **Freezer**
HAZARDS: Flammable liquid and vapour. May cause cancer. Toxic if inhaled. Causes damage to organs.

[redacted]

P.2593
9/15/15
12/15/15

BTEX during 25 ppm 0.5ml of ECS-A-017 Lot: EN1504105 exp. 4/10/18 received 6/15/15 and 0.5ml of MeOH final volume in

L2594
9/15/15
exp 12/15/15
JJ/2

box 2.5/sum >50 µg/ml
5ml LS "1050" at >500 µg/ml (exp 6/9/16) and
5ml LS "1051" at >500 µg/ml (exp 6/9/16)
diluted in to 50ml MeoH.

L2595
9/15/15
exp 12/15/15
JJ/2

box 2.5/sum >50 µg/ml
3ml LS "1050" at >500 µg/ml (exp 6/9/16) and
3ml LS "1051" at >500 µg/ml (exp 6/9/16)
diluted in to 50ml MeoH.

E15-10258 0322

L2596
9/17/15
6/17/15

Primary working standard @ 40 ppm

2mls of DMH-588-1 received 05/21/15 exp. 05/31/18
2mls of ECS-A-040 2-chloroethyl vinyl ether 11/17/15
@ 2000 ppm lot: CVE020 received ~~5/21/15~~ 6/17/15
exp. ~~05/31/18~~ 11/17/15
98ml of TBA @ 10,000 ppm # LS1038 made
2/4/15 exp. 2/4/16
98ml of DIPE stock # LS1037 @ 10,000 ppm
2mls of ECS-A-043 8260 ketones @ 2000 ppm
lot: KTM22 received exp 9/16/16
2mls of ECS-A-044 Add # ons #1 2000 ppm
lot: T115040 received 12/27/13 exp 4/6/16
2ml of VOFIALNJ-1 @ 2000 ppm lot C1130926
004 received 6/3/15 exp. 6/18/18

lot 0100
ml of neck

ECS-A-038
TS150804002

ISE

d and vapour. May
:d. Causes damage

aml.

d

DWM-588-1
Lot CM-1859
Exp 05/31/2018
ULTRA
1 mL
VOC Mixture
60 analyte(s) at 2000 µg/mL in methanol
250 Smith St, No Kingstown, RI 02852 USA
For Lab Use Only

DWM-588-1
Lot CM-1859
Exp 05/31/2018
ULTRA
1 mL
VOC Mixture
60 analyte(s) at 2000 µg/mL in methanol
250 Smith St, No Kingstown, RI 02852 USA
For Lab Use Only

SPEXCerti Prep
Calibrate with Confidence™

Part # : VO-IALNJ-1
Lot # : C1130926004
Date Opened: _____

Cat# VO-IALNJ-1
Lot# C1130926004
Date Opened _____

Custom
Contains the following in Methanol (Purge & Trap Grade)

Concentration	Compound
2000 µg/mL	Methylcyclohexane
2000 µg/mL	Methyl acetate
2000 µg/mL	Cyclohexane
2000 µg/mL	1,1,2-Trichlorotrifluoroethane

VO-IALNJ-1
C1130926004

SPEXCerti Prep
Calibrate with Confidence™

Cat# VO-IALNJ-1
Lot# C1130926004
Date Opened _____

Custom

Contains the following in | Methanol (Purge & Trap Grade) |
2000 µg/mL 1,1,2-Trichlorotrifluoroethane
2000 µg/mL Cyclohexane
2000 µg/mL Methyl acetate
2000 µg/mL Methylcyclohexane

VO-IALNJ-1
C1130926004

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS QC SUMMARY

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/11/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2		A5920.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKA151110-05	AQUEOUS	A5942.D	38		26		52		63		51		94	
LCSA151110-05	AQUEOUS	A5943.D	47		42		59		72		84		96	
E15-10210-001MS	AQUEOUS	A5944.D	74		66		76		89		89		97	
E15-10210-001MSD	AQUEOUS	A5945.D	61		55		80		91		89		99	
E15-10210-001	AQUEOUS	A5946.D	N/A		N/A		72		91		N/A		94	
E15-10258-018	AQUEOUS	A5947.D	N/A		N/A		67		83		N/A		88	
E15-10251-031	AQUEOUS	A5948.D	N/A		N/A		47		40		N/A		36	
E15-10258-001	AQUEOUS	A5949.D	N/A		N/A		59		73		N/A		64	
E15-10258-002	AQUEOUS	A5950.D	N/A		N/A		58		80		N/A		81	
E15-10258-003	AQUEOUS	A5951.D	N/A		N/A		50		49		N/A		33	
E15-10258-004	AQUEOUS	A5952.D	N/A		N/A		50		62		N/A		47	
E15-10258-005	AQUEOUS	A5953.D	N/A		N/A		63		74		N/A		63	
E15-10225-001	AQUEOUS	A5954.D	N/A		N/A		59		64		N/A		46	
E15-10261-001	AQUEOUS	A5955.D	N/A		N/A		49		41		N/A		34	
E15-10146-001	AQUEOUS	A5956.D	N/A		N/A		66		86		N/A		75	
E15-10161-001	AQUEOUS	A5957.D	N/A		N/A		50		67		N/A		80	
E15-10161-002	AQUEOUS	A5958.D	N/A		N/A		63		86		N/A		75	
E15-10224-001	AQUEOUS	A5959.D	N/A		N/A		80		89		N/A		99	
E15-10251-030	AQUEOUS	A5960.D	N/A		N/A		61		73		N/A		47	
E15-10217-001	AQUEOUS	A5961.D	N/A		N/A		70		40		N/A		40	
E15-10251-016	AQUEOUS	A5962.D	N/A		N/A		57		80		N/A		100	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10.-83	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	10.-91	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	25-94	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	23-102	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	27-110	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	33-113	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/11/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
E15-10251-032	AQUEOUS	A5963.D	N/A		N/A		67		81		N/A		65	
E15-10271-001	AQUEOUS	A5964.D	N/A		N/A		87		58		N/A		36	
E15-10251-041	AQUEOUS	A5965.D	42		25		78		96		87		99	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10.-83	24-101
S2 (PHL) = Phenol-d5	15-110	30-130	10.-91	23-108
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	25-94	26-98
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	23-102	34-96
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	27-110	32-112
S6 (TPH) = Terphenyl-d14	30-130	30-130	33-113	19-118

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/11/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2	AQUEOUS	B4001.D	N/A		N/A		N/A		N/A		N/A		N/A	
BLKA151111-01	AQUEOUS	B4005.D	61		63		64		77		63		93	
LCSA151111-01	AQUEOUS	B4006.D	51		49		63		71		83		89	
E15-10305-001MS	AQUEOUS	B4007.D	59		46		83		98		100		97	
E15-10305-001MSD	AQUEOUS	B4008.D	61		47		100		91		96		99	
E15-10305-001	AQUEOUS	B4009.D	N/A		N/A		81		100		N/A		102	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10-100	28-108
S2 (PHL) = Phenol-d5	15-110	30-130	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	22-115	35-126
S6 (TPH) = Terphenyl-d14	30-130	30-130	23-124	32-135

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/12/2015

Lab Sample ID	Matrix	File ID	S1	#	S2	#	S3	#	S4	#	S5	#	S6	#
CCV040BNA2	AQUEOUS	B4047.D	N/A		N/A		N/A		N/A		N/A		N/A	
E15-10258-006	AQUEOUS	B4070.D	N/A		N/A		96		61		N/A		47	
E15-10258-007	AQUEOUS	B4071.D	N/A		N/A		76		45		N/A		27	$
E15-10258-008	AQUEOUS	B4072.D	N/A		N/A		91		59		N/A		50	
E15-10258-009	AQUEOUS	B4073.D	N/A		N/A		89		72		N/A		62	
E15-10258-010	AQUEOUS	B4074.D	N/A		N/A		79		74		N/A		94	
E15-10258-011	AQUEOUS	B4075.D	N/A		N/A		78		61		N/A		41	
E15-10258-012	AQUEOUS	B4076.D	N/A		N/A		98		80		N/A		78	
E15-10258-013	AQUEOUS	B4077.D	N/A		N/A		77		69		N/A		68	
E15-10258-014	AQUEOUS	B4078.D	N/A		N/A		76		57		N/A		44	
E15-10258-015	AQUEOUS	B4079.D	N/A		N/A		76		68		N/A		50	
E15-10258-016	AQUEOUS	B4080.D	N/A		N/A		77		71		N/A		65	
E15-10306-001	AQUEOUS	B4081.D	N/A		N/A		99		94		N/A		85	
E15-10299-001	AQUEOUS	B4082.D	14	$	12	$	97		66		32		50	
E15-10299-002	AQUEOUS	B4083.D	N/A		N/A		89		75		N/A		56	
E15-10299-004	AQUEOUS	B4084.D	38		25		98		98		114	$	95	
E15-10299-005	AQUEOUS	B4085.D	38		25		95		95		97		80	
E15-10299-006	AQUEOUS	B4086.D	40		26		102		98		100		110	
E15-10299-007	AQUEOUS	B4087.D	39		24		99		83		89		89	

	DKQPs		IAL	
	Aqueous	Soil	Aqueous/Leachate	Soil
S1 (2FP) = 2-Fluorophenol	15-110	30-130	10-100	28-108
S2 (PHL) = Phenol-d5	15-110	30-130	10-102	34-107
S3 (NBZ) = Nitrobenzene-d5	30-130	30-130	27-102	26-104
S4 (FBP) = 2-Fluorobiphenyl	30-130	30-130	26-101	32-128
S5 (TBP) = 2,4,6-Tribromophenol	15-110	30-130	22-115	35-126
S6 (TPH) = Terphenyl-d14	30-130	30-130	23-124	32-135

Column used to flag recovery values that did not meet criteria
* Values outside of QC limits
$ Values outside of NJ DKQP limits
D Surrogate diluted out
M Matrix interference
N/A Not applicable

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA151110-05
Date Received: NA
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5943.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	DKQP
N-Nitrosodimethylamine	30.0	13.3	44	$	40-140	70-130
Pyridine	30.0	10.3	34		20-120	20-160
Benzaldehyde	30.0	3.2	11	$	10-110	20-160
Phenol	30.0	10.3	34		30-140	20-160
Aniline	30.0	15.7	52	$	40-140	70-130
Bis(2-chloroethyl) ether	30.0	15.8	53	$	40-140	70-130
2-Chlorophenol	30.0	14.0	47		30-140	20-160
1,3-Dichlorobenzene	30.0	16.1	54	$	40-140	70-130
1,4-Dichlorobenzene	30.0	17.6	59	$	40-140	70-130
Benzyl alcohol	30.0	16.6	55	$	40-140	70-130
1,2-Dichlorobenzene	30.0	17.5	58	$	40-140	70-130
2-Methylphenol	30.0	15.3	51		30-140	20-160
Bis(2-chloroisopropyl) ether	30.0	15.0	50	$	40-140	70-130
4-Methylphenol	30.0	15.2	51	$	30-140	70-130
N-Nitrosodi-n-propylamine	30.0	16.8	56	$	40-140	70-130
Acetophenone	30.0	18.4	61	$	40-140	70-130
3-Methylphenol	30.0	15.2	51		30-140	20-160
Hexachloroethane	30.0	16.3	54	$	40-140	70-130
Nitrobenzene	30.0	16.7	56	$	40-140	70-130
Isophorone	30.0	17.1	57	$	40-140	70-130
2-Nitrophenol	30.0	14.1	47		30-140	20-160
2,4-Dimethylphenol	30.0	16.2	54		30-140	20-160
Bis(2-chloroethoxy) methane	30.0	18.2	61	$	40-140	70-130
Benzoic acid	30.0	12.4	41		30-140	20-160
2,4-Dimethylaniline	30.0	12.5	42	$	40-140	70-130
2,4-Dichlorophenol	30.0	17.0	57		30-140	20-160
1,2,4-Trichlorobenzene	30.0	18.0	60	$	40-140	70-130
Naphthalene	30.0	19.7	66	$	40-140	70-130
4-Chloroaniline	30.0	18.1	60	$	40-140	70-130
Hexachlorobutadiene	30.0	17.3	58	$	40-140	70-130
Caprolactam	30.0	13.7	46	$	40-140	70-130
4-Chloro-3-methylphenol	30.0	17.4	58		30-140	20-160
2-Methylnaphthalene	30.0	18.8	63	$	40-140	70-130
Hexachlorocyclopentadiene	30.0	11.9	40		5-105	20-160
2,4,6-Trichlorophenol	30.0	16.5	55		30-140	20-160
2,4,5-Trichlorophenol	30.0	17.8	59		30-140	20-160
1,1'-Biphenyl	30.0	19.1	64	$	40-140	70-130
2-Chloronaphthalene	30.0	18.9	63	$	40-140	70-130
2-Nitroaniline	30.0	18.4	61	$	40-140	70-130
Dimethyl phthalate	30.0	20.7	69	$	40-140	70-130
2,6-Dinitrotoluene	30.0	19.2	64	$	40-140	70-130
Acenaphthylene	30.0	19.1	64	$	40-140	70-130
3-Nitroaniline	30.0	18.5	62	$	40-140	70-130
Acenaphthene	30.0	21.2	71		40-140	20-160
2,4-Dinitrophenol	30.0	16.6	55		5-105	20-160

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA151110-05
Date Received: NA
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5943.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	30.0	13.0	43		30-140	20-160
2,4-Dinitrotoluene	30.0	24.1	80		40-140	70-130
Dibenzofuran	30.0	21.5	72		40-140	70-130
Diethyl phthalate	30.0	24.4	81		40-140	70-130
Fluorene	30.0	22.7	76		40-140	70-130
4-Chlorophenyl phenyl ether	30.0	20.3	68	$	40-140	70-130
4-Nitroaniline	30.0	23.8	79		40-140	70-130
1,2,4,5-Tetrachlorobenzene	30.0	21.1	70		40-140	70-130
2,3,4,6-Tetrachlorophenol	30.0	19.5	65	$	40-140	70-130
4,6-Dinitro-2-methylphenol	30.0	19.4	65		10-110	20-160
N-Nitrosodiphenylamine	30.0	25.1	84		40-140	70-130
1,2-Diphenylhydrazine	30.0	22.3	74		40-140	70-130
4-Bromophenyl phenyl ether	30.0	21.9	73		40-140	70-130
Hexachlorobenzene	30.0	24.6	82		40-140	70-130
Atrazine	30.0	25.8	86		20-120	20-160
Pentachlorophenol	30.0	21.3	71		30-140	20-160
Phenanthrene	30.0	25.4	85		40-140	70-130
Anthracene	30.0	25.4	85		40-140	70-130
Carbazole	30.0	27.5	92		40-140	70-130
Di-n-butyl phthalate	30.0	26.5	88		40-140	70-130
Fluoranthene	30.0	28.7	96		40-140	70-130
Benzidine	30.0	6.1	20		5-105	20-160
Pyrene	30.0	25.7	86		40-140	70-130
3,3'-Dimethylbenzidine	30.0	6.7	22		5-105	20-160
Butyl benzyl phthalate	30.0	23.2	77		40-140	70-130
3,3'-Dichlorobenzidine	30.0	22.5	75		40-140	70-130
Benzo[a]anthracene	30.0	24.3	81		40-140	70-130
Chrysene	30.0	22.7	76		40-140	70-130
Bis(2-ethylhexyl) phthalate	30.0	21.7	72		40-140	70-130
Di-n-octyl phthalate	30.0	29.0	97		40-140	70-130
Benzo[b]fluoranthene	30.0	29.8	99		40-140	70-130
Benzo[k]fluoranthene	30.0	32.2	107		40-140	70-130
Benzo[a]pyrene	30.0	28.2	94		40-140	70-130
Indeno[1,2,3-cd]pyrene	30.0	32.4	108		40-140	70-130
Dibenz[a,h]anthracene	30.0	31.8	106		40-140	70-130
Benzo[g,h,i]perylene	30.0	32.0	107		40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA151111-01
Date Received: NA
Date Extracted: 11/11/2015
Date Analyzed: 11/11/2015
Data file: B4006.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	DKQP
N-Nitrosodimethylamine	30.0	15.1	50	$	40-140	70-130
Pyridine	30.0	11.1	37		20-120	20-160
Benzaldehyde	30.0	4.6	15	$	10-110	20-160
Phenol	30.0	13.2	44		30-140	20-160
Aniline	30.0	15.8	53	$	40-140	70-130
Bis(2-chloroethyl) ether	30.0	16.3	54	$	40-140	70-130
2-Chlorophenol	30.0	15.7	52		30-140	20-160
1,3-Dichlorobenzene	30.0	18.7	62	$	40-140	70-130
1,4-Dichlorobenzene	30.0	18.8	63	$	40-140	70-130
Benzyl alcohol	30.0	20.3	68	$	40-140	70-130
1,2-Dichlorobenzene	30.0	19.3	64	$	40-140	70-130
2-Methylphenol	30.0	15.3	51		30-140	20-160
Bis(2-chloroisopropyl) ether	30.0	15.1	50	$	40-140	70-130
4-Methylphenol	30.0	15.4	51	$	30-140	70-130
N-Nitrosodi-n-propylamine	30.0	17.1	57	$	40-140	70-130
Acetophenone	30.0	19.4	65	$	40-140	70-130
3-Methylphenol	30.0	15.4	51		30-140	20-160
Hexachloroethane	30.0	18.2	61	$	40-140	70-130
Nitrobenzene	30.0	18.5	62	$	40-140	70-130
Isophorone	30.0	16.7	56	$	40-140	70-130
2-Nitrophenol	30.0	18.5	62		30-140	20-160
2,4-Dimethylphenol	30.0	18.2	61		30-140	20-160
Bis(2-chloroethoxy) methane	30.0	19.8	66	$	40-140	70-130
Benzoic acid	30.0	15.4	51		30-140	20-160
2,4-Dimethylaniline	30.0	17.1	57	$	40-140	70-130
2,4-Dichlorophenol	30.0	19.2	64		30-140	20-160
1,2,4-Trichlorobenzene	30.0	20.4	68	$	40-140	70-130
Naphthalene	30.0	20.6	69	$	40-140	70-130
4-Chloroaniline	30.0	18.1	60	$	40-140	70-130
Hexachlorobutadiene	30.0	21.1	70		40-140	70-130
Caprolactam	30.0	16.6	55	$	40-140	70-130
4-Chloro-3-methylphenol	30.0	18.6	62		30-140	20-160
2-Methylnaphthalene	30.0	22.1	74		40-140	70-130
Hexachlorocyclopentadiene	30.0	20.8	69		5-105	20-160
2,4,6-Trichlorophenol	30.0	18.4	61		30-140	20-160
2,4,5-Trichlorophenol	30.0	19.2	64		30-140	20-160
1,1'-Biphenyl	30.0	21.8	73		40-140	70-130
2-Chloronaphthalene	30.0	21.3	71		40-140	70-130
2-Nitroaniline	30.0	19.6	65	$	40-140	70-130
Dimethyl phthalate	30.0	21.8	73		40-140	70-130
2,6-Dinitrotoluene	30.0	24.3	81		40-140	70-130
Acenaphthylene	30.0	21.9	73		40-140	70-130
3-Nitroaniline	30.0	22.4	75		40-140	70-130
Acenaphthene	30.0	22.1	74		40-140	20-160
2,4-Dinitrophenol	30.0	18.9	63		5-105	20-160

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA151111-01
Date Received: NA
Date Extracted: 11/11/2015
Date Analyzed: 11/11/2015
Data file: B4006.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Conc. LCS	%Rec. LCS	#	Rec Limits IAL	Rec Limits DKQP
4-Nitrophenol	30.0	11.2	37		30-140	20-160
2,4-Dinitrotoluene	30.0	26.9	90		40-140	70-130
Dibenzofuran	30.0	20.1	67	$	40-140	70-130
Diethyl phthalate	30.0	23.8	79		40-140	70-130
Fluorene	30.0	21.9	73		40-140	70-130
4-Chlorophenyl phenyl ether	30.0	22.1	74		40-140	70-130
4-Nitroaniline	30.0	22.9	76		40-140	70-130
1,2,4,5-Tetrachlorobenzene	30.0	22.8	76		40-140	70-130
2,3,4,6-Tetrachlorophenol	30.0	19.3	64	$	40-140	70-130
4,6-Dinitro-2-methylphenol	30.0	20.3	68		10-110	20-160
N-Nitrosodiphenylamine	30.0	27.2	91		40-140	70-130
1,2-Diphenylhydrazine	30.0	19.5	65	$	40-140	70-130
4-Bromophenyl phenyl ether	30.0	24.9	83		40-140	70-130
Hexachlorobenzene	30.0	26.1	87		40-140	70-130
Atrazine	30.0	25.8	86		20-120	20-160
Pentachlorophenol	30.0	21.4	71		30-140	20-160
Phenanthrene	30.0	25.0	83		40-140	70-130
Anthracene	30.0	26.6	89		40-140	70-130
Carbazole	30.0	27.8	93		40-140	70-130
Di-n-butyl phthalate	30.0	27.8	93		40-140	70-130
Fluoranthene	30.0	26.2	87		40-140	70-130
Benzidine	30.0	5.4	18	$	5-105	20-160
Pyrene	30.0	25.6	85		40-140	70-130
3,3'-Dimethylbenzidine	30.0	7.2	24		5-105	20-160
Butyl benzyl phthalate	30.0	25.4	85		40-140	70-130
3,3'-Dichlorobenzidine	30.0	23.7	79		40-140	70-130
Benzo[a]anthracene	30.0	23.6	79		40-140	70-130
Chrysene	30.0	24.1	80		40-140	70-130
Bis(2-ethylhexyl) phthalate	30.0	25.6	85		40-140	70-130
Di-n-octyl phthalate	30.0	32.7	109		40-140	70-130
Benzo[b]fluoranthene	30.0	29.1	97		40-140	70-130
Benzo[k]fluoranthene	30.0	32.5	108		40-140	70-130
Benzo[a]pyrene	30.0	32.4	108		40-140	70-130
Indeno[1,2,3-cd]pyrene	30.0	32.9	110		40-140	70-130
Dibenz[a,h]anthracene	30.0	32.7	109		40-140	70-130
Benzo[g,h,i]perylene	30.0	33.7	112		40-140	70-130

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-10210-001
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
MS Data file: A5944.D
MSD Data file: A5945.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD limits IAL	DKQP
N-Nitrosodimethylamine	40.0	0.0	26.4	66	$	23.2	58	$	13		40-140/20	70-130/20
Pyridine	40.0	0.0	23.6	59		20.5	51		14		20-120/20	20-160/20
Benzaldehyde	40.0	0.0	26.0	65		22.0	55		17		10-110/20	20-160/20
Phenol	40.0	0.0	22.6	57		18.6	47		19		30-140/20	20-160/20
Aniline	40.0	0.0	30.8	77		26.8	67	$	14		40-140/20	70-130/20
Bis(2-chloroethyl) ether	40.0	0.0	32.0	80		27.0	68	$	17		40-140/20	70-130/20
2-Chlorophenol	40.0	0.0	28.9	72		23.6	59		20		30-140/20	20-160/20
1,3-Dichlorobenzene	40.0	0.0	31.0	78		27.1	68	$	13		40-140/20	70-130/20
1,4-Dichlorobenzene	40.0	0.0	35.5	89		29.3	73		19		40-140/20	70-130/20
Benzyl alcohol	40.0	0.0	33.8	85		28.0	70		19		40-140/20	70-130/20
1,2-Dichlorobenzene	40.0	0.0	34.6	87		28.5	71		19		40-140/20	70-130/20
2-Methylphenol	40.0	0.0	30.1	75		25.3	63		17		30-140/20	20-160/20
Bis(2-chloroisopropyl) ether	40.0	0.0	30.1	75		25.3	63	$	17		40-140/20	70-130/20
4-Methylphenol	40.0	0.0	29.6	74		24.9	62	$	17		30-140/20	70-130/20
N-Nitrosodi-n-propylamine	40.0	0.0	33.2	83		27.8	70		18		40-140/20	70-130/20
Acetophenone	40.0	0.0	36.7	92		30.3	76		19		40-140/20	70-130/20
3-Methylphenol	40.0	0.0	29.6	74		24.9	62		17		30-140/20	20-160/20
Hexachloroethane	40.0	0.0	33.8	85		27.7	69	$	20		40-140/20	70-130/20
Nitrobenzene	40.0	0.0	27.1	68	$	28.9	72		6		40-140/20	70-130/20
Isophorone	40.0	0.0	26.2	66	$	27.8	70		6		40-140/20	70-130/20
2-Nitrophenol	40.0	0.0	25.0	63		26.6	67		6		30-140/20	20-160/20
2,4-Dimethylphenol	40.0	0.0	16.6	42		17.7	44		6		30-140/20	20-160/20
Bis(2-chloroethoxy) methane	40.0	0.0	27.6	69	$	29.6	74		7		40-140/20	70-130/20
Benzoic acid	40.0	0.0	22.1	55		22.1	55		0		30-140/20	20-160/20
2,4-Dimethylaniline	40.0	0.0	20.7	52	$	24.6	62	$	17		40-140/20	70-130/20
2,4-Dichlorophenol	40.0	0.0	27.0	68		28.6	72		6		30-140/20	20-160/20
1,2,4-Trichlorobenzene	40.0	0.0	28.0	70		30.1	75		7		40-140/20	70-130/20
Naphthalene	40.0	0.0	30.5	76		32.3	81		6		40-140/20	70-130/20
4-Chloroaniline	40.0	0.0	29.4	74		31.0	78		5		40-140/20	70-130/20
Hexachlorobutadiene	40.0	0.0	28.3	71		29.7	74		5		40-140/20	70-130/20
Caprolactam	40.0	0.0	20.5	51	$	21.3	53	$	4		40-140/20	70-130/20
4-Chloro-3-methylphenol	40.0	0.0	27.9	70		27.7	69		1		30-140/20	20-160/20
2-Methylnaphthalene	40.0	0.0	30.1	75		31.6	79		5		40-140/20	70-130/20
Hexachlorocyclopentadiene	40.0	0.0	20.7	52		21.7	54		5		5-105/20	20-160/20
2,4,6-Trichlorophenol	40.0	0.0	22.8	57		27.5	69		19		30-140/20	20-160/20
2,4,5-Trichlorophenol	40.0	0.0	23.5	59		27.3	68		15		30-140/20	20-160/20
1,1'-Biphenyl	40.0	0.0	31.2	78		31.1	78		0		40-140/20	70-130/20
2-Chloronaphthalene	40.0	0.0	30.6	77		31.2	78		2		40-140/20	70-130/20
2-Nitroaniline	40.0	0.0	33.3	83		33.6	84		1		40-140/20	70-130/20
Dimethyl phthalate	40.0	0.0	32.8	82		32.1	80		2		40-140/20	70-130/20
2,6-Dinitrotoluene	40.0	0.0	27.0	68	$	28.4	71		5		40-140/20	70-130/20
Acenaphthylene	40.0	0.0	33.7	84		32.4	81		4		40-140/20	70-130/20
3-Nitroaniline	40.0	0.0	33.8	85		33.9	85		0		40-140/20	70-130/20
Acenaphthene	40.0	0.0	32.6	82		33.3	83		2		40-140/20	20-160/20
2,4-Dinitrophenol	40.0	0.0	26.7	67		28.4	71		6		5-105/20	20-160/20

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-10210-001
Date Received: 11/06/2015
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
MS Data file: A5944.D
MSD Data file: A5945.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD IAL Limits	Rec/RPD DKQP Limits
4-Nitrophenol	40.0	0.0	22.4	56		22.1	55		1		30-140/20	20-160/20
2,4-Dinitrotoluene	40.0	0.0	36.8	92		36.1	90		2		40-140/20	70-130/20
Dibenzofuran	40.0	0.0	28.0	70		32.6	82		15		40-140/20	70-130/20
Diethyl phthalate	40.0	0.0	35.4	89		35.0	88		1		40-140/20	70-130/20
Fluorene	40.0	0.0	35.1	88		34.8	87		1		40-140/20	70-130/20
4-Chlorophenyl phenyl ether	40.0	0.0	28.5	71		31.9	80		11		40-140/20	70-130/20
4-Nitroaniline	40.0	0.0	35.5	89		34.6	87		3		40-140/20	70-130/20
1,2,4,5-Tetrachlorobenzene	40.0	0.0	32.6	82		33.4	84		2		40-140/20	70-130/20
2,3,4,6-Tetrachlorophenol	40.0	0.0	32.5	81		31.7	79		2		40-140/20	70-130/20
4,6-Dinitro-2-methylphenol	40.0	0.0	20.8	52		22.1	55		6		10-110/20	20-160/20
N-Nitrosodiphenylamine	40.0	0.0	34.7	87		34.9	87		1		40-140/20	70-130/20
1,2-Diphenylhydrazine	40.0	0.0	33.9	85		34.1	85		1		40-140/20	70-130/20
4-Bromophenyl phenyl ether	40.0	0.0	32.5	81		32.4	81		0		40-140/20	70-130/20
Hexachlorobenzene	40.0	0.0	33.8	85		34.0	85		1		40-140/20	70-130/20
Atrazine	40.0	0.0	33.4	84		33.8	85		1		20-120/20	20-160/20
Pentachlorophenol	40.0	0.0	31.5	79		30.3	76		4		30-140/20	20-160/20
Phenanthrene	40.0	0.0	36.0	90		35.3	88		2		40-140/20	70-130/20
Anthracene	40.0	0.0	35.4	89		35.7	89		1		40-140/20	70-130/20
Carbazole	40.0	0.0	35.9	90		35.8	90		0		40-140/20	70-130/20
Di-n-butyl phthalate	40.0	0.0	34.9	87		35.2	88		1		40-140/20	70-130/20
Fluoranthene	40.0	0.0	37.7	94		36.5	91		3		40-140/20	70-130/20
Benzidine	40.0	0.0	13.1	33		13.1	33		0		5-105/20	20-160/20
Pyrene	40.0	0.0	35.0	88		34.8	87		1		40-140/20	70-130/20
3,3'-Dimethylbenzidine	40.0	0.0	10.7	27		11.3	28		5		5-105/20	20-160/20
Butyl benzyl phthalate	40.0	0.0	33.1	83		34.6	87		4		40-140/20	70-130/20
3,3'-Dichlorobenzidine	40.0	0.0	33.3	83		34.4	86		3		40-140/20	70-130/20
Benzo[a]anthracene	40.0	0.0	32.9	82		33.7	84		2		40-140/20	70-130/20
Chrysene	40.0	0.0	32.6	82		33.8	85		4		40-140/20	70-130/20
Bis(2-ethylhexyl) phthalate	40.0	0.0	32.2	81		33.3	83		3		40-140/20	70-130/20
Di-n-octyl phthalate	40.0	0.0	39.3	98		40.8	102		4		40-140/20	70-130/20
Benzo[b]fluoranthene	40.0	0.0	44.7	112		44.8	112		0		40-140/20	70-130/20
Benzo[k]fluoranthene	40.0	0.0	43.2	108		45.2	113		5		40-140/20	70-130/20
Benzo[a]pyrene	40.0	0.0	38.6	97		40.3	101		4		40-140/20	70-130/20
Indeno[1,2,3-cd]pyrene	40.0	0.0	43.9	110		43.3	108		1		40-140/20	70-130/20
Dibenz[a,h]anthracene	40.0	0.0	42.6	107		42.6	107		0		40-140/20	70-130/20
Benzo[g,h,i]perylene	40.0	0.0	43.5	109		43.1	108		1		40-140/20	70-130/20

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-10305-001
Date Received: 11/10/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/11/2015
MS Data file: B4007.D
MSD Data file: B4008.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD limits IAL	DKQP
N-Nitrosodimethylamine	40.0	0.0	25.5	64	$	25.6	64	$	0		40-140/20	70-130/20
Pyridine	40.0	0.0	18.5	46		19.2	48		4		20-120/20	20-160/20
Benzaldehyde	40.0	0.0	12.7	32		12.9	32		2		10-110/20	20-160/20
Phenol	40.0	0.0	18.4	46		18.7	47		2		30-140/20	20-160/20
Aniline	40.0	0.0	35.8	90		36.9	92		3		40-140/20	70-130/20
Bis(2-chloroethyl) ether	40.0	0.0	40.3	101		42.0	105		4		40-140/20	70-130/20
2-Chlorophenol	40.0	0.0	33.5	84		34.0	85		1		30-140/20	20-160/20
1,3-Dichlorobenzene	40.0	0.0	33.1	83		33.2	83		0		40-140/20	70-130/20
1,4-Dichlorobenzene	40.0	0.0	32.9	82		33.1	83		1		40-140/20	70-130/20
Benzyl alcohol	40.0	0.0	36.3	91		36.8	92		1		40-140/20	70-130/20
1,2-Dichlorobenzene	40.0	0.0	34.0	85		34.3	86		1		40-140/20	70-130/20
2-Methylphenol	40.0	0.0	31.2	78		32.0	80		3		30-140/20	20-160/20
Bis(2-chloroisopropyl) ether	40.0	0.0	42.2	106		43.8	110		4		40-140/20	70-130/20
4-Methylphenol	40.0	0.0	32.8	82		32.6	82		1		30-140/20	70-130/20
N-Nitrosodi-n-propylamine	40.0	0.0	42.9	107		43.9	110		2		40-140/20	70-130/20
Acetophenone	40.0	0.0	40.1	100		41.1	103		2		40-140/20	70-130/20
3-Methylphenol	40.0	0.0	32.8	82		32.6	82		1		30-140/20	20-160/20
Hexachloroethane	40.0	0.0	37.3	93		38.1	95		2		40-140/20	70-130/20
Nitrobenzene	40.0	0.0	41.5	104		39.9	100		4		40-140/20	70-130/20
Isophorone	40.0	0.0	34.1	85		33.7	84		1		40-140/20	70-130/20
2-Nitrophenol	40.0	0.0	38.5	96		37.4	94		3		30-140/20	20-160/20
2,4-Dimethylphenol	40.0	0.0	38.5	96		37.7	94		2		30-140/20	20-160/20
Bis(2-chloroethoxy) methane	40.0	0.0	40.1	100		39.2	98		2		40-140/20	70-130/20
Benzoic acid	40.0	0.0	20.3	51		19.2	48		6		30-140/20	20-160/20
2,4-Dimethylaniline	40.0	0.0	38.1	95		37.9	95		1		40-140/20	70-130/20
2,4-Dichlorophenol	40.0	0.0	36.5	91		36.0	90		1		30-140/20	20-160/20
1,2,4-Trichlorobenzene	40.0	0.0	32.7	82		31.8	80		3		40-140/20	70-130/20
Naphthalene	40.0	0.0	35.6	89		35.1	88		1		40-140/20	70-130/20
4-Chloroaniline	40.0	0.0	35.0	88		35.4	89		1		40-140/20	70-130/20
Hexachlorobutadiene	40.0	0.0	34.5	86		32.8	82		5		40-140/20	70-130/20
Caprolactam	40.0	0.0	16.8	42	$	16.1	40	$	4		40-140/20	70-130/20
4-Chloro-3-methylphenol	40.0	0.0	41.4	104		41.0	103		1		30-140/20	20-160/20
2-Methylnaphthalene	40.0	0.0	38.0	95		37.4	94		2		40-140/20	70-130/20
Hexachlorocyclopentadiene	40.0	0.0	38.8	97		35.6	89		9		5-105/20	20-160/20
2,4,6-Trichlorophenol	40.0	0.0	37.9	95		36.1	90		5		30-140/20	20-160/20
2,4,5-Trichlorophenol	40.0	0.0	37.4	94		36.1	90		4		30-140/20	20-160/20
1,1'-Biphenyl	40.0	0.0	40.1	100		38.6	97		4		40-140/20	70-130/20
2-Chloronaphthalene	40.0	0.0	38.6	97		37.7	94		2		40-140/20	70-130/20
2-Nitroaniline	40.0	0.0	51.7	129		51.4	129		1		40-140/20	70-130/20
Dimethyl phthalate	40.0	0.0	36.4	91		36.6	92		1		40-140/20	70-130/20
2,6-Dinitrotoluene	40.0	0.0	41.4	104		41.5	104		0		40-140/20	70-130/20
Acenaphthylene	40.0	0.0	38.7	97		38.9	97		1		40-140/20	70-130/20
3-Nitroaniline	40.0	0.0	38.6	97		39.8	100		3		40-140/20	70-130/20
Acenaphthene	40.0	0.0	39.3	98		39.6	99		1		40-140/20	20-160/20
2,4-Dinitrophenol	40.0	0.0	39.7	99		40.7	102		2		5-105/20	20-160/20

E15-10258 0336

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD ACCURACY REPORT

Lab ID: E15-10305-001
Date Received: 11/10/2015
Date Extracted: 11/11/2015
Date Analyzed: 11/11/2015
MS Data file: B4007.D
MSD Data file: B4008.D

GC/MS Column: DB-5
Sample wt/vol: 500ml
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1
Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	% RPD	#	Rec/RPD IAL Limits	Rec/RPD DKQP Limits
4-Nitrophenol	40.0	0.0	18.4	46		18.8	47		2		30-140/20	20-160/20
2,4-Dinitrotoluene	40.0	0.0	44.9	112		46.0	115		2		40-140/20	70-130/20
Dibenzofuran	40.0	0.0	35.3	88		35.5	89		1		40-140/20	70-130/20
Diethyl phthalate	40.0	0.0	38.5	96		38.9	97		1		40-140/20	70-130/20
Fluorene	40.0	0.0	37.0	93		36.8	92		1		40-140/20	70-130/20
4-Chlorophenyl phenyl ether	40.0	0.0	37.0	93		36.3	91		2		40-140/20	70-130/20
4-Nitroaniline	40.0	0.0	35.6	89		36.0	90		1		40-140/20	70-130/20
1,2,4,5-Tetrachlorobenzene	40.0	0.0	37.2	93		35.2	88		6		40-140/20	70-130/20
2,3,4,6-Tetrachlorophenol	40.0	0.0	35.8	90		36.1	90		1		40-140/20	70-130/20
4,6-Dinitro-2-methylphenol	40.0	0.0	40.5	101		40.0	100		1		10-110/20	20-160/20
N-Nitrosodiphenylamine	40.0	0.0	42.5	106		41.0	103		4		40-140/20	70-130/20
1,2-Diphenylhydrazine	40.0	0.0	42.2	106		40.8	102		3		40-140/20	70-130/20
4-Bromophenyl phenyl ether	40.0	0.0	40.6	102		40.2	101		1		40-140/20	70-130/20
Hexachlorobenzene	40.0	0.0	38.9	97		38.1	95		2		40-140/20	70-130/20
Atrazine	40.0	0.0	39.3	98		37.4	94		5		20-120/20	20-160/20
Pentachlorophenol	40.0	0.0	34.7	87		35.6	89		3		30-140/20	20-160/20
Phenanthrene	40.0	0.0	39.7	99		38.8	97		2		40-140/20	70-130/20
Anthracene	40.0	0.0	40.5	101		40.6	102		0		40-140/20	70-130/20
Carbazole	40.0	0.0	42.6	107		43.3	108		2		40-140/20	70-130/20
Di-n-butyl phthalate	40.0	0.0	43.2	108		44.4	111		3		40-140/20	70-130/20
Fluoranthene	40.0	0.0	38.1	95		38.2	96		0		40-140/20	70-130/20
Benzidine	40.0	0.0	7.1	18	$	7.2	18	$	1		5-105/20	20-160/20
Pyrene	40.0	0.0	40.3	101		40.9	102		1		40-140/20	70-130/20
3,3'-Dimethylbenzidine	40.0	0.0	7.1	18	$	7.3	18	$	3		5-105/20	20-160/20
Butyl benzyl phthalate	40.0	0.0	44.8	112		46.3	116		3		40-140/20	70-130/20
3,3'-Dichlorobenzidine	40.0	0.0	34.8	87		35.5	89		2		40-140/20	70-130/20
Benzo[a]anthracene	40.0	0.0	35.5	89		35.7	89		1		40-140/20	70-130/20
Chrysene	40.0	0.0	37.3	93		36.7	92		2		40-140/20	70-130/20
Bis(2-ethylhexyl) phthalate	40.0	0.0	43.6	109		45.7	114		5		40-140/20	70-130/20
Di-n-octyl phthalate	40.0	0.0	47.4	119		49.1	123		4		40-140/20	70-130/20
Benzo[b]fluoranthene	40.0	0.0	36.3	91		37.0	93		2		40-140/20	70-130/20
Benzo[k]fluoranthene	40.0	0.0	45.0	113		42.2	106		6		40-140/20	70-130/20
Benzo[a]pyrene	40.0	0.0	43.1	108		42.4	106		2		40-140/20	70-130/20
Indeno[1,2,3-cd]pyrene	40.0	0.0	44.4	111		43.6	109		2		40-140/20	70-130/20
Dibenz[a,h]anthracene	40.0	0.0	43.7	109		41.3	103		6		40-140/20	70-130/20
Benzo[g,h,i]perylene	40.0	0.0	43.9	110		45.2	113		3		40-140/20	70-130/20

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

$ Values outside of NJ DKQP limits

NC Not calculable

E15-10258 0337

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: A5942.D

Instrument ID: MSDA

Date Extracted: 11/10/15

Matrix: AQUEOUS

Date Analyzed: 11/11/2015

Time Analyzed: 20:06

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSA151110-05	11/11/2015	20:22
.	E15-10210-001MS	11/11/2015	20:38
.	E15-10210-001MSD	11/11/2015	20:54
POT-1	E15-10210-001	11/11/2015	21:10
FB-11031	E15-10258-018	11/11/2015	21:26
TWP-E2	E15-10251-031	11/11/2015	21:42
MW-21	E15-10258-001	11/11/2015	21:58
FB-11042	E15-10258-002	11/11/2015	22:14
MW-22	E15-10258-003	11/11/2015	22:30
MW-20	E15-10258-004	11/11/2015	22:46
MW-18	E15-10258-005	11/11/2015	23:02
PZ-1	E15-10225-001	11/11/2015	23:18
MW-1/19.	E15-10261-001	11/11/2015	23:34
MW-1/9.4	E15-10146-001	11/11/2015	23:50
MW-1	E15-10161-001	11/12/2015	00:06
110515-F	E15-10161-002	11/12/2015	00:22
MW_#1	E15-10224-001	11/12/2015	00:38
TWP-E1	E15-10251-030	11/12/2015	00:54
ZPZ-1	E15-10217-001	11/12/2015	01:10
FIELD_BL	E15-10251-016	11/12/2015	01:26
TWP-E3	E15-10251-032	11/12/2015	01:42
MW-101	E15-10271-001	11/12/2015	01:58
FIELD_BL	E15-10251-041	11/12/2015	02:14
ZPZ-1	E15-10217-001	11/13/2015	07:39

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: A5922.D

Instrument ID: MSDA

Date Extracted: 11/10/15

Matrix: AQUEOUS

Date Analyzed: 11/11/2015

Time Analyzed: 15:16

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
POT-1	E15-10210-001	11/11/2015	15:30
FB-11031	E15-10258-018	11/11/2015	15:45
TWP-E2	E15-10251-031	11/11/2015	15:59
MW-21	E15-10258-001	11/11/2015	16:14
FB-11042	E15-10258-002	11/11/2015	16:28
MW-22	E15-10258-003	11/11/2015	16:43
MW-20	E15-10258-004	11/11/2015	16:57
MW-18	E15-10258-005	11/11/2015	17:12
PZ-1	E15-10225-001	11/11/2015	17:26
MW-1/19.	E15-10261-001	11/11/2015	17:41
MW-1/9.4	E15-10146-001	11/11/2015	17:55
MW-1	E15-10161-001	11/11/2015	18:10
110515-F	E15-10161-002	11/11/2015	18:24
MW_#1	E15-10224-001	11/11/2015	18:38
TWP-E1	E15-10251-030	11/11/2015	18:53
ZPZ-1	E15-10217-001	11/11/2015	19:07
FIELD_BL	E15-10251-016	11/11/2015	19:22
TWP-E3	E15-10251-032	11/11/2015	19:36
MW-101	E15-10271-001	11/11/2015	19:51

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B4005.D

Instrument ID: MSDB

Date Extracted: 11/11/15

Matrix: AQUEOUS

Date Analyzed: 11/11/2015

Time Analyzed: 11:07

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	LCSA151111-01	11/11/2015	11:24
.	E15-10305-001MS	11/11/2015	11:41
.	E15-10305-001MSD	11/11/2015	11:59
MW-1	E15-10305-001	11/11/2015	12:16
MW-11	E15-10258-006	11/12/2015	22:55
MW-23	E15-10258-007	11/12/2015	23:12
MW-16	E15-10258-008	11/12/2015	23:29
MW-13	E15-10258-009	11/12/2015	23:46
FB-11052	E15-10258-010	11/13/2015	00:03
MW-25	E15-10258-011	11/13/2015	00:21
MW-19RR	E15-10258-012	11/13/2015	00:38
FB-11062	E15-10258-013	11/13/2015	00:55
MW-24-2	E15-10258-014	11/13/2015	01:13
MW-24-1	E15-10258-015	11/13/2015	01:30
MW-26	E15-10258-016	11/13/2015	01:47
MW-1	E15-10306-001	11/13/2015	02:05
MW-1	E15-10299-001	11/13/2015	02:22
MW-2	E15-10299-002	11/13/2015	02:39
MW-4	E15-10299-004	11/13/2015	02:57
MW-5	E15-10299-005	11/13/2015	03:14
MW-105	E15-10299-006	11/13/2015	03:32
FB-11091	E15-10299-007	11/13/2015	03:49

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: B4003.D

Instrument ID: MSDB

Date Extracted: 11/11/15

Matrix:

Date Analyzed: 11/11/2015

Time Analyzed: 10:35

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
MW-1	E15-10305-001	11/11/2015	10:50
MW-11	E15-10258-006	11/12/2015	17:31
MW-23	E15-10258-007	11/12/2015	18:21
MW-16	E15-10258-008	11/12/2015	18:37
MW-13	E15-10258-009	11/12/2015	18:53
FB-11052	E15-10258-010	11/12/2015	19:09
MW-25	E15-10258-011	11/12/2015	19:25
MW-19RR	E15-10258-012	11/12/2015	19:41
FB-11062015	E15-10258-013	11/12/2015	19:57
MW-24-2	E15-10258-014	11/12/2015	20:13
MW-24-1	E15-10258-015	11/12/2015	20:29
MW-26	E15-10258-016	11/12/2015	20:46
MW-1	E15-10306-001	11/12/2015	21:02
MW-1	E15-10299-001	11/12/2015	21:17
MW-2	E15-10299-002	11/12/2015	21:34
MW-4	E15-10299-004	11/12/2015	21:50
MW-5	E15-10299-005	11/12/2015	22:06
MW-105	E15-10299-006	11/12/2015	22:22
FB-11091	E15-10299-007	11/12/2015	22:38

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5895.D

DFTPP Injection Date : 10/29/2015

Inst ID: MSDA

DFTPP Injection Time: 11:40

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	34.7	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Mass 69 relative abundance	35.2	
70	Less than 2.0% of mass 69	0.3	(0.9)1
127	40.0 - 60.0% of mass 198	45.6	
197	Less than 1.0% of mass 198	0.3	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	26.3	
365	Greater than 1.0% of mass 198	3.2	
441	Present, but less than mass 443	12.80	(73.0)3
442	40.0 - 100.0% of mass 198	90.4	
443	17.0 - 23.0% of mass 442	17.5	(19.4)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN068-15	ICC0160BNA1	A5896.D	10/29/2015	12:07
ABN063-15	ICC001BNA1	A5897.D	10/29/2015	12:34
ABN064-15	ICC010BNA1	A5898.D	10/29/2015	12:50
ABN065-15	ICC020BNA1	A5899.D	10/29/2015	13:06
ABN066-15	ICC040BNA1	A5900.D	10/29/2015	13:22
ABN067-15	ICC080BNA1	A5901.D	10/29/2015	13:38
ABN074-15	ICC160BNA2	A5902.D	10/29/2015	13:55
ABN073-15	ICC080BNA2	A5903.D	10/29/2015	14:11
ABN072-15	ICC040BNA2	A5904.D	10/29/2015	14:26
ABN071-15	ICC020BNA2	A5905.D	10/29/2015	14:42
ABN070-15	ICC010BNA2	A5906.D	10/29/2015	14:58
ABN069-15	ICC001BNA2	A5907.D	10/29/2015	15:14
ABN075-15	ICV040BNA1	A5908.D	10/29/2015	15:30
ABN07615	ICV040BNA2	A5909.D	10/29/2015	15:46

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5895.D

DFTPP Injection Date : 10/29/2015

Inst ID: MSDA

DFTPP Injection Time: 11:40

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	34.7	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Mass 69 relative abundance	35.2	
70	Less than 2.0% of mass 69	0.3	(0.9)1
127	40.0 - 60.0% of mass 198	45.6	
197	Less than 1.0% of mass 198	0.3	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	26.3	
365	Greater than 1.0% of mass 198	3.2	
441	Present, but less than mass 443	12.80	(73.0)3
442	40.0 - 100.0% of mass 198	90.4	
443	17.0 - 23.0% of mass 442	17.5	(19.4)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN056-15	ICC000.1SIM	A5910.D	10/29/2015	16:01
ABN057-15	ICC000.2SIM	A5911.D	10/29/2015	16:15
ABN058-15	ICC000.5SIM	A5912.D	10/29/2015	16:30
ABN059-15	ICC001.0SIM	A5913.D	10/29/2015	16:44
ABN060-15	ICC002.0SIM	A5914.D	10/29/2015	16:59
ABN061-15	ICV000.5SIM	A5915.D	10/29/2015	17:13

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5917.D

DFTPP Injection Date : 11/11/2015

Inst ID: MSDA

DFTPP Injection Time: 14:20

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	34.7	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Mass 69 relative abundance	35.8	
70	Less than 2.0% of mass 69	0.3	(0.9)1
127	40.0 - 60.0% of mass 198	46.9	
197	Less than 1.0% of mass 198	0.4	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.2	
275	10.0 - 30.0% of mass 198	20.4	
365	Greater than 1.0% of mass 198	2.2	
441	Present, but less than mass 443	6.35	(74.5)3
442	40.0 - 100.0% of mass 198	42.8	
443	17.0 - 23.0% of mass 442	8.5	(19.9)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN075-15	CCV040BNA1	A5919.D	11/11/2015	14:31
ABN076-15	CCV040BNA2	A5920.D	11/11/2015	14:46
.	BLKA151110-05	A5942.D	11/11/2015	20:06
.	LCSA151110-05	A5943.D	11/11/2015	20:22
.	E15-10210-001MS	A5944.D	11/11/2015	20:38
.	E15-10210-001MSD	A5945.D	11/11/2015	20:54
POT-1	E15-10210-001	A5946.D	11/11/2015	21:10
FB-11031	E15-10258-018	A5947.D	11/11/2015	21:26
TWP-E2	E15-10251-031	A5948.D	11/11/2015	21:42
MW-21	E15-10258-001	A5949.D	11/11/2015	21:58
FB-11042	E15-10258-002	A5950.D	11/11/2015	22:14
MW-22	E15-10258-003	A5951.D	11/11/2015	22:30
MW-20	E15-10258-004	A5952.D	11/11/2015	22:46
MW-18	E15-10258-005	A5953.D	11/11/2015	23:02
PZ-1	E15-10225-001	A5954.D	11/11/2015	23:18
MW-1/19.	E15-10261-001	A5955.D	11/11/2015	23:34
MW-1/9.4	E15-10146-001	A5956.D	11/11/2015	23:50
MW-1	E15-10161-001	A5957.D	11/12/2015	00:06
110515-F	E15-10161-002	A5958.D	11/12/2015	00:22
MW_#1	E15-10224-001	A5959.D	11/12/2015	00:38
TWP-E1	E15-10251-030	A5960.D	11/12/2015	00:54
ZPZ-1	E15-10217-001	A5961.D	11/12/2015	01:10
FIELD_BL	E15-10251-016	A5962.D	11/12/2015	01:26

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5917.D

DFTPP Injection Date : 11/11/2015

Inst ID: MSDA

DFTPP Injection Time: 14:20

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	34.7	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Mass 69 relative abundance	35.8	
70	Less than 2.0% of mass 69	0.3	(0.9)1
127	40.0 - 60.0% of mass 198	46.9	
197	Less than 1.0% of mass 198	0.4	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.2	
275	10.0 - 30.0% of mass 198	20.4	
365	Greater than 1.0% of mass 198	2.2	
441	Present, but less than mass 443	6.35	(74.5)3
442	40.0 - 100.0% of mass 198	42.8	
443	17.0 - 23.0% of mass 442	8.5	(19.9)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
TWP-E3	E15-10251-032	A5963.D	11/12/2015	01:42
MW-101	E15-10271-001	A5964.D	11/12/2015	01:58
FIELD_BL	E15-10251-041	A5965.D	11/12/2015	02:14

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: A5917.D

DFTPP Injection Date : 11/11/2015

Inst ID: MSDA

DFTPP Injection Time: 14:20

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	34.7	
68	Less than 2.0% of mass 69	0.5	(1.4)1
69	Mass 69 relative abundance	35.8	
70	Less than 2.0% of mass 69	0.3	(0.9)1
127	40.0 - 60.0% of mass 198	46.9	
197	Less than 1.0% of mass 198	0.4	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.2	
275	10.0 - 30.0% of mass 198	20.4	
365	Greater than 1.0% of mass 198	2.2	
441	Present, but less than mass 443	6.35	(74.5)3
442	40.0 - 100.0% of mass 198	42.8	
443	17.0 - 23.0% of mass 442	8.5	(19.9)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN061-15	CCV000.5SIM	A5921.D	11/11/2015	15:01
	BLKA151110-05	A5922.D	11/11/2015	15:16
POT-1	E15-10210-001	A5923.D	11/11/2015	15:30
FB-11031	E15-10258-018	A5924.D	11/11/2015	15:45
TWP-E2	E15-10251-031	A5925.D	11/11/2015	15:59
MW-21	E15-10258-001	A5926.D	11/11/2015	16:14
FB-11042	E15-10258-002	A5927.D	11/11/2015	16:28
MW-22	E15-10258-003	A5928.D	11/11/2015	16:43
MW-20	E15-10258-004	A5929.D	11/11/2015	16:57
MW-18	E15-10258-005	A5930.D	11/11/2015	17:12
PZ-1	E15-10225-001	A5931.D	11/11/2015	17:26
MW-1/19.	E15-10261-001	A5932.D	11/11/2015	17:41
MW-1/9.4	E15-10146-001	A5933.D	11/11/2015	17:55
MW-1	E15-10161-001	A5934.D	11/11/2015	18:10
110515-F	E15-10161-002	A5935.D	11/11/2015	18:24
MW_#1	E15-10224-001	A5936.D	11/11/2015	18:38
TWP-E1	E15-10251-030	A5937.D	11/11/2015	18:53
ZPZ-1	E15-10217-001	A5938.D	11/11/2015	19:07
FIELD_BL	E15-10251-016	A5939.D	11/11/2015	19:22
TWP-E3	E15-10251-032	A5940.D	11/11/2015	19:36
MW-101	E15-10271-001	A5941.D	11/11/2015	19:51

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3558.D

DFTPP Injection Date : 10/21/2015

Inst ID: MSDB

DFTPP Injection Time: 10:21

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	40.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	46.0	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	40.0 - 60.0% of mass 198	55.1	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.6	
275	10.0 - 30.0% of mass 198	22.1	
365	Greater than 1.0% of mass 198	1.8	
441	Present, but less than mass 443	10.45	(72.0)3
442	40.0 - 100.0% of mass 198	67.2	
443	17.0 - 23.0% of mass 442	14.5	(21.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN066-15	ICC040BNA1	B3559.D	10/21/2015	10:32
ABN063-15	ICC001BNA1	B3560.D	10/21/2015	10:49
ABN064-15	ICC010BNA1	B3561.D	10/21/2015	11:06
ABN065-15	ICC020BNA1	B3562.D	10/21/2015	11:23
ABN067-15	ICC080BNA1	B3563.D	10/21/2015	11:41
ABN068-15	ICC160BNA1	B3564.D	10/21/2015	11:58
ABN074-15	ICC160BNA2	B3565.D	10/21/2015	12:15
ABN073-15	ICC080BNA2	B3566.D	10/21/2015	12:32
ABN072-15	ICC040BNA2	B3567.D	10/21/2015	12:50
ABN071-15	ICC020BNA2	B3568.D	10/21/2015	13:07
ABN070-15	ICC010BNA2	B3569.D	10/21/2015	13:24
ABN069-15	ICC001BNA2	B3570.D	10/21/2015	13:41
ABN075-15	ICV040BNA1	B3576.D	10/21/2015	15:56
ABN076-15	ICV040BNA2	B3577.D	10/21/2015	16:13

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3558.D

DFTPP Injection Date : 10/21/2015

Inst ID: MSDB

DFTPP Injection Time: 10:21

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	40.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	46.0	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	40.0 - 60.0% of mass 198	55.1	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.6	
275	10.0 - 30.0% of mass 198	22.1	
365	Greater than 1.0% of mass 198	1.8	
441	Present, but less than mass 443	10.45	(72.0)3
442	40.0 - 100.0% of mass 198	67.2	
443	17.0 - 23.0% of mass 442	14.5	(21.6)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN058-15	ICC000.5SIM	B3571.D	10/21/2015	16:46
ABN056-15	ICC000.1SIM	B3572.D	10/21/2015	14:52
ABN057-15	ICC000.2SIM	B3573.D	10/21/2015	15:07
ABN059-15	ICC001.0SIM	B3574.D	10/21/2015	15:23
ABN060-15	ICC002.0SIM	B3575.D	10/21/2015	15:39
ABN061-15	ICV000.5SIM	B3578.D	10/21/2015	16:30

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3999.D

DFTPP Injection Date : 11/11/2015

Inst ID: MSDB

DFTPP Injection Time: 09:34

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	35.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.1	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	53.2	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	21.9	
365	Greater than 1.0% of mass 198	1.9	
441	Present, but less than mass 443	9.48	(72.4)3
442	40.0 - 100.0% of mass 198	63.9	
443	17.0 - 23.0% of mass 442	13.1	(20.5)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN075-15	CCV040BNA1	B4000.D	11/11/2015	09:45
ABN076-15	CCV040BNA2	B4001.D	11/11/2015	10:02
.	BLKA151111-01	B4005.D	11/11/2015	11:07
.	LCSA151111-01	B4006.D	11/11/2015	11:24
.	E15-10305-001MS	B4007.D	11/11/2015	11:41
.	E15-10305-001MSD	B4008.D	11/11/2015	11:59
MW-1	E15-10305-001	B4009.D	11/11/2015	12:16

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B3999.D

DFTPP Injection Date : 11/11/2015

Inst ID: MSDB

DFTPP Injection Time: 09:34

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	35.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.1	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	40.0 - 60.0% of mass 198	53.2	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	21.9	
365	Greater than 1.0% of mass 198	1.9	
441	Present, but less than mass 443	9.48	(72.4)3
442	40.0 - 100.0% of mass 198	63.9	
443	17.0 - 23.0% of mass 442	13.1	(20.5)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN061-15	CCV000.5SIM	B4002.D	11/11/2015	10:18
.	BLKA151111-01	B4003.D	11/11/2015	10:35
MW-1	E15-10305-001	B4004.D	11/11/2015	10:50

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B4045.D

DFTPP Injection Date : 11/12/2015

Inst ID: MSDB

DFTPP Injection Time: 15:55

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.8	
68	Less than 2.0% of mass 69	0.5	(1.3)1
69	Mass 69 relative abundance	35.8	
70	Less than 2.0% of mass 69	0.1	(0.2)1
127	40.0 - 60.0% of mass 198	51.9	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	23.3	
365	Greater than 1.0% of mass 198	2.6	
441	Present, but less than mass 443	11.57	(77.4)3
442	40.0 - 100.0% of mass 198	78.7	
443	17.0 - 23.0% of mass 442	15.0	(19.0)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN075-15	CCV040BNA1	B4046.D	11/12/2015	16:52
ABN076-15	CCV040BNA2	B4047.D	11/12/2015	16:39
MW-11	E15-10258-006	B4070.D	11/12/2015	22:55
MW-23	E15-10258-007	B4071.D	11/12/2015	23:12
MW-16	E15-10258-008	B4072.D	11/12/2015	23:29
MW-13	E15-10258-009	B4073.D	11/12/2015	23:46
FB-11052	E15-10258-010	B4074.D	11/13/2015	00:03
MW-25	E15-10258-011	B4075.D	11/13/2015	00:21
MW-19RR	E15-10258-012	B4076.D	11/13/2015	00:38
FB-11062	E15-10258-013	B4077.D	11/13/2015	00:55
MW-24-2	E15-10258-014	B4078.D	11/13/2015	01:13
MW-24-1	E15-10258-015	B4079.D	11/13/2015	01:30
MW-26	E15-10258-016	B4080.D	11/13/2015	01:47
MW-1	E15-10306-001	B4081.D	11/13/2015	02:05
MW-1	E15-10299-001	B4082.D	11/13/2015	02:22
MW-2	E15-10299-002	B4083.D	11/13/2015	02:39
MW-4	E15-10299-004	B4084.D	11/13/2015	02:57
MW-5	E15-10299-005	B4085.D	11/13/2015	03:14
MW-105	E15-10299-006	B4086.D	11/13/2015	03:32
FB-11091	E15-10299-007	B4087.D	11/13/2015	03:49

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: B4045.D

DFTPP Injection Date : 11/12/2015

Inst ID: MSDB

DFTPP Injection Time: 15:55

m/z	Ion Abudance Criteria	%Relative Abundance	
51	30.0 - 60.0% of mass 198	38.8	
68	Less than 2.0% of mass 69	0.5	(1.3)1
69	Mass 69 relative abundance	35.8	
70	Less than 2.0% of mass 69	0.1	(0.2)1
127	40.0 - 60.0% of mass 198	51.9	
197	Less than 1.0% of mass 198	0.0	
198	Base peak, 100% relative abundance	100.0	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	23.3	
365	Greater than 1.0% of mass 198	2.6	
441	Present, but less than mass 443	11.57	(77.4)3
442	40.0 - 100.0% of mass 198	78.7	
443	17.0 - 23.0% of mass 442	15.0	(19.0)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ABN061-15	CCV000.5SIM	B4048.D	11/12/2015	16:56
MW-11	E15-10258-006	B4052.D	11/12/2015	17:31
MW-23	E15-10258-007	B4053.D	11/12/2015	18:21
MW-16	E15-10258-008	B4054.D	11/12/2015	18:37
MW-13	E15-10258-009	B4055.D	11/12/2015	18:53
FB-11052	E15-10258-010	B4056.D	11/12/2015	19:09
MW-25	E15-10258-011	B4057.D	11/12/2015	19:25
MW-19RR	E15-10258-012	B4058.D	11/12/2015	19:41
FB-11062015	E15-10258-013	B4059.D	11/12/2015	19:57
MW-24-2	E15-10258-014	B4060.D	11/12/2015	20:13
MW-24-1	E15-10258-015	B4061.D	11/12/2015	20:29
MW-26	E15-10258-016	B4062.D	11/12/2015	20:46
MW-1	E15-10306-001	B4063.D	11/12/2015	21:02
MW-1	E15-10299-001	B4064.D	11/12/2015	21:17
MW-2	E15-10299-002	B4065.D	11/12/2015	21:34
MW-4	E15-10299-004	B4066.D	11/12/2015	21:50
MW-5	E15-10299-005	B4067.D	11/12/2015	22:06
MW-105	E15-10299-006	B4068.D	11/12/2015	22:22
FB-11091	E15-10299-007	B4069.D	11/12/2015	22:38

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5896.D

Date Analyzed: 10/29/2015

Instrument ID: MSDA

Time Analyzed: 12:07

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	56303		3.42		219048		4.17		125843		5.18	
	UPPER LIMIT	112606		3.92		438096		4.67		251686		5.68	
	LOWER LIMIT	28152		2.92		109524		3.67		62922		4.68	
	LAB SAMPLE ID												
01	ICC001BNA1	62204		3.41		266811		4.17		153810		5.18	
02	ICC010BNA1	62438		3.42		260286		4.17		144688		5.18	
03	ICC020BNA1	63912		3.42		257802		4.17		145736		5.18	
04	ICC040BNA1	59139		3.42		242279		4.17		138240		5.18	
05	ICC080BNA1	61059		3.42		238201		4.17		140150		5.18	
06	ICC160BNA2	60995		3.41		250247		4.17		145681		5.18	
07	ICC080BNA2	55649		3.42		233451		4.17		133514		5.18	
08	ICC040BNA2	58664		3.42		241608		4.17		138410		5.18	
09	ICC020BNA2	54531		3.42		225763		4.17		131679		5.18	
10	ICC010BNA2	54193		3.42		221435		4.17		130708		5.18	
11	ICC001BNA2	56549		3.42		228343		4.17		134788		5.18	
12	ICV040BNA1	64569		3.42		253127		4.17		145439		5.18	
13	ICV040BNA2	56143		3.42		231429		4.17		132555		5.18	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5896.D

Date Analyzed: 10/29/2015

Instrument ID: MSDA

Time Analyzed: 12:07

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	203614		6.02		155801		7.63		162869		8.86	
	UPPER LIMIT	407228		6.52		311602		8.13		325738		9.36	
	LOWER LIMIT	101807		5.52		77901		7.13		81435		8.36	
	LAB SAMPLE ID												
01	ICC001BNA1	250924		6.03		194781		7.65		168071		8.90	
02	ICC010BNA1	243461		6.02		184803		7.62		161030		8.85	
03	ICC020BNA1	238714		6.02		184534		7.61		160008		8.85	
04	ICC040BNA1	229551		6.02		169839		7.61		156067		8.85	
05	ICC080BNA1	225470		6.02		164851		7.62		162019		8.86	
06	ICC160BNA2	245439		6.03		213932		7.69		144985		8.95	
07	ICC080BNA2	220424		6.02		187870		7.62		138912		8.86	
08	ICC040BNA2	233832		6.02		198370		7.62		142303		8.85	
09	ICC020BNA2	217544		6.02		190961		7.61		138184		8.85	
10	ICC010BNA2	218892		6.02		193353		7.62		139820		8.86	
11	ICC001BNA2	227663		6.02		197960		7.62		143309		8.86	
12	ICV040BNA1	233533		6.02		178714		7.62		160684		8.86	
13	ICV040BNA2	222172		6.02		198702		7.61		143652		8.85	
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5910.D

Date Analyzed: 10/29/2015

Instrument ID: MSDA

Time Analyzed: 16:01

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	6586		2.25		20164		2.79		10148		3.58	
	UPPER LIMIT	13172		2.75		40328		3.29		20296		4.08	
	LOWER LIMIT	3293		1.75		10082		2.29		5074		3.08	
	LAB SAMPLE ID												
01	ICC000.2SIM	6130		2.25		18863		2.79		9516		3.58	
02	ICC000.5SIM	6508		2.25		19975		2.79		10040		3.58	
03	ICC001.0SIM	6020		2.25		18596		2.79		9453		3.58	
04	ICC002.0SIM	5472		2.25		17089		2.79		8849		3.58	
05	ICV000.5SIM	6178		2.25		19126		2.79		9638		3.58	
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5910.D

Date Analyzed: 10/29/2015

Instrument ID: MSDA

Time Analyzed: 16:01

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	16550	4.30	11541	6.20	10955	7.53
	UPPER LIMIT	33100	4.80	23082	6.70	21910	8.03
	LOWER LIMIT	8275	3.80	5771	5.70	5478	7.03
	LAB SAMPLE ID						
01	ICC000.2SIM	15342	4.29	11028	6.19	10404	7.53
02	ICC000.5SIM	16410	4.30	11839	6.20	11116	7.53
03	ICC001.0SIM	15597	4.29	11544	6.19	10930	7.53
04	ICC002.0SIM	13800	4.30	11110	6.20	10718	7.54
05	ICV000.5SIM	15145	4.31	11597	6.20	10515	7.54
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5919.D

Date Analyzed: 11/11/2015

Instrument ID: MSDA

Time Analyzed: 14:31

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	58173		3.42		237624		4.17		140919		5.18	
	UPPER LIMIT	116346		3.92		475248		4.67		281838		5.68	
	LOWER LIMIT	29087		2.92		118812		3.67		70460		4.68	
	LAB SAMPLE ID												
01	CCV040BNA2	72696		3.42		297842		4.17		174474		5.18	
02	BLKA151110-05	68569		3.41		272236		4.17		156382		5.18	
03	LCSA151110-05	60401		3.42		238163		4.17		138530		5.18	
04	E15-10210-001MS	47867		3.42		243708		4.17		134994		5.18	
05	E15-10210-001MSD	58665		3.42		232142		4.17		134287		5.18	
06	E15-10210-001	62438		3.42		247233		4.17		138804		5.18	
07	E15-10258-018	68095		3.42		270436		4.17		158929		5.18	
08	E15-10251-031	63933		3.41		253327		4.17		146359		5.18	
09	E15-10258-001	67851		3.41		267014		4.17		155232		5.18	
10	E15-10258-002	66165		3.41		252198		4.17		149227		5.18	
11	E15-10258-003	57813		3.41		219025		4.16		125915		5.18	
12	E15-10258-004	58637		3.41		231405		4.16		131892		5.18	
13	E15-10258-005	63200		3.41		241611		4.17		140194		5.18	
14	E15-10225-001	62486		3.41		245186		4.17		142951		5.18	
15	E15-10261-001	57533		3.41		215182		4.17		124676		5.18	
16	E15-10146-001	57605		3.41		233032		4.17		128420		5.18	
17	E15-10161-001	64114		3.41		248503		4.17		146094		5.18	
18	E15-10161-002	67788		3.41		264186		4.17		153961		5.18	
19	E15-10224-001	63972		3.41		234910		4.17		140634		5.18	
20	E15-10251-030	61483		3.41		236467		4.17		139782		5.18	
21	E15-10217-001	48110		3.42		163328		4.17		95604		5.18	
22	E15-10251-016	64537		3.41		248801		4.16		138868		5.18	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5919.D

Date Analyzed: 11/11/2015

Instrument ID: MSDA

Time Analyzed: 14:31

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	231261		6.02		161875		7.61		142725		8.84	
	UPPER LIMIT	462522		6.52		323750		8.11		285450		9.34	
	LOWER LIMIT	115631		5.52		80938		7.11		71363		8.34	
	LAB SAMPLE ID												
01	CCV040BNA2	294912		6.02		250364		7.59		169446		8.82	
02	BLKA151110-05	251578		6.02		213494		7.61		100160		8.84	
03	LCSA151110-05	224728		6.02		189526		7.61		109176		8.84	
04	E15-10210-001MS	224928		6.02		183303		7.60		121326		8.84	
05	E15-10210-001MSD	216842		6.02		172493		7.61		119088		8.84	
06	E15-10210-001	235979		6.02		196041		7.62		91609		8.85	
07	E15-10258-018	257530		6.02		202259		7.61		97716		8.84	
08	E15-10251-031	239647		6.02		149402		7.62		95141		8.86	
09	E15-10258-001	249244		6.02		209994		7.61		102474		8.84	
10	E15-10258-002	243334		6.02		206176		7.61		101502		8.84	
11	E15-10258-003	204883		6.02		175442		7.60		87394		8.83	
12	E15-10258-004	230989		6.02		191632		7.62		91740		8.85	
13	E15-10258-005	231609		6.02		197292		7.61		92982		8.84	
14	E15-10225-001	234806		6.02		193785		7.60		90758		8.83	
15	E15-10261-001	201065		6.02		123981		7.59		81306		8.82	
16	E15-10146-001	218773		6.02		175556		7.59		84557		8.82	
17	E15-10161-001	244613		6.02		197388		7.59		94919		8.82	
18	E15-10161-002	246037		6.02		208111		7.59		96776		8.82	
19	E15-10224-001	235758		6.02		197851		7.60		93873		8.83	
20	E15-10251-030	230456		6.02		188030		7.59		89730		8.82	
21	E15-10217-001	149488		6.03		144678		7.59		84498		8.82	
22	E15-10251-016	225110		6.02		189671		7.59		88476		8.81	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5919.D

Date Analyzed: 11/11/2015

Instrument ID: MSDA

Time Analyzed: 14:31

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	58173	3.42	237624	4.17	140919	5.18
	UPPER LIMIT	116346	3.92	475248	4.67	281838	5.68
	LOWER LIMIT	29087	2.92	118812	3.67	70460	4.68
	LAB SAMPLE ID						
01	E15-10251-032	64271	3.41	243080	4.16	142079	5.18
02	E15-10271-001	60002	3.42	208937	4.17	116278	5.19
03	E15-10251-041	55816	3.41	216586	4.16	126460	5.18
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22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5919.D

Date Analyzed: 11/11/2015

Instrument ID: MSDA

Time Analyzed: 14:31

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	231261	6.02	161875	7.61	142725	8.84
	UPPER LIMIT	462522	6.52	323750	8.11	285450	9.34
	LOWER LIMIT	115631	5.52	80938	7.11	71363	8.34
	LAB SAMPLE ID						
01	E15-10251-032	233991	6.02	191595	7.60	95262	8.83
02	E15-10271-001	179306	6.03	192229	7.59	121500	8.82
03	E15-10251-041	209161	6.02	173067	7.59	86156	8.82
04							
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5921.D

Date Analyzed: 11/11/2015

Instrument ID: MSDA

Time Analyzed: 15:01

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	5795	2.25	18357	2.79	9486	3.58
	UPPER LIMIT	11590	2.75	36714	3.29	18972	4.08
	LOWER LIMIT	2898	1.75	9179	2.29	4743	3.08
	LAB SAMPLE ID						
01	BLKA151110-05	8306	2.25	26493	2.79	13917	3.57
02	E15-10210-001	7034	2.25	22533	2.79	12067	3.57
03	E15-10258-018	7448	2.25	24015	2.79	12700	3.58
04	E15-10251-031	8043	2.25	25901	2.79	14492	3.58
05	E15-10258-001	8084	2.25	26154	2.79	14074	3.58
06	E15-10258-002	7059	2.25	22612	2.79	11938	3.58
07	E15-10258-003	8118	2.25	26100	2.79	13847	3.58
08	E15-10258-004	6832	2.25	21851	2.79	11964	3.58
09	E15-10258-005	8072	2.25	26003	2.79	13931	3.57
10	E15-10225-001	7157	2.25	22911	2.79	12398	3.57
11	E15-10261-001	7527	2.25	24113	2.79	12841	3.58
12	E15-10146-001	7443	2.25	23790	2.79	12372	3.57
13	E15-10161-001	8259	2.25	26577	2.79	15443	3.57
14	E15-10161-002	7866	2.25	25260	2.79	13260	3.57
15	E15-10224-001	7402	2.25	23755	2.79	13341	3.57
16	E15-10251-030	7753	2.25	24870	2.79	13623	3.57
17	E15-10217-001	12517*	2.27	16301	2.85	24624*	3.62
18	E15-10251-016	6506	2.25	20902	2.79	11744	3.57
19	E15-10251-032	7469	2.25	24919	2.79	13900	3.56
20	E15-10271-001	11318	2.26	20838	2.80	13069	3.59
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): A5921.D

Date Analyzed: 11/11/2015

Instrument ID: MSDA

Time Analyzed: 15:01

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	14815	4.30	11684	6.20	11081	7.53
	UPPER LIMIT	29630	4.80	23368	6.70	22162	8.03
	LOWER LIMIT	7408	3.80	5842	5.70	5541	7.03
	LAB SAMPLE ID						
01	BLKA151110-05	22605	4.28	17162	6.19	14539	7.52
02	E15-10210-001	19726	4.28	15020	6.19	12533	7.52
03	E15-10258-018	20480	4.29	16588	6.19	14475	7.52
04	E15-10251-031	23790	4.29	18095	6.19	16280	7.53
05	E15-10258-001	22402	4.30	17561	6.20	16015	7.54
06	E15-10258-002	19173	4.30	14999	6.20	12885	7.54
07	E15-10258-003	22591	4.30	17193	6.20	14881	7.53
08	E15-10258-004	21245	4.29	16383	6.19	14864	7.52
09	E15-10258-005	22475	4.29	17739	6.19	15140	7.52
10	E15-10225-001	19514	4.28	14225	6.19	13390	7.52
11	E15-10261-001	22578	4.29	16096	6.19	14035	7.52
12	E15-10146-001	20319	4.28	15112	6.18	13226	7.52
13	E15-10161-001	24846	4.28	18440	6.19	15322	7.52
14	E15-10161-002	21724	4.27	16379	6.18	14226	7.51
15	E15-10224-001	21322	4.27	15498	6.18	14058	7.51
16	E15-10251-030	21680	4.27	16418	6.18	15398	7.51
17	E15-10217-001	4936*	4.37	15583	6.22	22874*	7.53
18	E15-10251-016	20027	4.26	15266	6.18	14995	7.51
19	E15-10251-032	22888	4.26	17306	6.17	16250	7.51
20	E15-10271-001	11944	4.30	13334	6.18	19208	7.51
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3559.D

Date Analyzed: 10/21/2015

Instrument ID: MSDB

Time Analyzed: 10:32

	40 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	239863	6.32	228508	8.01	203995	9.26
	UPPER LIMIT	479726	6.82	457016	8.51	407990	9.76
	LOWER LIMIT	119932	5.82	114254	7.51	101998	8.76
	LAB SAMPLE ID						
01	ICC001BNA1	282723	6.30	253345	7.90	242603	9.14
02	ICC010BNA1	231334	6.31	209358	7.98	193224	9.22
03	ICC020BNA1	231989	6.30	207490	7.89	188341	9.12
04	ICC080BNA1	248656	6.30	201725	7.91	190272	9.15
05	ICC160BNA1	209818	6.30	171992	7.90	159382	9.13
06	ICC160BNA2	213539	6.29	202652	7.89	163792	9.12
07	ICC080BNA2	251449	6.29	258856	7.94	215926	9.20
08	ICC040BNA2	240793	6.29	234429	7.92	190484	9.16
09	ICC020BNA2	235962	6.29	240861	7.91	195722	9.15
10	ICC010BNA2	248663	6.29	236999	7.90	188617	9.15
11	ICC001BNA2	260290	6.29	257961	7.90	210364	9.14
12	ICV040BNA1	146391	6.30	150951	7.98	152389	9.26
13	ICV040BNA2	228267	6.29	230758	7.86	185946	9.09
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22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3559.D

Date Analyzed: 10/21/2015

Instrument ID: MSDB

Time Analyzed: 10:32

	40 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	55703	3.57	226029	4.34	138639	5.37
	UPPER LIMIT	111406	4.07	452058	4.84	277278	5.87
	LOWER LIMIT	27852	3.07	113015	3.84	69320	4.87
	LAB SAMPLE ID						
01	ICC001BNA1	64967	3.57	264837	4.34	162484	5.37
02	ICC010BNA1	55772	3.57	221752	4.34	134613	5.37
03	ICC020BNA1	52514	3.57	213093	4.34	130974	5.37
04	ICC080BNA1	54471	3.57	226428	4.34	143684	5.37
05	ICC160BNA1	49103	3.57	197678	4.34	122059	5.37
06	ICC160BNA2	48759	3.57	196414	4.34	119741	5.37
07	ICC080BNA2	57523	3.57	227504	4.34	141350	5.37
08	ICC040BNA2	58061	3.57	229382	4.34	139279	5.37
09	ICC020BNA2	54544	3.57	221574	4.34	131461	5.37
10	ICC010BNA2	59928	3.57	234862	4.34	141791	5.37
11	ICC001BNA2	52376	3.57	244873	4.34	148157	5.37
12	ICV040BNA1	32022	3.57	130261	4.34	81570	5.37
13	ICV040BNA2	53220	3.57	212173	4.34	129275	5.37
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22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3571.D

Date Analyzed: 10/21/2015

Instrument ID: MSDB

Time Analyzed: 16:46

	1 ppm	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	17155	2.16	48707	2.70	25232	3.49
	UPPER LIMIT	34310	2.66	97414	3.20	50464	3.99
	LOWER LIMIT	8578	1.66	24354	2.20	12616	2.99
	LAB SAMPLE ID						
01	ICC000.1SIM	17454	2.16	47753	2.70	25030	3.51
02	ICC000.2SIM	17615	2.16	48423	2.70	26007	3.50
03	ICC001.0SIM	17388	2.16	48538	2.70	25918	3.50
04	ICC002.0SIM	14293	2.16	40644	2.70	22356	3.50
05	ICV000.5SIM	17966	2.16	49005	2.70	25386	3.49
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B3571.D

Date Analyzed: 10/21/2015

Instrument ID: MSDB

Time Analyzed: 16:46

	1 ppm	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	39333	4.22	31795	5.97	39511	7.24
	UPPER LIMIT	78666	4.72	63590	6.47	79022	7.74
	LOWER LIMIT	19667	3.72	15898	5.47	19756	6.74
	LAB SAMPLE ID						
01	ICC000.1SIM	39949	4.27	32166	6.05	42904	7.32
02	ICC000.2SIM	40384	4.24	33571	5.99	40688	7.28
03	ICC001.0SIM	40744	4.24	34645	6.00	44664	7.27
04	ICC002.0SIM	35142	4.24	31508	6.00	40810	7.28
05	ICV000.5SIM	40093	4.23	34510	5.98	44184	7.25
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4000.D

Date Analyzed: 11/11/2015

Instrument ID: MSDB

Time Analyzed: 09:45

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	92558		3.56		351012		4.34		200252		5.35	
	UPPER LIMIT	185116		4.06		702024		4.84		400504		5.85	
	LOWER LIMIT	46279		3.06		175506		3.84		100126		4.85	
	LAB SAMPLE ID												
01	CCV040BNA2	94249		3.56		360397		4.33		214923		5.35	
02	BLKA151111-01	76854		3.56		292117		4.33		171605		5.35	
03	LCSA151111-01	82473		3.56		308726		4.33		190127		5.36	
04	E15-10305-001MS	74476		3.56		293119		4.32		160885		5.35	
05	E15-10305-001MSD	69895		3.56		287163		4.33		161792		5.35	
06	E15-10305-001	50890		3.57		204643		4.33		124119		5.35	
07													
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21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4000.D

Date Analyzed: 11/11/2015

Instrument ID: MSDB

Time Analyzed: 09:45

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	315861		6.27		237594		7.83		220966		9.03	
	UPPER LIMIT	631722		6.77		475188		8.33		441932		9.53	
	LOWER LIMIT	157931		5.77		118797		7.33		110483		8.53	
	LAB SAMPLE ID												
01	CCV040BNA2	342234		6.27		292707		7.82		236187		9.00	
02	BLKA151111-01	276109		6.27		233586		7.83		181405		9.02	
03	LCSA151111-01	303004		6.29		267495		7.95		187543		9.16	
04	E15-10305-001MS	242658		6.26		195201		7.81		163263		9.00	
05	E15-10305-001MSD	254944		6.27		202581		7.84		165185		9.03	
06	E15-10305-001	207219		6.27		192034		7.80		149715		8.98	
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4002.D

Date Analyzed: 11/11/2015

Instrument ID: MSDB

Time Analyzed: 10:18

	1 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	28060		2.16		80853		2.70		41325		3.49	
	UPPER LIMIT	56120		2.66		161706		3.20		82650		3.99	
	LOWER LIMIT	14030		1.66		40427		2.20		20663		2.99	
	LAB SAMPLE ID												
01	BLKA151111-01	26648		2.16		78719		2.70		44264		3.48	
02	E15-10305-001	26180		2.16		74331		2.70		41580		3.48	
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
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16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4002.D

Date Analyzed: 11/11/2015

Instrument ID: MSDB

Time Analyzed: 10:18

	1 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	65581		4.22		52228		5.96		57569		7.21	
	UPPER LIMIT	131162		4.72		104456		6.46		115138		7.71	
	LOWER LIMIT	32791		3.72		26114		5.46		28785		6.71	
	LAB SAMPLE ID												
01	BLKA151111-01	70364		4.21		51691		5.93		53239		7.19	
02	E15-10305-001	64888		4.20		47085		5.92		47627		7.19	
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
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14													
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16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4046.D

Date Analyzed: 11/12/2015

Instrument ID: MSDB

Time Analyzed: 16:52

	40 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	64485		3.56		263713		4.32		145260		5.35	
	UPPER LIMIT	128970		4.06		527426		4.82		290520		5.85	
	LOWER LIMIT	32243		3.06		131857		3.82		72630		4.85	
	LAB SAMPLE ID												
01	CCV040BNA2	61802		3.56		251761		4.32		144659		5.35	
02	E15-10258-006	106045		3.56		405782		4.33		223290		5.35	
03	E15-10258-007	74085		3.56		296458		4.32		168089		5.35	
04	E15-10258-008	103462		3.56		406139		4.32		229452		5.35	
05	E15-10258-009	99489		3.56		390381		4.32		223286		5.34	
06	E15-10258-010	53078		3.56		214290		4.32		119449		5.35	
07	E15-10258-011	75576		3.56		299464		4.32		168278		5.35	
08	E15-10258-012	92901		3.56		367366		4.32		206378		5.35	
09	E15-10258-013	81922		3.56		320412		4.32		180889		5.35	
10	E15-10258-014	64610		3.56		254224		4.32		146886		5.35	
11	E15-10258-015	86175		3.56		372135		4.32		197791		5.35	
12	E15-10258-016	87477		3.56		339214		4.32		194784		5.35	
13	E15-10306-001	50041		3.56		202630		4.32		120588		5.35	
14	E15-10299-001	41852		3.56		171404		4.32		102539		5.35	
15	E15-10299-002	68835		3.56		268159		4.32		153120		5.35	
16	E15-10299-004	87003		3.56		337383		4.32		196019		5.35	
17	E15-10299-005	82480		3.56		315252		4.32		178920		5.35	
18	E15-10299-006	111116		3.56		435474		4.32		246101		5.35	
19	E15-10299-007	94857		3.56		363366		4.32		209156		5.35	
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4046.D

Date Analyzed: 11/12/2015

Instrument ID: MSDB

Time Analyzed: 16:52

	40 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	221191		6.26		160428		7.81		140015		8.99	
	UPPER LIMIT	442382		6.76		320856		8.31		280030		9.49	
	LOWER LIMIT	110596		5.76		80214		7.31		70008		8.49	
	LAB SAMPLE ID												
01	CCV040BNA2	215833		6.26		174792		7.82		125646		9.00	
02	E15-10258-006	325381		6.27		251619		7.88		134062		9.08	
03	E15-10258-007	260539		6.27		221096		7.83		119186		9.01	
04	E15-10258-008	358441		6.26		291662		7.80		157570		8.99	
05	E15-10258-009	349130		6.26		305093		7.80		164628		8.98	
06	E15-10258-010	183095		6.26		165797		7.80		88480		8.98	
07	E15-10258-011	271338		6.25		242568		7.82		133783		9.03	
08	E15-10258-012	329033		6.26		290842		7.81		161978		9.00	
09	E15-10258-013	286007		6.25		250433		7.83		135458		9.04	
10	E15-10258-014	233263		6.26		205697		7.81		113422		9.00	
11	E15-10258-015	313165		6.25		285349		7.83		162621		9.04	
12	E15-10258-016	320941		6.27		296878		7.98		198211		9.21	
13	E15-10306-001	203988		6.26		200042		7.83		111921		9.02	
14	E15-10299-001	169245		6.25		170417		7.82		115044		9.04	
15	E15-10299-002	237402		6.26		223762		7.80		134475		8.98	
16	E15-10299-004	304296		6.26		283192		7.80		173968		8.99	
17	E15-10299-005	285404		6.26		273018		7.79		161770		8.96	
18	E15-10299-006	398250		6.26		290217		7.78		223536		8.96	
19	E15-10299-007	337799		6.25		306791		7.80		176845		9.00	
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4048.D Date Analyzed: 11/12/2015

Instrument ID: MSDB Time Analyzed: 16:56

	1 ppm	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	23683		2.16		59146		2.71		28296		3.55	
	UPPER LIMIT	47366		2.66		118292		3.21		56592		4.05	
	LOWER LIMIT	11842		1.66		29573		2.21		14148		3.05	
	LAB SAMPLE ID												
01	E15-10258-006	40621		2.16		106579		2.70		53456		3.53	
02	E15-10258-007	28812		2.15		77534		2.69		39352		3.48	
03	E15-10258-008	35223		2.15		96379		2.69		48579		3.47	
04	E15-10258-009	33499		2.15		87938		2.69		45409		3.47	
05	E15-10258-010	34389		2.15		93535		2.69		48114		3.47	
06	E15-10258-011	26127		2.15		78874		2.69		36692		3.47	
07	E15-10258-012	36751		2.15		99376		2.69		52164		3.47	
08	E15-10258-013	34025		2.15		89652		2.69		46813		3.47	
09	E15-10258-014	33502		2.15		88998		2.69		48428		3.47	
10	E15-10258-015	32632		2.15		84073		2.69		46242		3.47	
11	E15-10258-016	35307		2.15		106713		2.69		52273		3.47	
12	E15-10306-001	44036		2.15		118123		2.69		55753		3.47	
13	E15-10299-001	25285		2.15		61709		2.69		43162		3.48	
14	E15-10299-002	37921		2.15		102274		2.69		55167		3.47	
15	E15-10299-004	40448		2.15		106767		2.69		54304		3.47	
16	E15-10299-005	34219		2.15		93656		2.69		46930		3.47	
17	E15-10299-006	33516		2.15		89328		2.69		43971		3.47	
18	E15-10299-007	35891		2.15		96928		2.69		50111		3.47	
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): B4048.D

Date Analyzed: 11/12/2015

Instrument ID: MSDB

Time Analyzed: 16:56

	1 ppm	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	37421		4.36		21303		6.18		21770		7.42	
	UPPER LIMIT	74842		4.86		42606		6.68		43540		7.92	
	LOWER LIMIT	18711		3.86		10652		5.68		10885		6.92	
	LAB SAMPLE ID												
01	E15-10258-006	74463		4.32		42465		6.12		41386		7.36	
02	E15-10258-007	56797		4.22		39135		5.95		36884		7.21	
03	E15-10258-008	70717		4.20		41909		5.92		40060		7.18	
04	E15-10258-009	66622		4.20		40334		5.92		37617		7.18	
05	E15-10258-010	70400		4.19		41701		5.90		41879		7.18	
06	E15-10258-011	54364		4.18		39178		5.89		36368		7.16	
07	E15-10258-012	74206		4.18		42034		5.89		43410		7.16	
08	E15-10258-013	66735		4.19		41398		5.90		36896		7.18	
09	E15-10258-014	71192		4.18		41183		5.90		42431		7.16	
10	E15-10258-015	68740		4.18		41014		5.89		40684		7.16	
11	E15-10258-016	71673		4.18		41797		5.89		43188		7.16	
12	E15-10306-001	73908		4.18		40402		5.89		43446		7.15	
13	E15-10299-001	49089		4.20		22886		5.92		21391		7.19	
14	E15-10299-002	72765		4.20		41786		5.93		39361		7.17	
15	E15-10299-004	68623		4.20		41639		5.91		42577		7.16	
16	E15-10299-005	64665		4.20		41587		5.92		41683		7.16	
17	E15-10299-006	61224		4.19		39951		5.91		41554		7.16	
18	E15-10299-007	68076		4.19		42567		5.92		42935		7.17	
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEMI-VOLATILE ORGANICS SAMPLE DATA

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5949.D
Acq On : 11 Nov 2015 21:58
Operator : JC
Sample : MW-21,E15-10258-001,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Nov 12 11:23:18 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	67851	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	267014	40.00	UG	0.00
43) Acenaphthene-d10	5.178	164	155232	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	249244	40.00	UG	0.00
82) Chrysene-d12	7.606	240	209994	40.00	UG	-0.02
92) Perylene-d12	8.837	264	102474	40.00	UG	-0.03

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.739	82	49845	29.67	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 59.34%			
47) 2-Fluorobiphenyl	4.777	172	128984	36.34	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 72.68%			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	6.927	244	135426	32.04	UG	0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 64.08%			

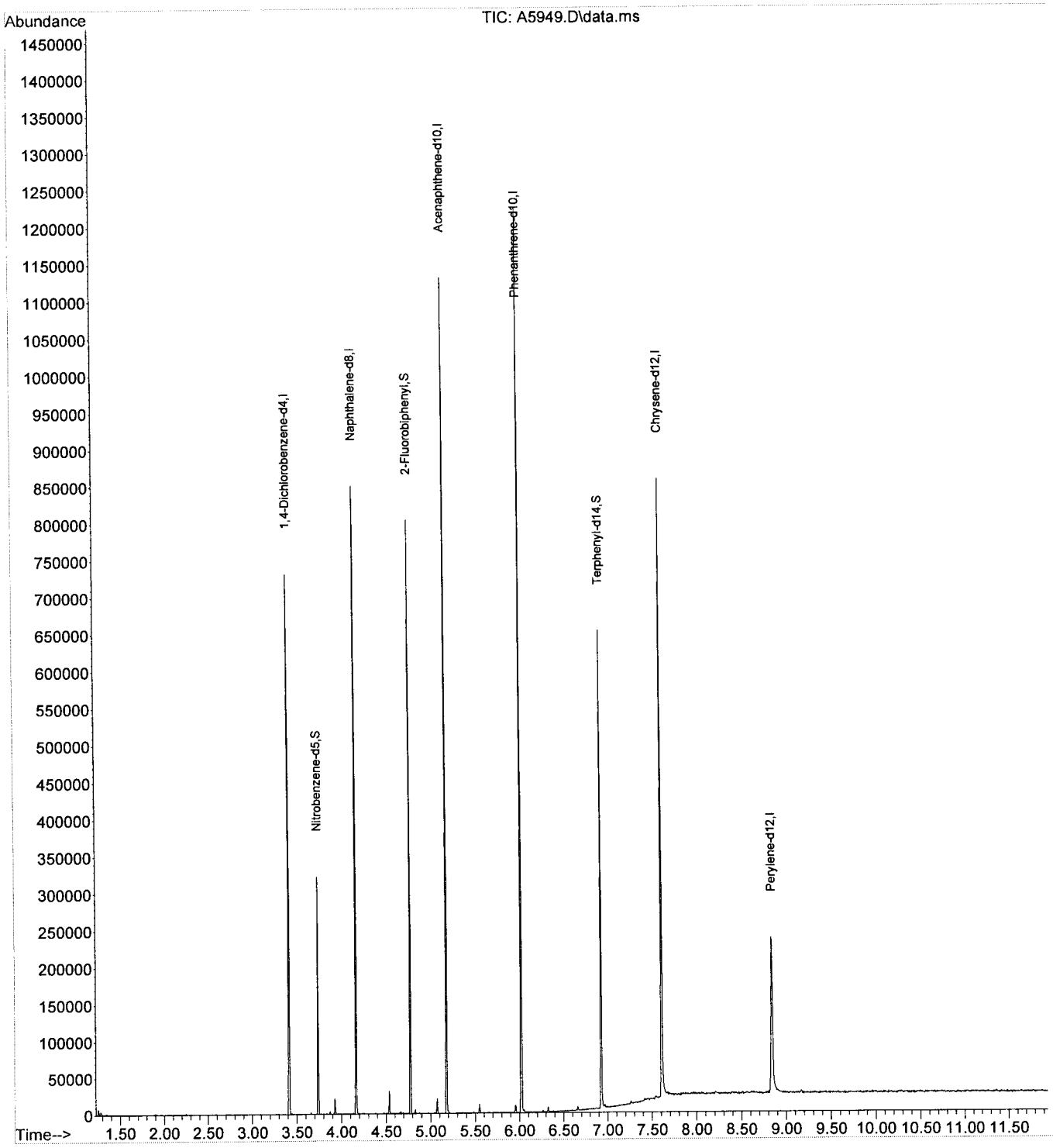
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5949.D
Acq On : 11 Nov 2015 21:58
Operator : JC
Sample : MW-21,E15-10258-001,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Nov 12 11:23:18 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0377

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5926.D
Acq On : 11 Nov 2015 16:14
Operator : JC
Sample : MW-21,E15-10258-001,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 11 16:48:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	8084	1.00	UG	0.00
23) Naphthalene-d8	2.793	136	26154	1.00	UG	0.00
43) Acenaphthene-d10	3.579	164	14074	1.00	UG	0.00
66) Phenanthrene-d10	4.302	188	22402	1.00	UG	0.00
82) Chrysene-d12	6.199	240	17561	1.00	UG	0.00
92) Perylene-d12	7.536	264	16015	1.00	UG	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		

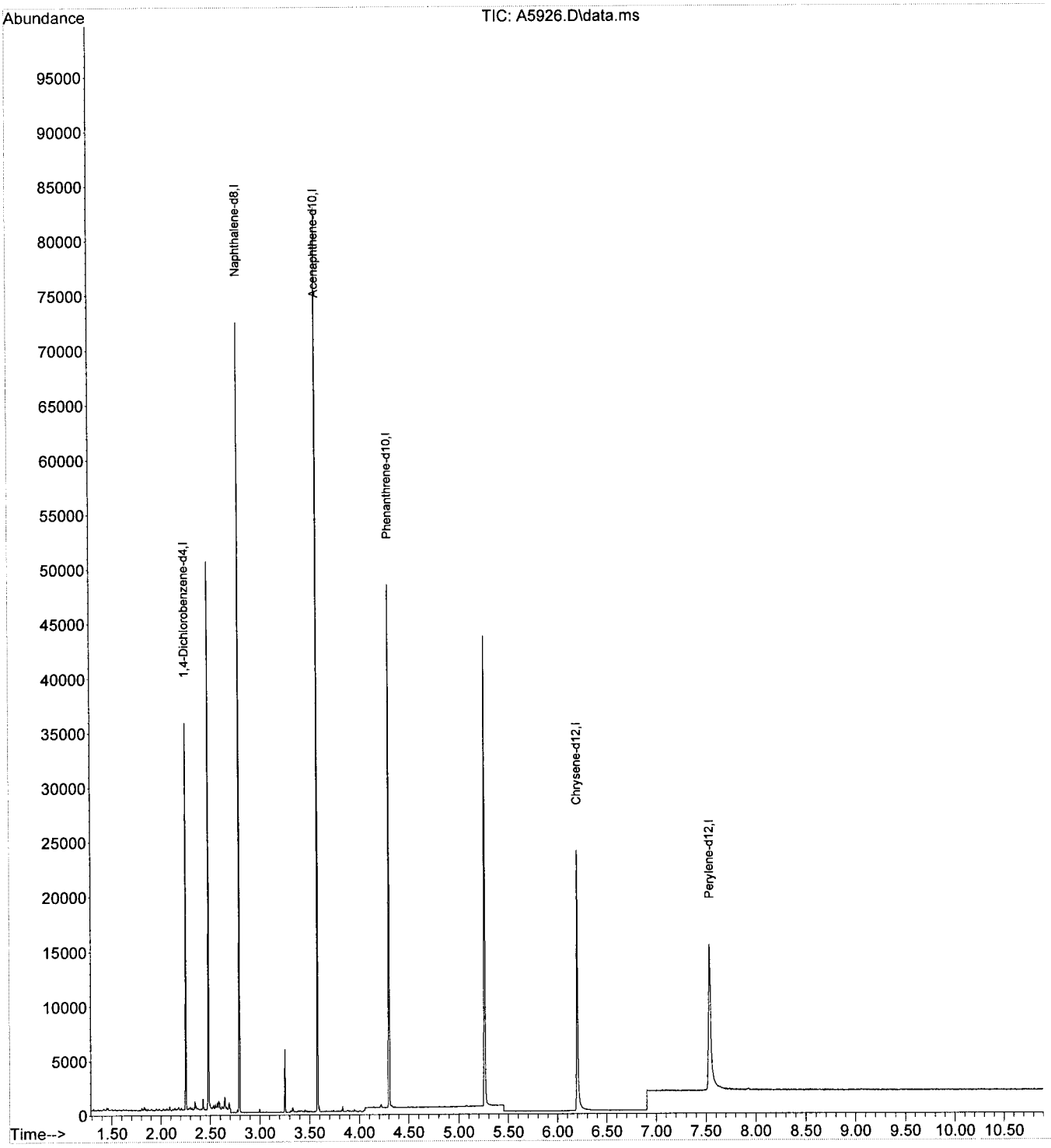
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5926.D
Acq On : 11 Nov 2015 16:14
Operator : JC
Sample : MW-21,E15-10258-001,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 11 16:48:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



E15-10258 0379

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5950.D
Acq On : 11 Nov 2015 22:14
Operator : JC
Sample : FB-11042,E15-10258-002,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Nov 12 11:24:02 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	66165	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	252198	40.00	UG	0.00
43) Acenaphthene-d10	5.178	164	149227	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	243334	40.00	UG	0.00
82) Chrysene-d12	7.607	240	206176	40.00	UG	-0.02
92) Perylene-d12	8.837	264	101502	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.739	82	46225	29.13	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery =	58.26%		
47) 2-Fluorobiphenyl	4.777	172	136035	39.87	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery =	79.74%		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	6.927	244	167893	40.45	UG	0.00
Spiked Amount 50.000	Range 33 - 113		Recovery =	80.90%		

Target Compounds	Qvalue

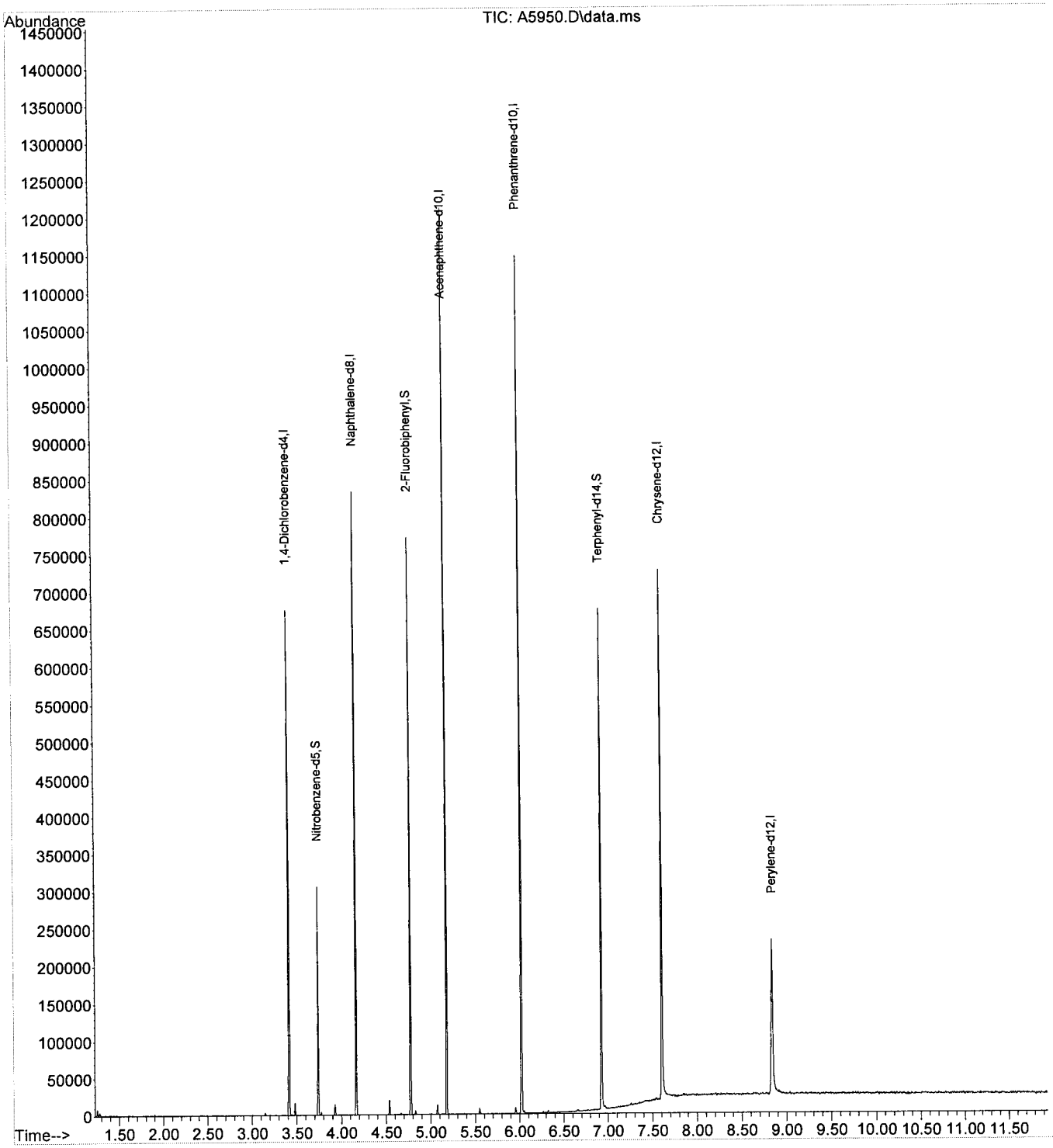
(#) = qualifier out of range (m) = manual integration (+) = signals summed

E15-10258 0380

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5950.D
Acq On : 11 Nov 2015 22:14
Operator : JC
Sample : FB-11042,E15-10258-002,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Nov 12 11:24:02 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0381

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5927.D
Acq On : 11 Nov 2015 16:28
Operator : JC
Sample : FB-11042,E15-10258-002,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 12 06:11:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	7059	1.00	UG	0.00
23) Naphthalene-d8	2.793	136	22612	1.00	UG	0.00
43) Acenaphthene-d10	3.580	164	11938	1.00	UG	0.00
66) Phenanthrene-d10	4.302	188	19173	1.00	UG	0.00
82) Chrysene-d12	6.200	240	14999	1.00	UG	0.00
92) Perylene-d12	7.539	264	12885	1.00	UG	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		

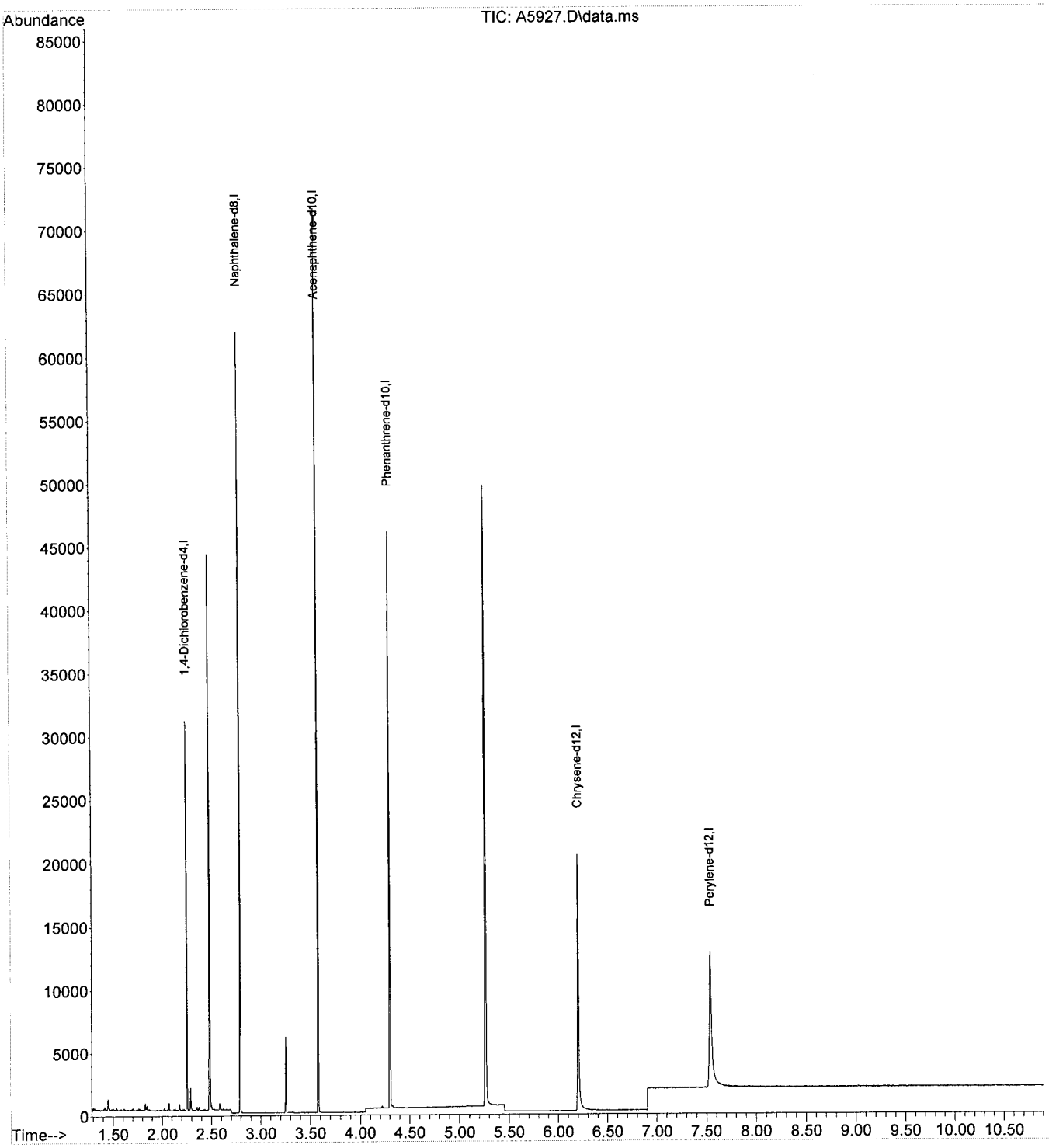
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5927.D
Acq On : 11 Nov 2015 16:28
Operator : JC
Sample : FB-11042,E15-10258-002,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 12 06:11:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



E15-10258 0383

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5951.D
Acq On : 11 Nov 2015 22:30
Operator : JC
Sample : MW-22,E15-10258-003,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Nov 12 11:25:42 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	57813	40.00	UG	0.00
23) Naphthalene-d8	4.162	136	219025	40.00	UG	0.00
43) Acenaphthene-d10	5.178	164	125915	40.00	UG	0.00
66) Phenanthrene-d10	6.018	188	204883	40.00	UG	0.00
82) Chrysene-d12	7.601	240	175442	40.00	UG	-0.03
92) Perylene-d12	8.831	264	87394	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.739	82	34787	25.25	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 50.50%			
47) 2-Fluorobiphenyl	4.777	172	70893	24.63	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 49.26%			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	6.922	244	58948	16.69	UG	-0.01
Spiked Amount 50.000	Range 33 - 113		Recovery = 33.38%			

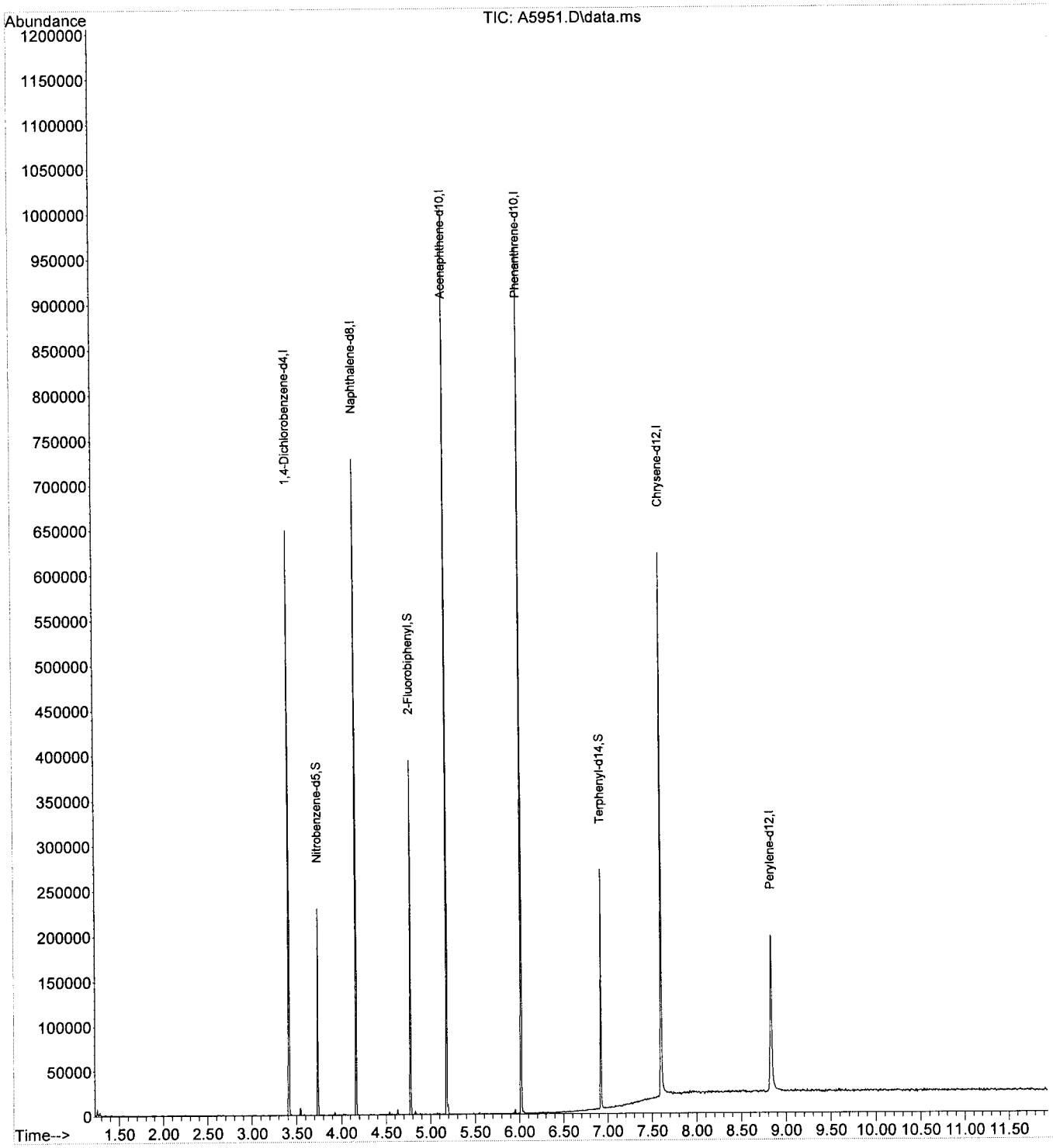
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5951.D
Acq On : 11 Nov 2015 22:30
Operator : JC
Sample : MW-22,E15-10258-003,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Nov 12 11:25:42 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0385

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5928.D
Acq On : 11 Nov 2015 16:43
Operator : JC
Sample : MW-22,E15-10258-003,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 12 06:11:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	8118	1.00	UG	0.00
23) Naphthalene-d8	2.792	136	26100	1.00	UG	0.00
43) Acenaphthene-d10	3.579	164	13847	1.00	UG	0.00
66) Phenanthrene-d10	4.297	188	22591	1.00	UG	0.00
82) Chrysene-d12	6.195	240	17193	1.00	UG	0.00
92) Perylene-d12	7.532	264	14881	1.00	UG	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		

Target Compounds	Qvalue

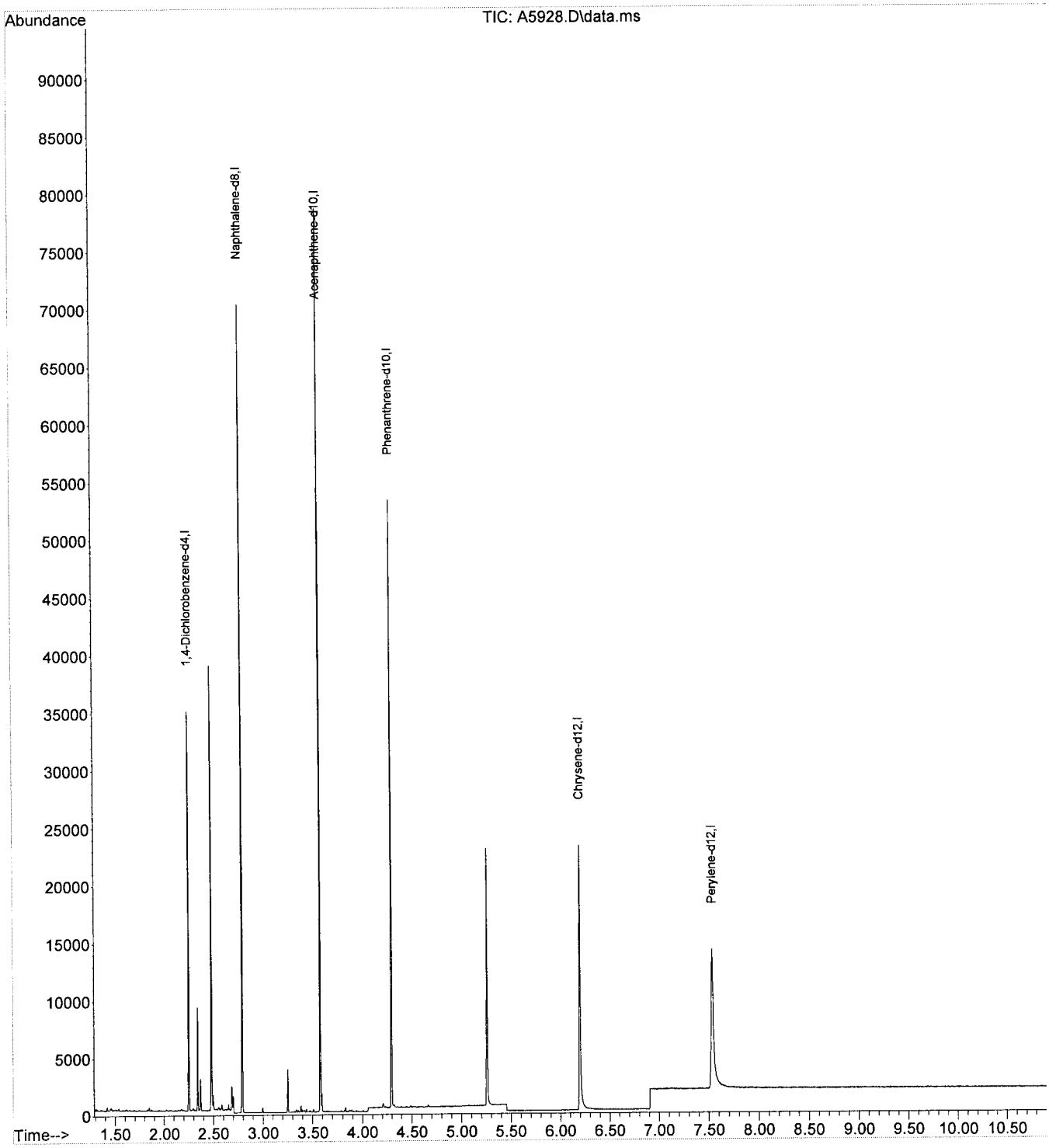
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Jean Clauch E15-10258 0386

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5928.D
Acq On : 11 Nov 2015 16:43
Operator : JC
Sample : MW-22,E15-10258-003,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 12 06:11:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



E15-10258 0387

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5952.D
Acq On : 11 Nov 2015 22:46
Operator : JC
Sample : MW-20,E15-10258-004,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 12 11:26:25 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	58637	40.00	UG	0.00
23) Naphthalene-d8	4.162	136	231405	40.00	UG	0.00
43) Acenaphthene-d10	5.178	164	131892	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	230989	40.00	UG	0.00
82) Chrysene-d12	7.617	240	191632	40.00	UG	-0.01
92) Perylene-d12	8.853	264	91740	40.00	UG	-0.01

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.739	82	36037	24.75	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 49.50%			
47) 2-Fluorobiphenyl	4.777	172	93870	31.13	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 62.26%			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	6.933	244	91532	23.73	UG	0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 47.46%			

Target Compounds	Qvalue

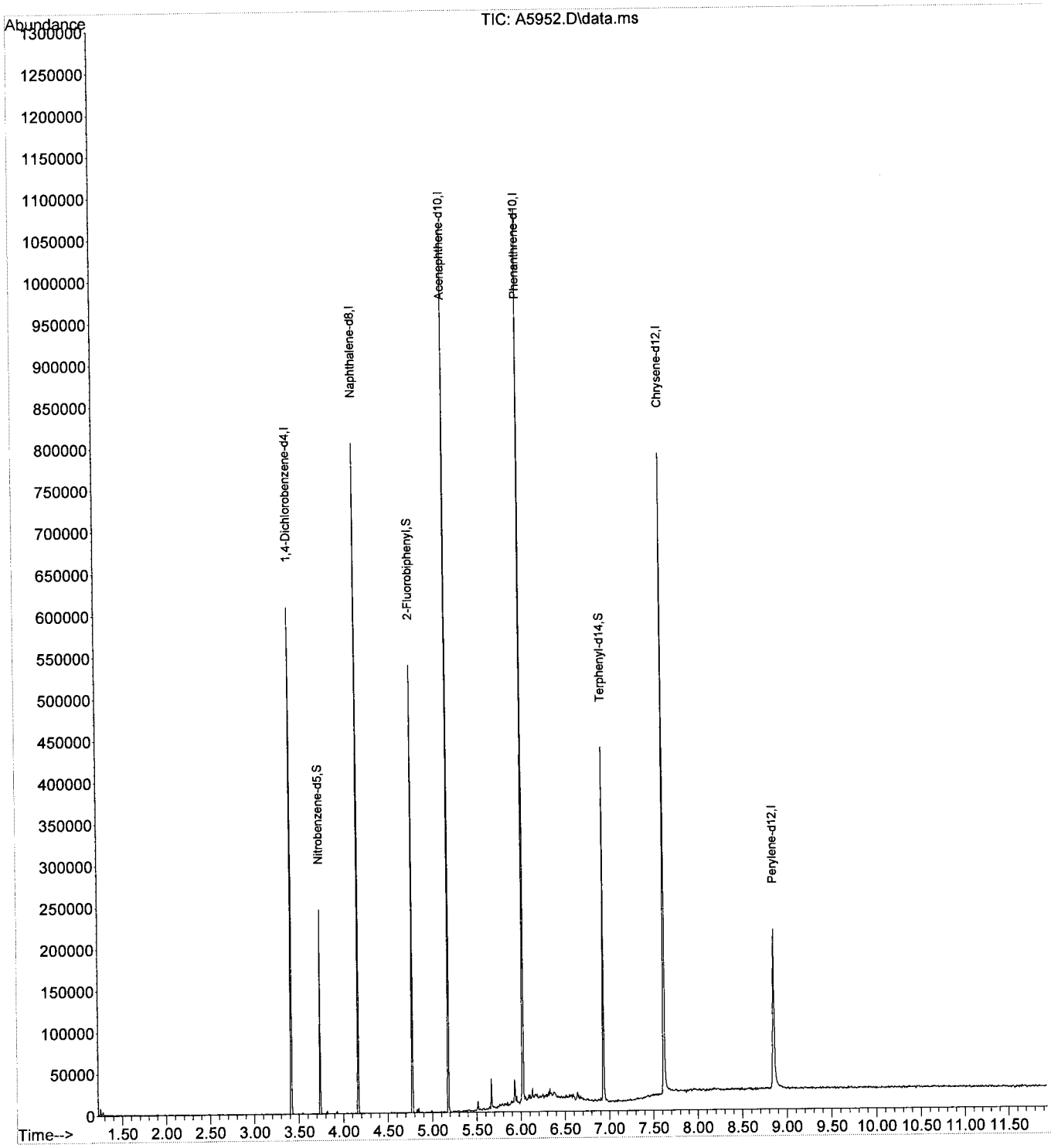
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Jean Cluck

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5952.D
Acq On : 11 Nov 2015 22:46
Operator : JC
Sample : MW-20,E15-10258-004,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Nov 12 11:26:25 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0389

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5929.D
Acq On : 11 Nov 2015 16:57
Operator : JC
Sample : MW-20,E15-10258-004,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 12 06:11:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	6832	1.00	UG	0.00
23) Naphthalene-d8	2.794	136	21851	1.00	UG	0.00
43) Acenaphthene-d10	3.578	164	11964	1.00	UG	0.00
66) Phenanthrene-d10	4.290	188	21245	1.00	UG	0.00
82) Chrysene-d12	6.190	240	16383	1.00	UG	0.00
92) Perylene-d12	7.523	264	14864	1.00	UG	-0.01

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		

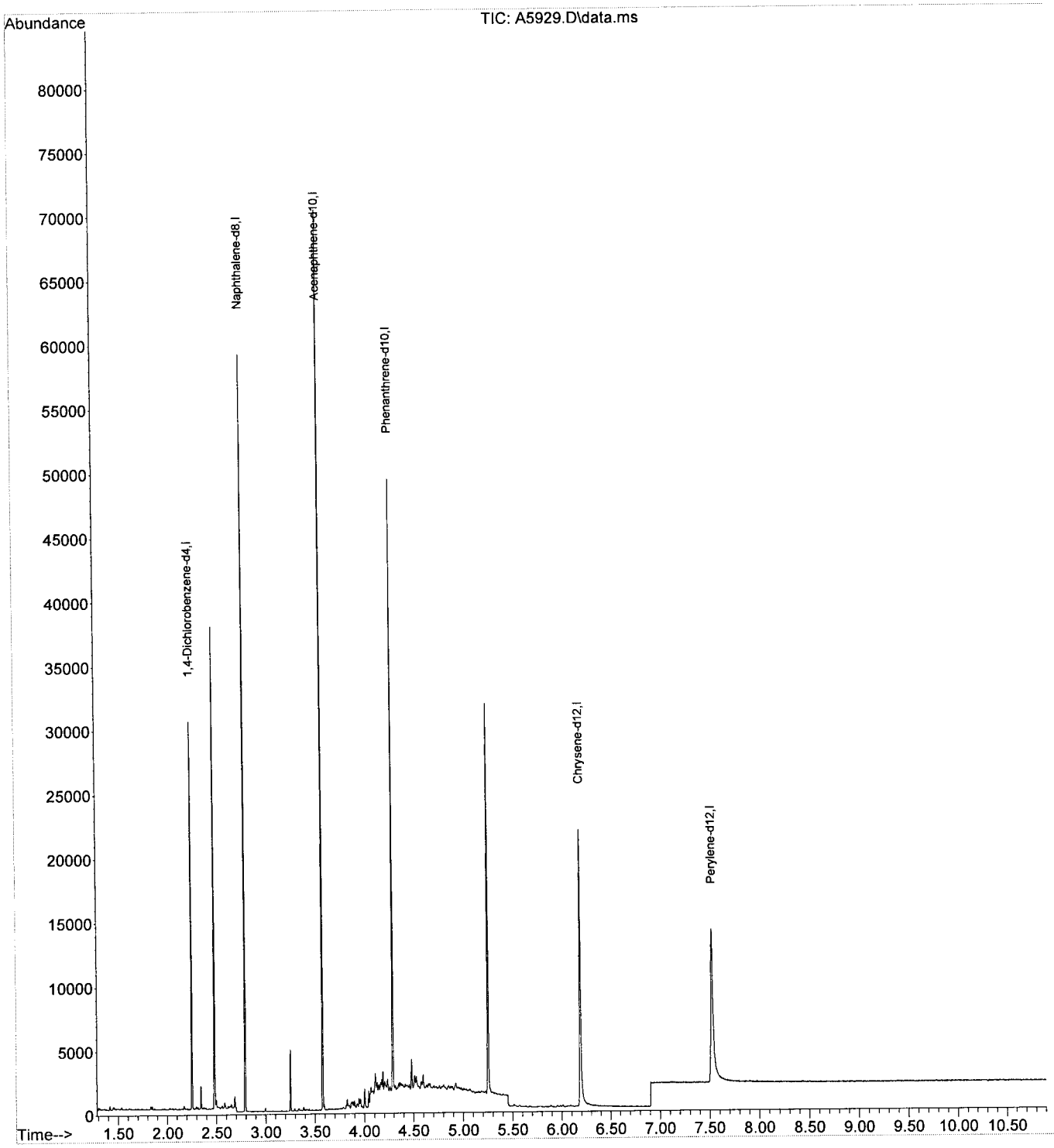
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5929.D
Acq On : 11 Nov 2015 16:57
Operator : JC
Sample : MW-20,E15-10258-004,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 12 06:11:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



E15-10258 0391

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5953.D
Acq On : 11 Nov 2015 23:02
Operator : JC
Sample : MW-18,E15-10258-005,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 12 11:27:14 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	63200	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	241611	40.00	UG	0.00
43) Acenaphthene-d10	5.178	164	140194	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	231609	40.00	UG	0.00
82) Chrysene-d12	7.606	240	197292	40.00	UG	-0.02
92) Perylene-d12	8.837	264	92982	40.00	UG	-0.03

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.739	82	47914	31.52	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 63.04%			
47) 2-Fluorobiphenyl	4.777	172	118311	36.91	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 73.82%			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	6.927	244	124842	31.43	UG	0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 62.86%			

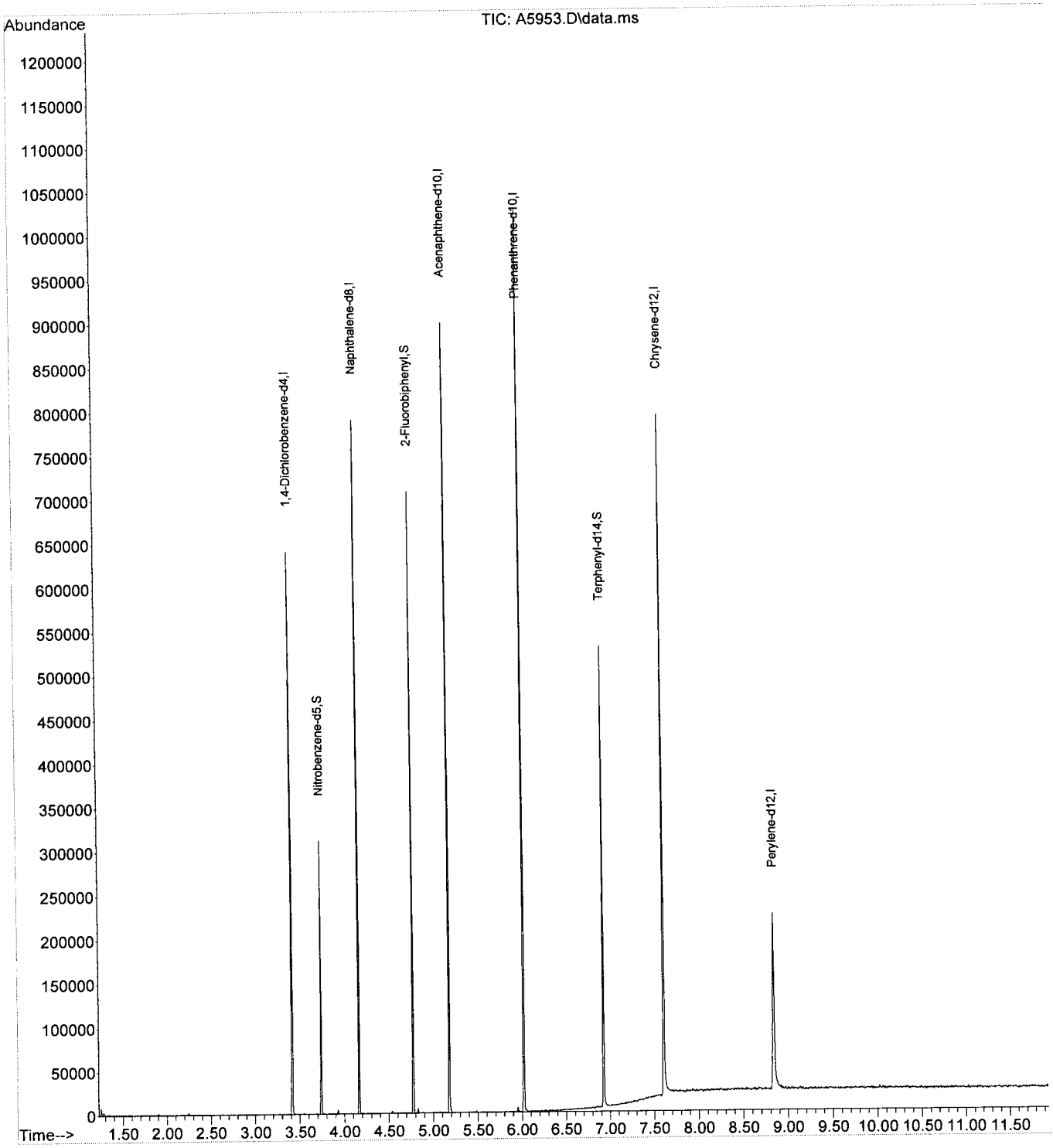
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5953.D
Acq On : 11 Nov 2015 23:02
Operator : JC
Sample : MW-18,E15-10258-005,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Nov 12 11:27:14 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0393

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5930.D
Acq On : 11 Nov 2015 17:12
Operator : JC
Sample : MW-18,E15-10258-005,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 12 06:25:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	8072	1.00	UG	0.00
23) Naphthalene-d8	2.793	136	26003	1.00	UG	0.00
43) Acenaphthene-d10	3.573	164	13931	1.00	UG	0.00
66) Phenanthrene-d10	4.286	188	22475	1.00	UG	-0.01
82) Chrysene-d12	6.189	240	17739	1.00	UG	0.00
92) Perylene-d12	7.521	264	15140	1.00	UG	-0.02

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		

Target Compounds	Qvalue

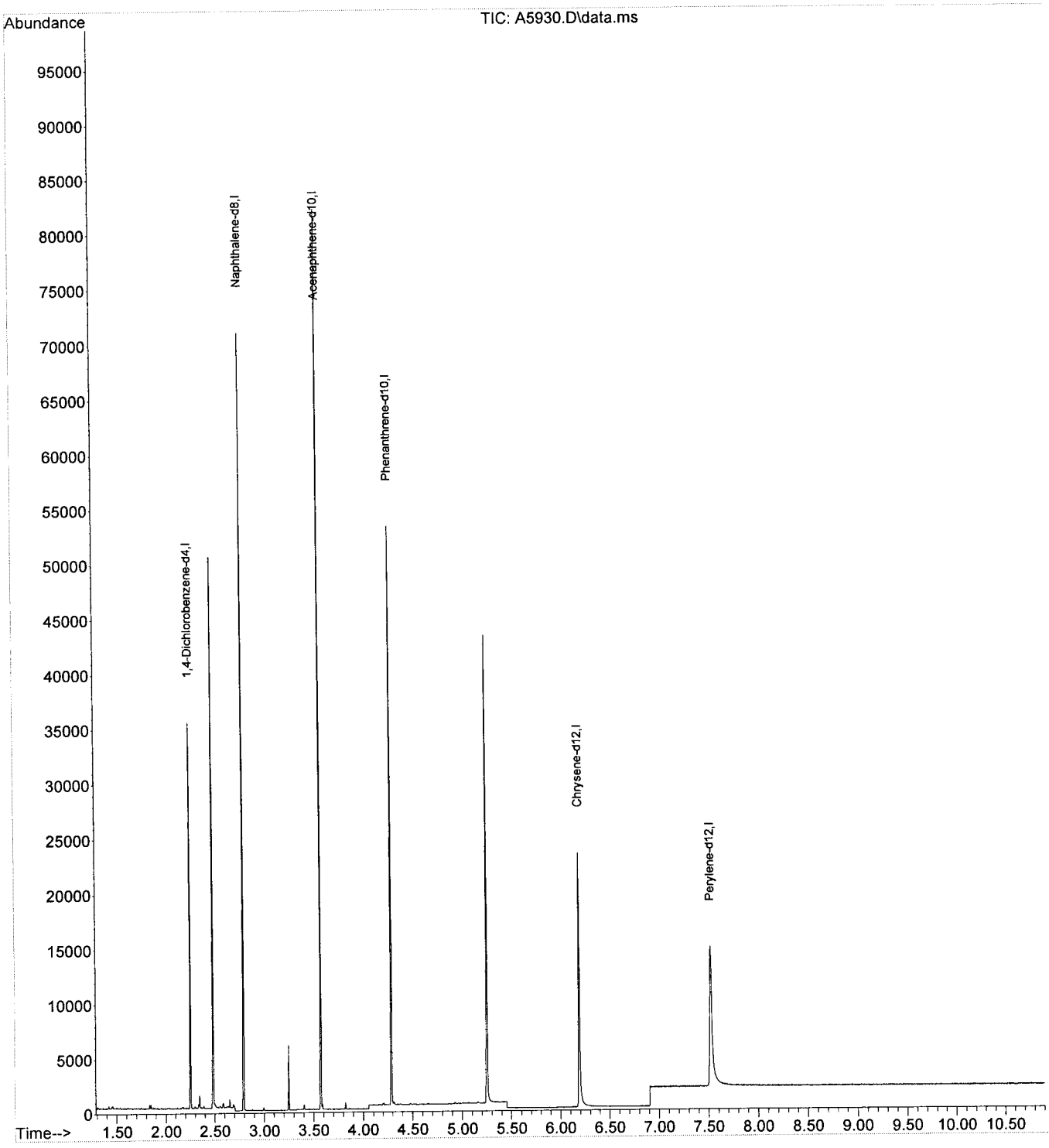
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Jean Clarke E15-10258 0394

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5930.D
Acq On : 11 Nov 2015 17:12
Operator : JC
Sample : MW-18,E15-10258-005,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 12 06:25:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



E15-10258 0395

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4070.D
Acq On : 12 Nov 2015 22:55
Operator : KIM
Sample : MW-11,E15-10258-006,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 65 Sample Multiplier: 1

Quant Time: Nov 16 16:01:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	106045	40.00	UG	-0.01
23) Naphthalene-d8	4.33	136	405782	40.00	UG	-0.01
43) Acenaphthene-d10	5.35	164	223290	40.00	UG	-0.02
66) Phenanthrene-d10	6.27	188	325381	40.00	UG	-0.02
82) Chrysene-d12	7.88	240	251619	40.00	UG	-0.02
92) Perylene-d12	9.08	264	134062	40.00	UG	-0.05
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	118548	48.14	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	96.28%		
47) 2-Fluorobiphenyl	4.94	172	170194	30.30	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	60.60%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.17	244	129373	23.34	UG	-0.02
Spiked Amount 50.000	Range 23 - 124		Recovery =	46.68%		

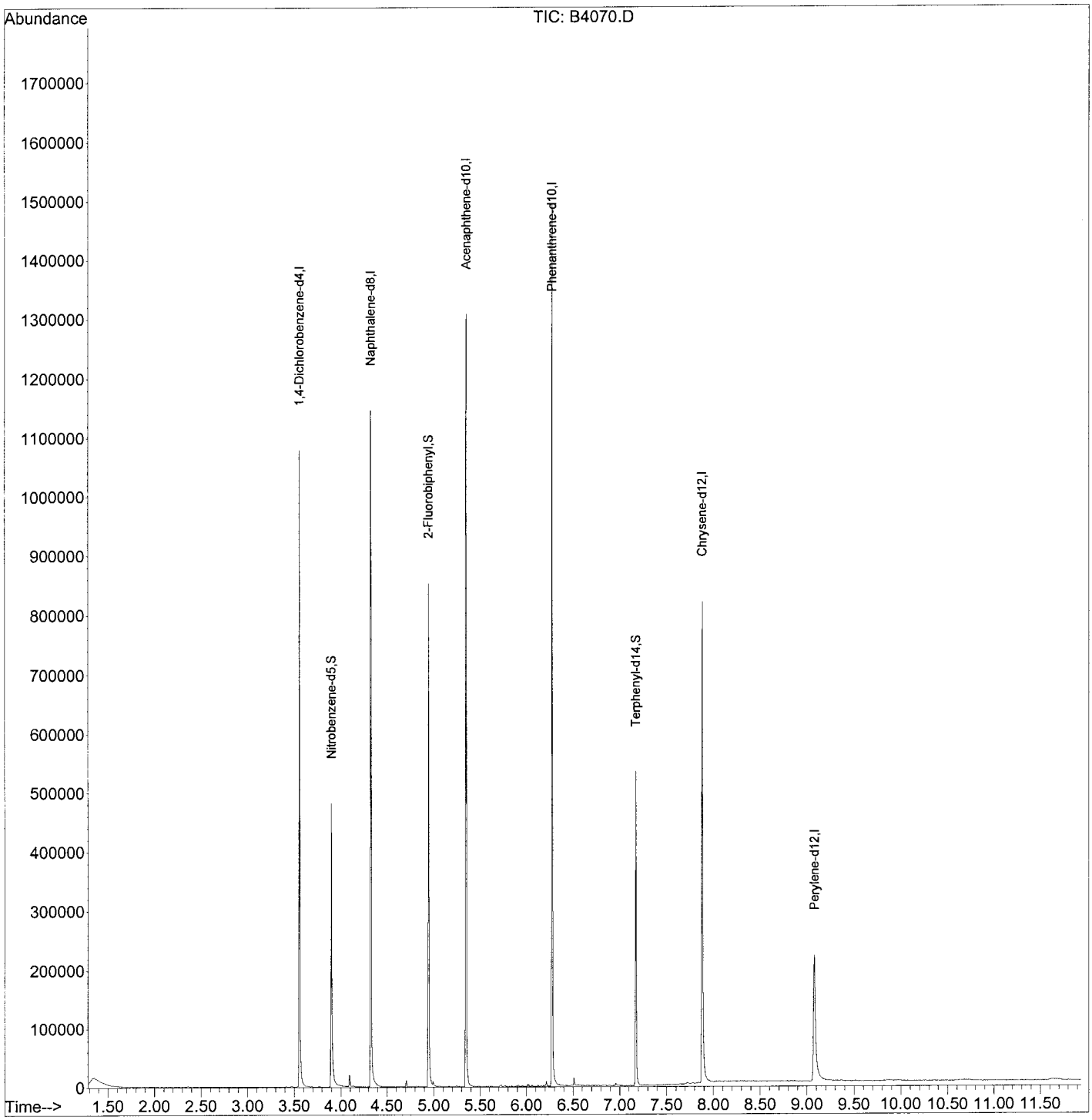
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4070.D
Acq On : 12 Nov 2015 22:55
Operator : KIM
Sample : MW-11,E15-10258-006,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 65 Sample Multiplier: 1

Quant Time: Nov 16 16:01:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



E15-10258 0397

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4052.D
Acq On : 12 Nov 2015 17:31
Operator : KIM
Sample : MW-11,E15-10258-006,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Nov 16 13:51:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	40621m	1.00	UG	0.00
23) Naphthalene-d8	2.70	136	106579	1.00	UG	0.00
43) Acenaphthene-d10	3.53	164	53456m	1.00	UG	0.03
66) Phenanthrene-d10	4.32	188	74463m	1.00	UG	0.08
82) Chrysene-d12	6.12	240	42465m	1.00	UG	0.12
92) Perylene-d12	7.36	264	41386m	1.00	UG	0.09

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		

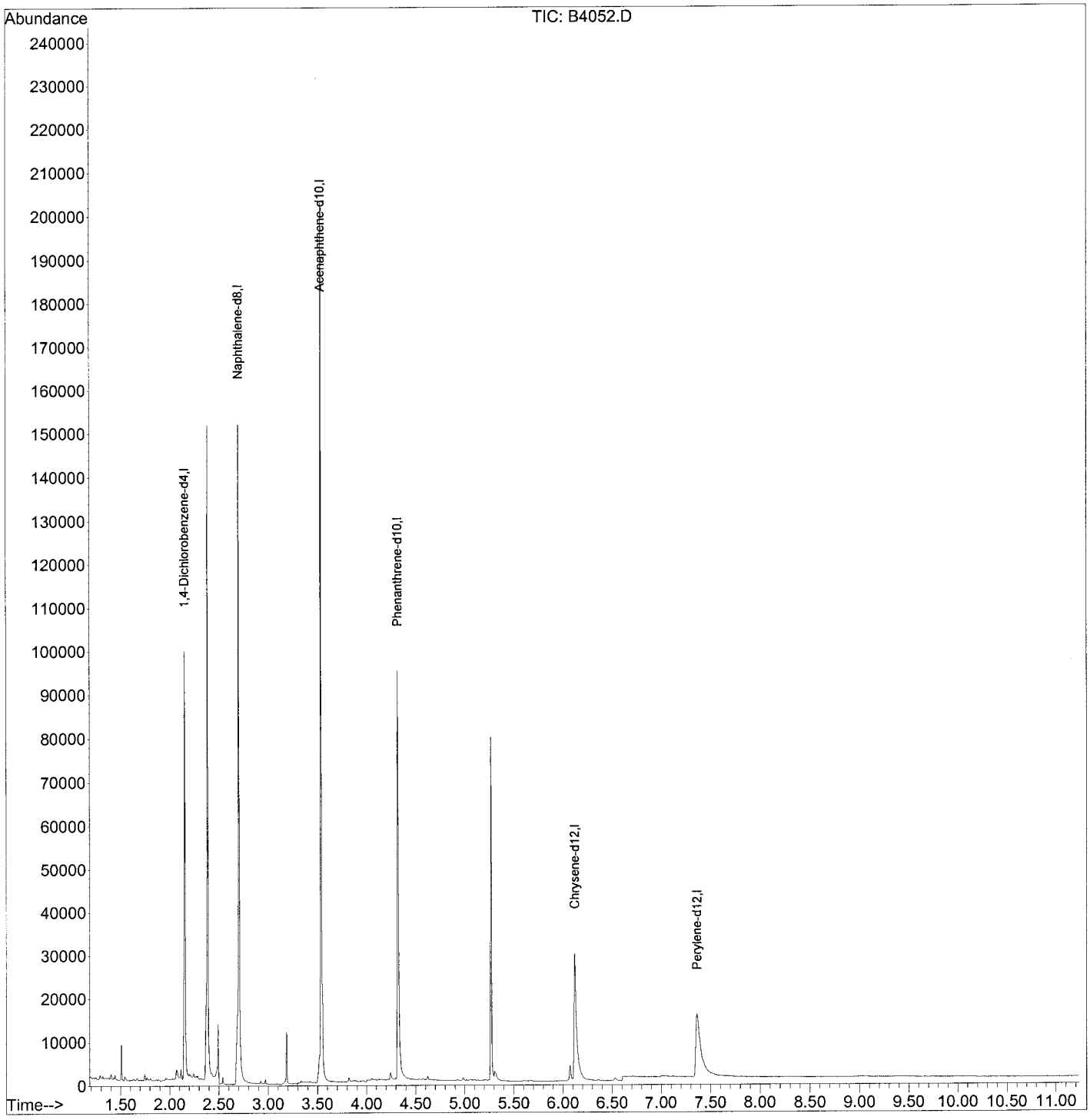
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4052.D
Acq On : 12 Nov 2015 17:31
Operator : KIM
Sample : MW-11,E15-10258-006,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Nov 16 13:51:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4071.D
Acq On : 12 Nov 2015 23:12
Operator : KIM
Sample : MW-23,E15-10258-007,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 66 Sample Multiplier: 1

Quant Time: Nov 16 16:05:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	74085	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	296458	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	168089	40.00	UG	-0.02
66) Phenanthrene-d10	6.27	188	260539	40.00	UG	-0.03
82) Chrysene-d12	7.83	240	221096	40.00	UG	-0.07
92) Perylene-d12	9.01	264	119186	40.00	UG	-0.12
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	68587	38.12	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	76.24%		
47) 2-Fluorobiphenyl	4.94	172	94468	22.34	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	44.68%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.14	244	65984	13.55	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery =	27.10%		
Target Compounds						Qvalue

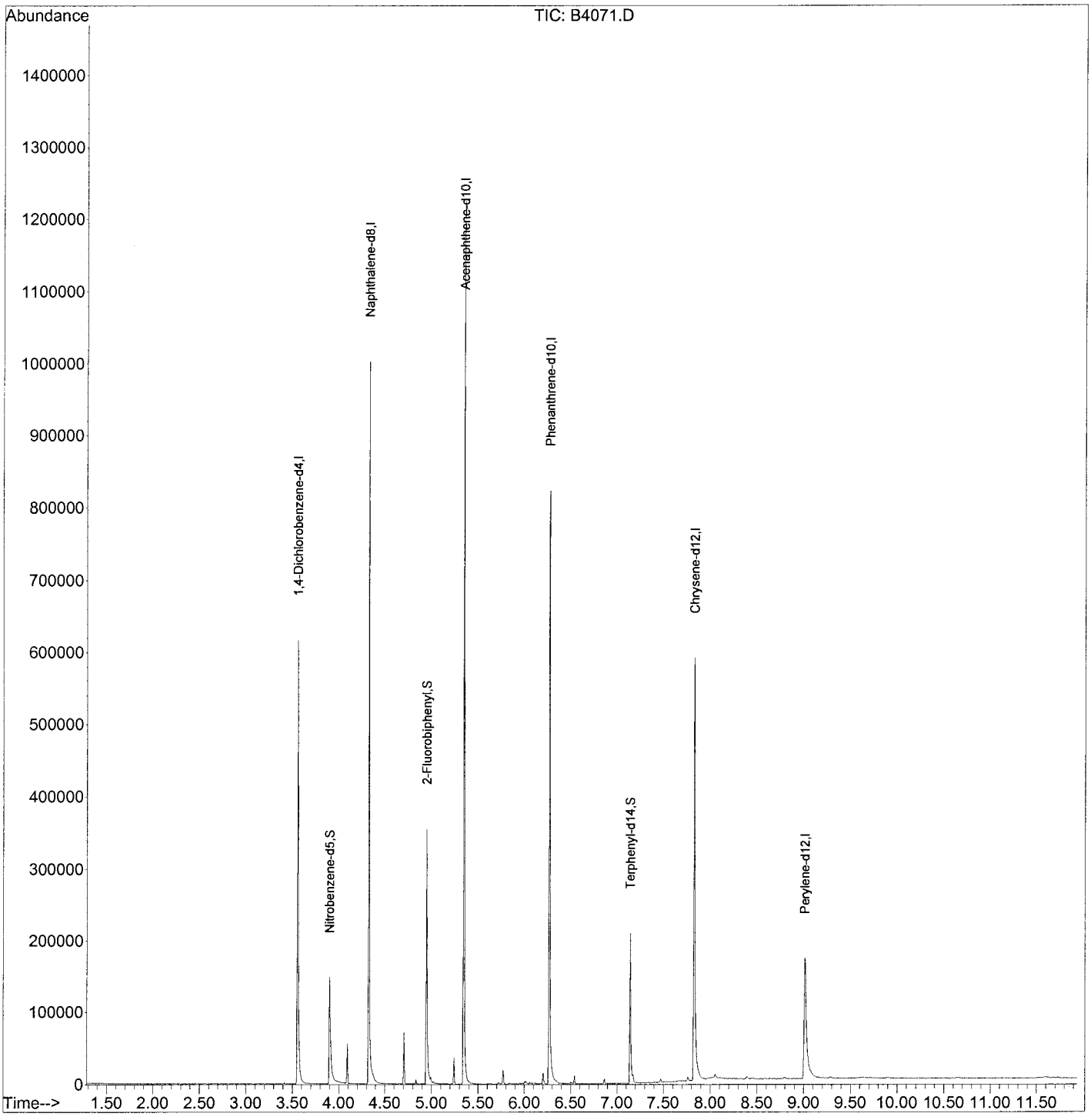
(#) = qualifier out of range (m) = manual integration (+) = signals summed

E15-10258

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4071.D
Acq On : 12 Nov 2015 23:12
Operator : KIM
Sample : MW-23,E15-10258-007,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 66 Sample Multiplier: 1

Quant Time: Nov 16 16:05:32 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



E15-10258 0401

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4053.D
Acq On : 12 Nov 2015 18:21
Operator : KIM
Sample : MW-23,E15-10258-007,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 16 13:51:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	28812m	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	77534m	1.00	UG	0.00
43) Acenaphthene-d10	3.48	164	39352m	1.00	UG	-0.02
66) Phenanthrene-d10	4.22	188	56797m	1.00	UG	-0.02
82) Chrysene-d12	5.95	240	39135m	1.00	UG	-0.06
92) Perylene-d12	7.21	264	36884m	1.00	UG	-0.07

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		

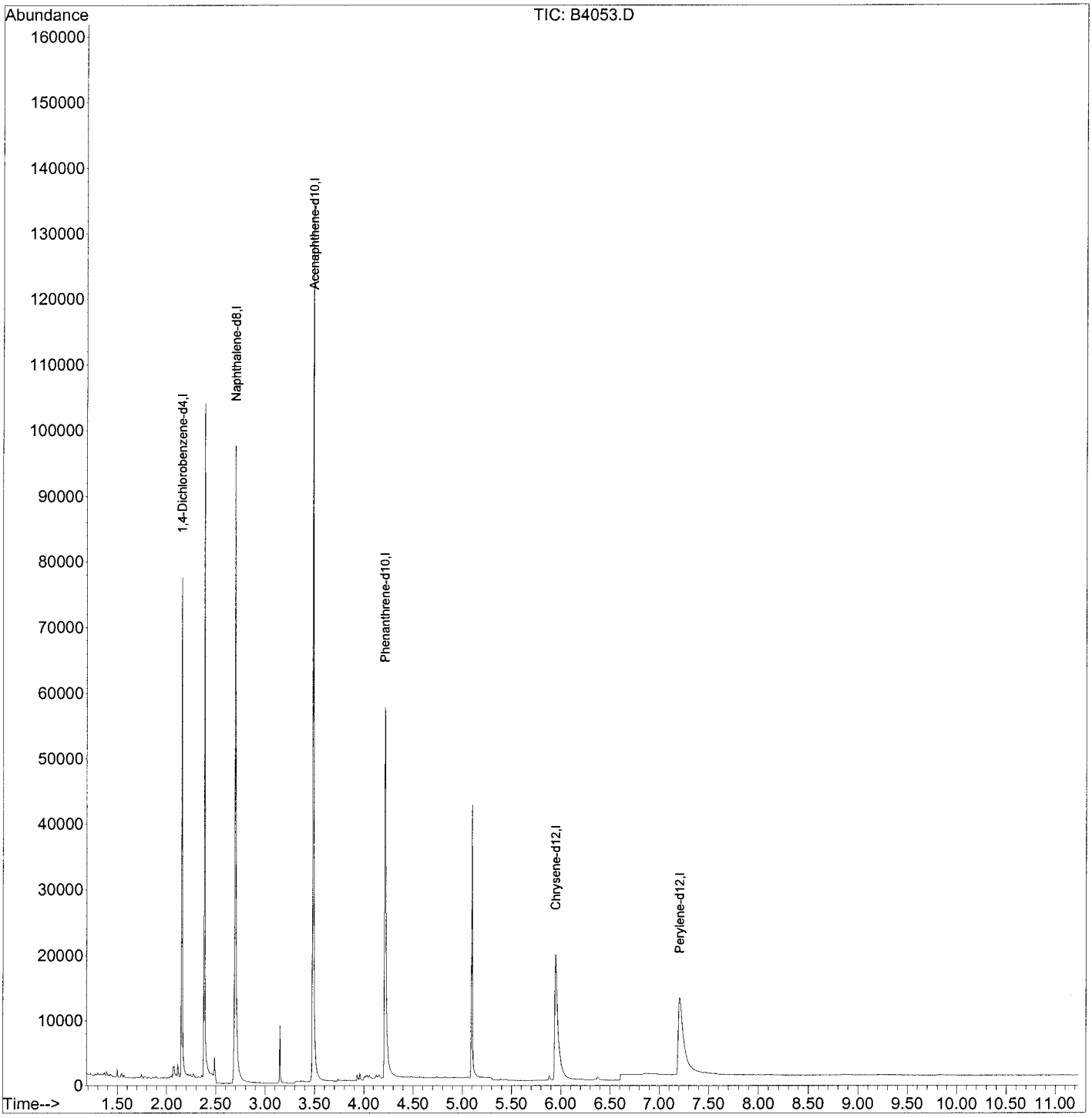
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4053.D
Acq On : 12 Nov 2015 18:21
Operator : KIM
Sample : MW-23,E15-10258-007,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Nov 16 13:51:34 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4072.D
Acq On : 12 Nov 2015 23:29
Operator : KIM
Sample : MW-16,E15-10258-008,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 67 Sample Multiplier: 1

Quant Time: Nov 16 16:06:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	103462	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	406139	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	229452	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	358441	40.00	UG	-0.03
82) Chrysene-d12	7.80	240	291662	40.00	UG	-0.10
92) Perylene-d12	8.99	264	157570	40.00	UG	-0.14
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.90	82	111918	45.41	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 90.82%			
47) 2-Fluorobiphenyl	4.94	172	171514	29.71	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery = 59.42%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.13	244	160841	25.03	UG	-0.06
Spiked Amount 50.000	Range 23 - 124		Recovery = 50.06%			

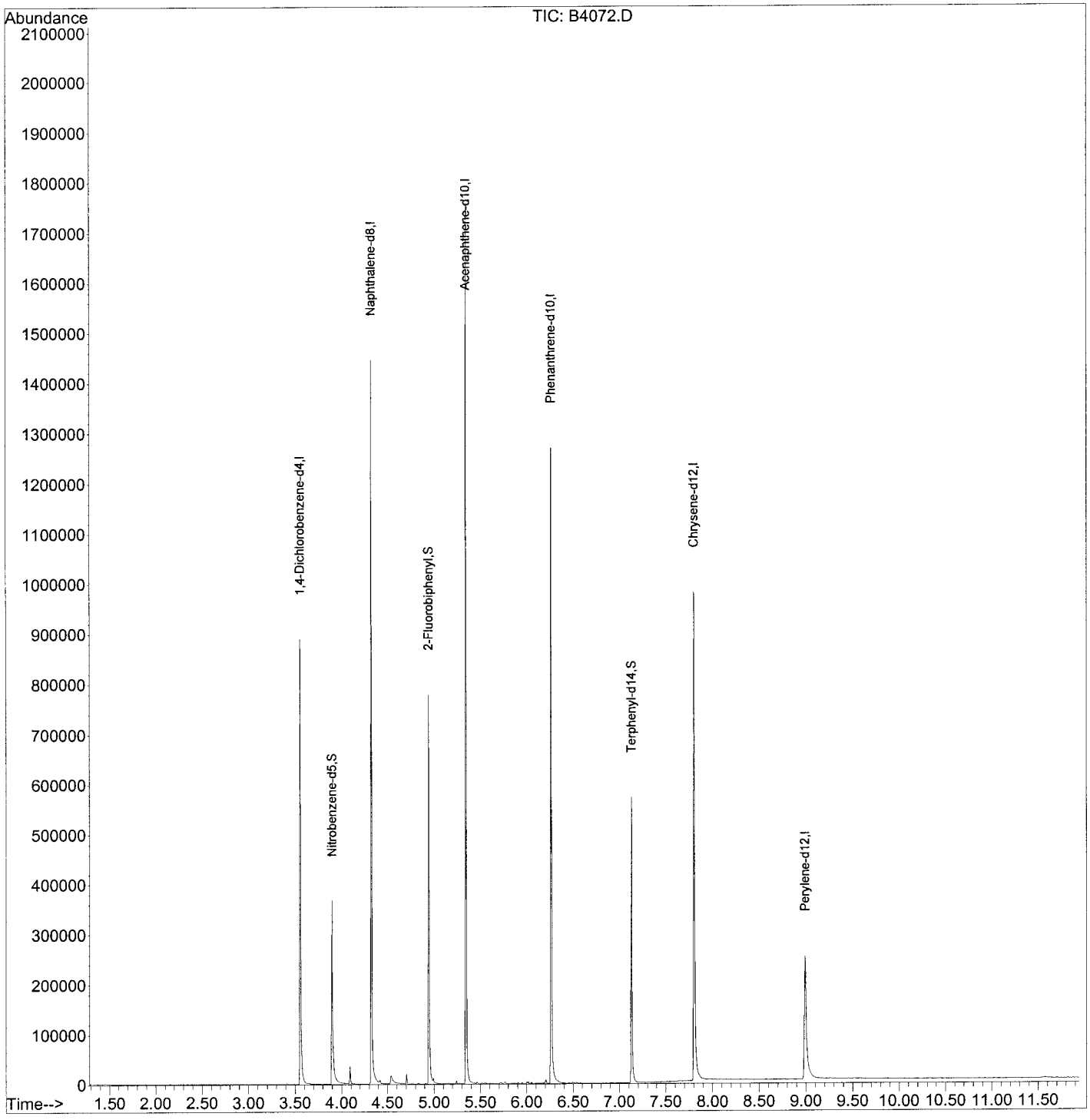
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4072.D
Acq On : 12 Nov 2015 23:29
Operator : KIM
Sample : MW-16,E15-10258-008,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 67 Sample Multiplier: 1

Quant Time: Nov 16 16:06:00 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4054.D
Acq On : 12 Nov 2015 18:37
Operator : KIM
Sample : MW-16,E15-10258-008,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Nov 16 13:52:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	35223	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	96379m	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	48579m	1.00	UG	-0.02
66) Phenanthrene-d10	4.20	188	70717m	1.00	UG	-0.04
82) Chrysene-d12	5.92	240	41909m	1.00	UG	-0.08
92) Perylene-d12	7.18	264	40060m	1.00	UG	-0.09

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

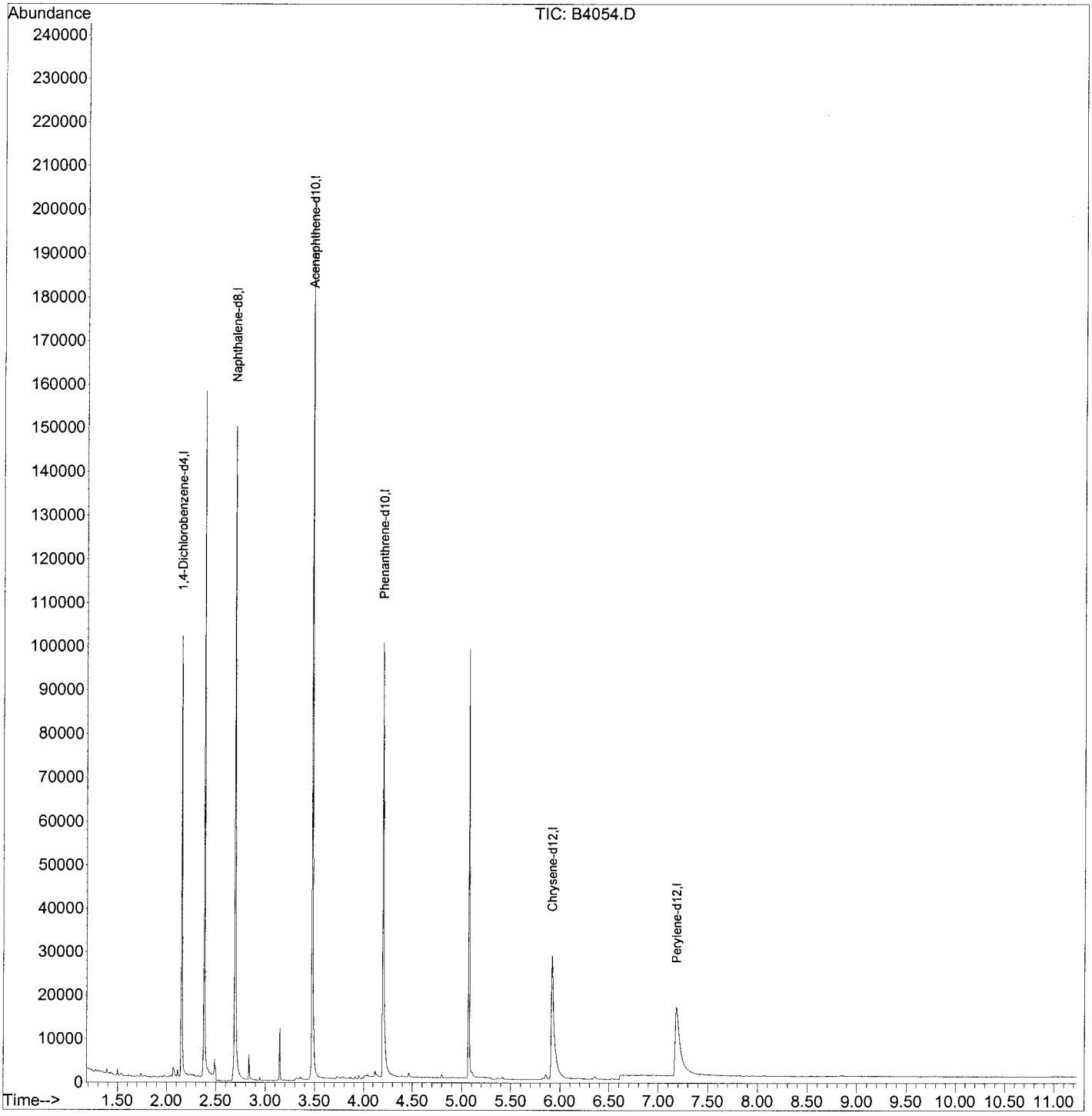
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4054.D
Acq On : 12 Nov 2015 18:37
Operator : KIM
Sample : MW-16,E15-10258-008,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Nov 16 13:52:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



E15-10258 0407

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4073.D
Acq On : 12 Nov 2015 23:46
Operator : KIM
Sample : MW-13,E15-10258-009,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 68 Sample Multiplier: 1

Quant Time: Nov 16 16:06:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	99489	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	390381	40.00	UG	-0.02
43) Acenaphthene-d10	5.34	164	223286	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	349130	40.00	UG	-0.03
82) Chrysene-d12	7.80	240	305093	40.00	UG	-0.10
92) Perylene-d12	8.98	264	164628	40.00	UG	-0.15
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	106001	44.74	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	89.48%		
47) 2-Fluorobiphenyl	4.94	172	201940	35.95	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	71.90%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.13	244	207232	30.84	UG	-0.06
Spiked Amount 50.000	Range 23 - 124		Recovery =	61.68%		

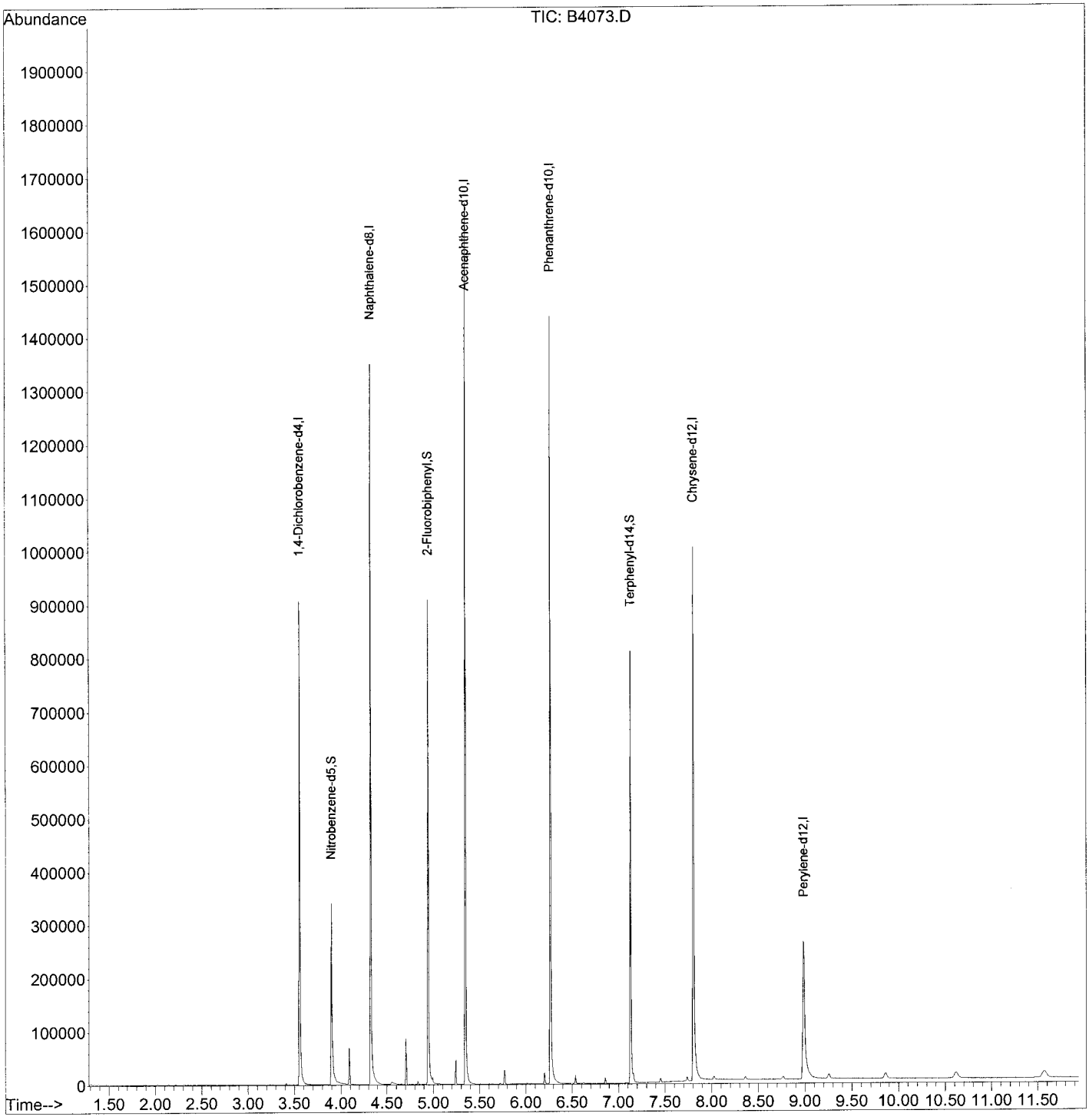
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4073.D
Acq On : 12 Nov 2015 23:46
Operator : KIM
Sample : MW-13,E15-10258-009,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 68 Sample Multiplier: 1

Quant Time: Nov 16 16:06:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4055.D
Acq On : 12 Nov 2015 18:53
Operator : KIM
Sample : MW-13,E15-10258-009,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 16 13:52:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	33499m	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	87938	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	45409m	1.00	UG	-0.02
66) Phenanthrene-d10	4.20	188	66622m	1.00	UG	-0.04
82) Chrysene-d12	5.92	240	40334m	1.00	UG	-0.08
92) Perylene-d12	7.18	264	37617m	1.00	UG	-0.09

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		

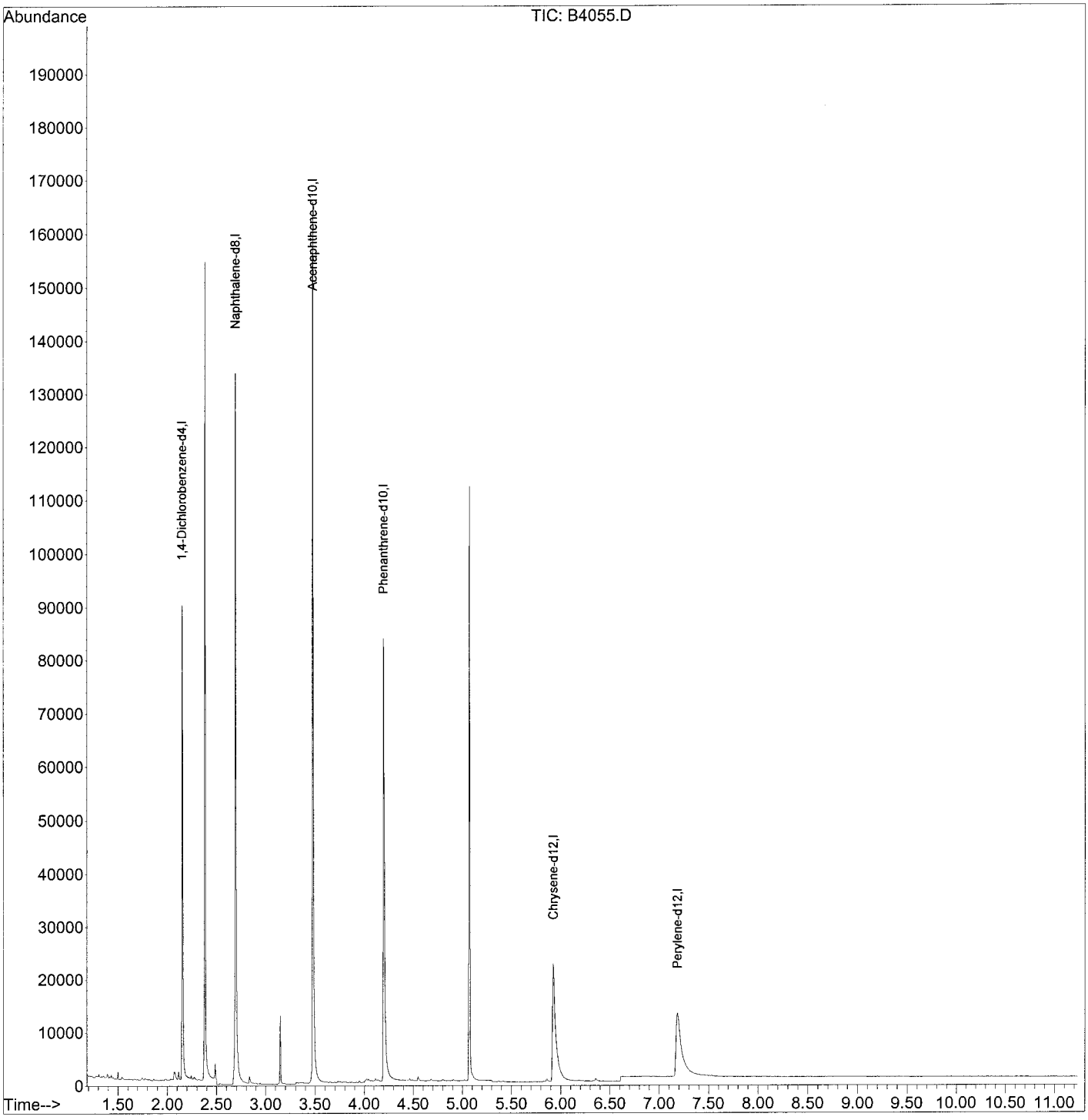
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4055.D
Acq On : 12 Nov 2015 18:53
Operator : KIM
Sample : MW-13,E15-10258-009,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 50 Sample Multiplier: 1

Quant Time: Nov 16 13:52:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4074.D
Acq On : 13 Nov 2015 00:03
Operator : KIM
Sample : FB-11052,E15-10258-010,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 69 Sample Multiplier: 1

Quant Time: Nov 16 16:03:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	53078	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	214290	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	119449	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	183095	40.00	UG	-0.03
82) Chrysene-d12	7.80	240	165797	40.00	UG	-0.11
92) Perylene-d12	8.98	264	88480	40.00	UG	-0.15
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.90	82	51170	39.35	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 78.70%			
47) 2-Fluorobiphenyl	4.94	172	110915	36.91	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery = 73.82%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.12	244	172473	47.22	UG	-0.07
Spiked Amount 50.000	Range 23 - 124		Recovery = 94.44%			

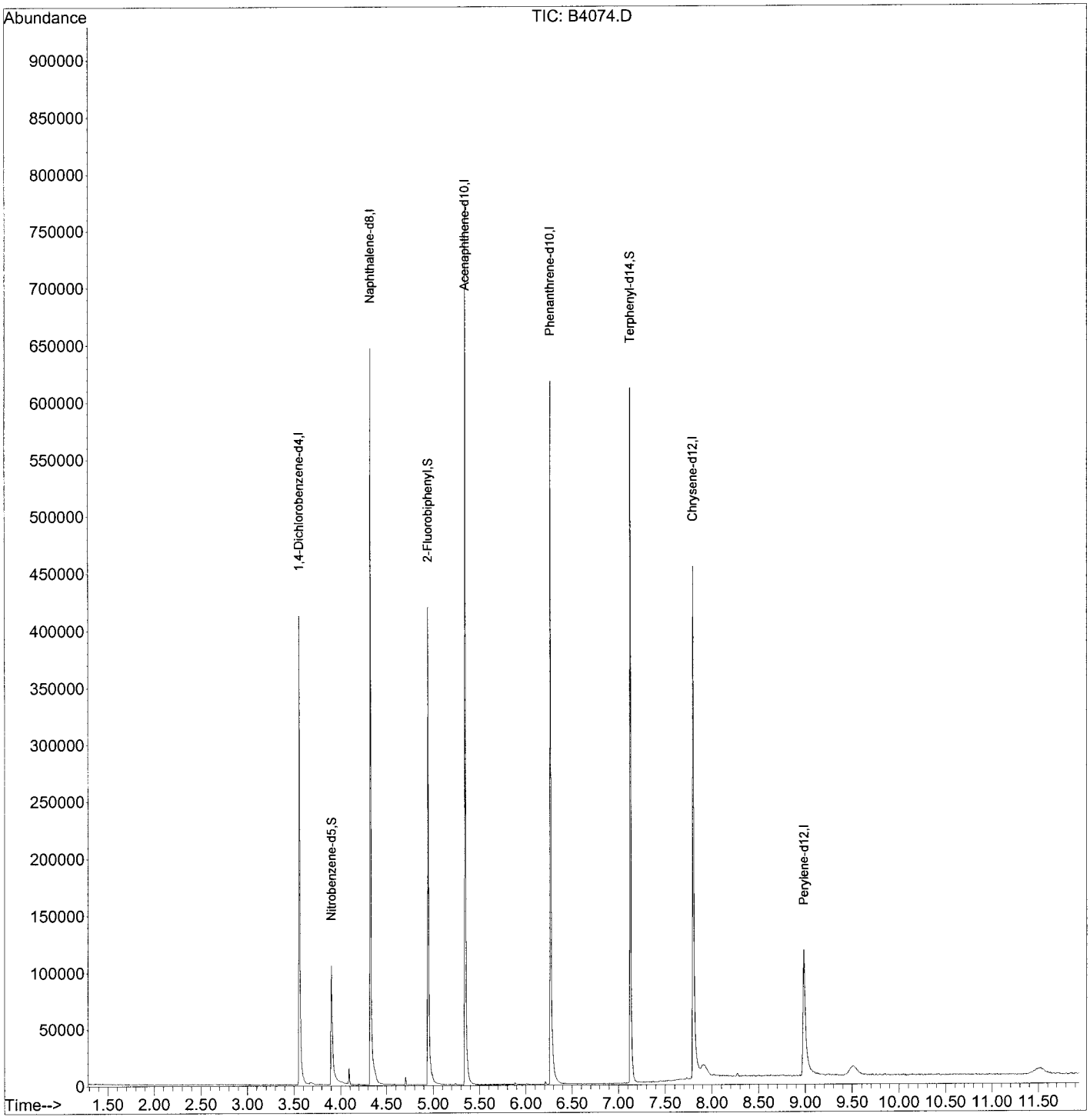
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4074.D
Acq On : 13 Nov 2015 00:03
Operator : KIM
Sample : FB-11052,E15-10258-010,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 69 Sample Multiplier: 1

Quant Time: Nov 16 16:03:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4056.D
Acq On : 12 Nov 2015 19:09
Operator : KIM
Sample : FB-11052,E15-10258-010,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 51 Sample Multiplier: 1

Quant Time: Nov 16 13:53:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	34389	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	93535m	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	48114m	1.00	UG	-0.03
66) Phenanthrene-d10	4.19	188	70400m	1.00	UG	-0.05
82) Chrysene-d12	5.90	240	41701m	1.00	UG	-0.10
92) Perylene-d12	7.18	264	41879m	1.00	UG	-0.10

System Monitoring Compounds						
4) 2-Fluorophenol		0.00	112	0	0.00	UG
Spiked Amount	1.000	Range 40 - 140		Recovery =	0.00%#	
6) Phenol-d5		0.00	99	0	0.00	UG
Spiked Amount	1.000	Range 40 - 140		Recovery =	0.00%#	
24) Nitrobenzene-d5		0.00	82	0	0.00	UG
Spiked Amount	0.500	Range 40 - 140		Recovery =	0.00%#	
47) 2-Fluorobiphenyl		0.00	172	0	0.00	UG
Spiked Amount	0.500	Range 40 - 140		Recovery =	0.00%#	
70) 2,4,6-Tribromophenol		0.00	330	0	0.00	UG
Spiked Amount	1.000	Range 40 - 140		Recovery =	0.00%#	
84) Terphenyl-d14		0.00	244	0	0.00	UG
Spiked Amount	0.500	Range 40 - 140		Recovery =	0.00%#	

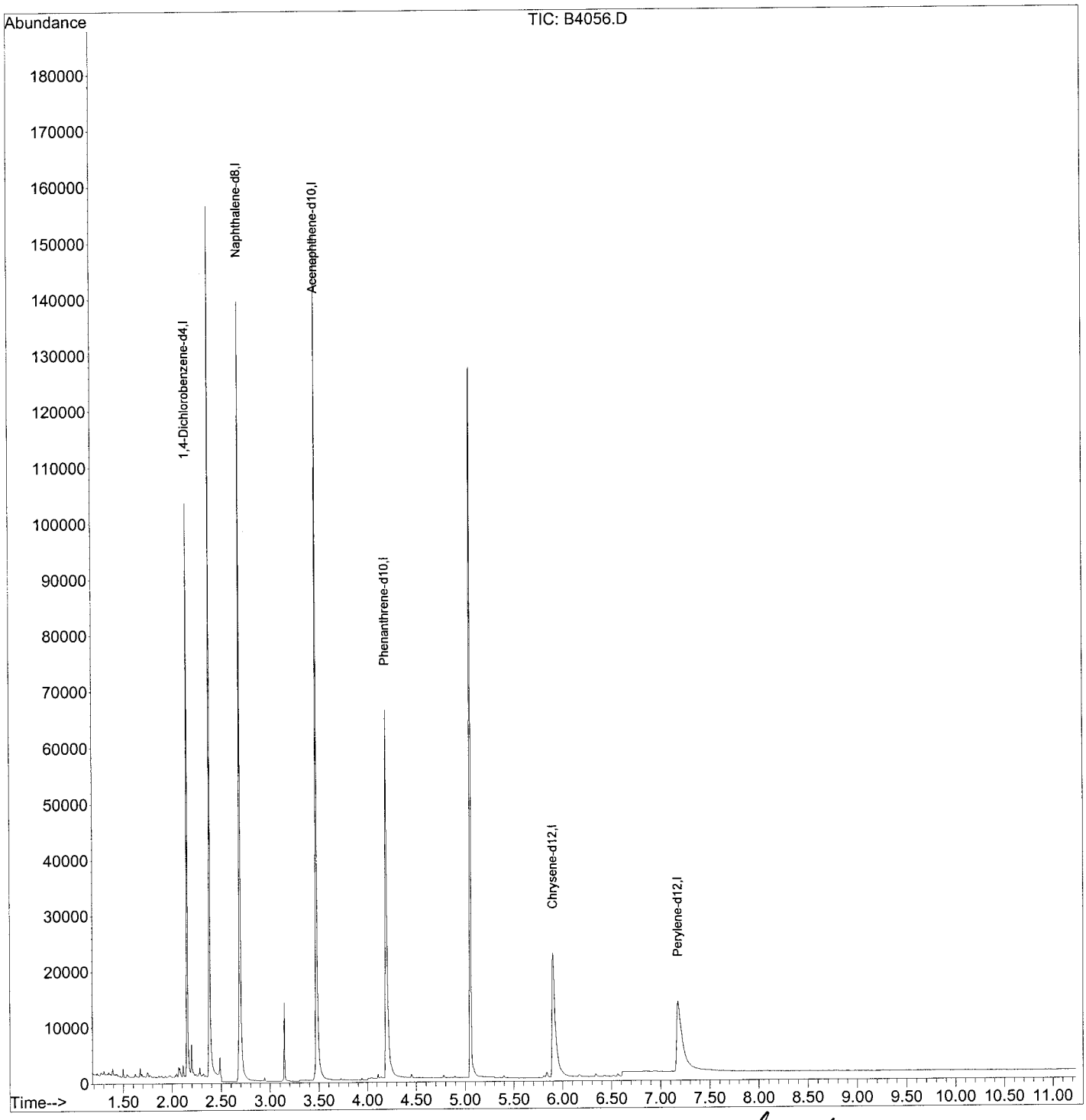
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4056.D
Acq On : 12 Nov 2015 19:09
Operator : KIM
Sample : FB-11052,E15-10258-010,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 51 Sample Multiplier: 1

Quant Time: Nov 16 13:53:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4075.D
Acq On : 13 Nov 2015 00:21
Operator : KIM
Sample : MW-25,E15-10258-011,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Nov 16 16:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

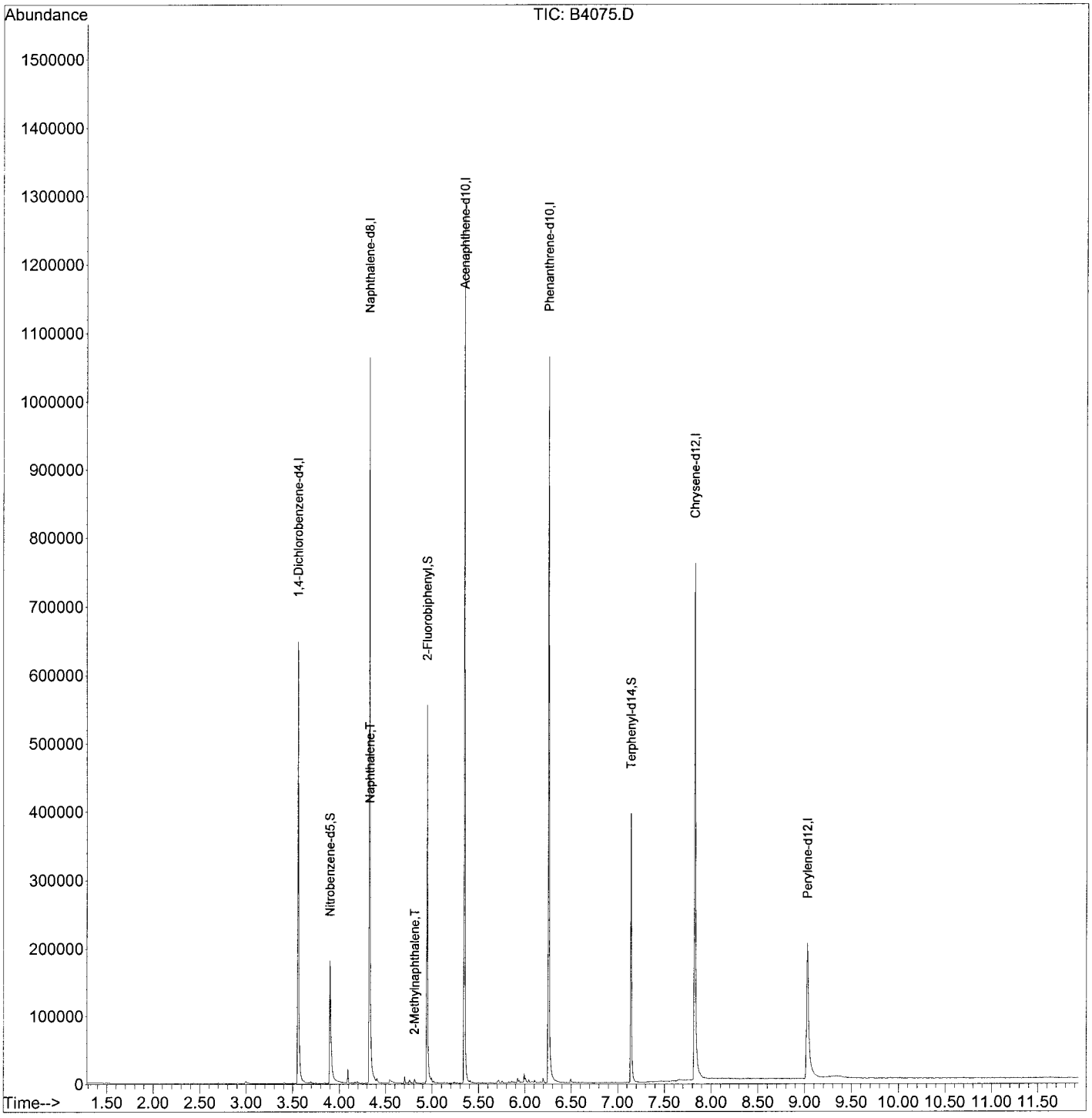
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	75576	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	299464	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	168278	40.00	UG	-0.02
66) Phenanthrene-d10	6.25	188	271338	40.00	UG	-0.04
82) Chrysene-d12	7.82	240	242568	40.00	UG	-0.08
92) Perylene-d12	9.03	264	133783	40.00	UG	-0.11
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	70988	39.06	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	78.12%		
47) 2-Fluorobiphenyl	4.94	172	128987	30.47	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	60.94%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.14	244	108707	20.34	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery =	40.68%		
Target Compounds						Qvalue
34) Naphthalene	4.34	128	17068	2.92	UG	# 97
41) 2-Methylnaphthalene	4.81	142	1896m	0.51	UG	

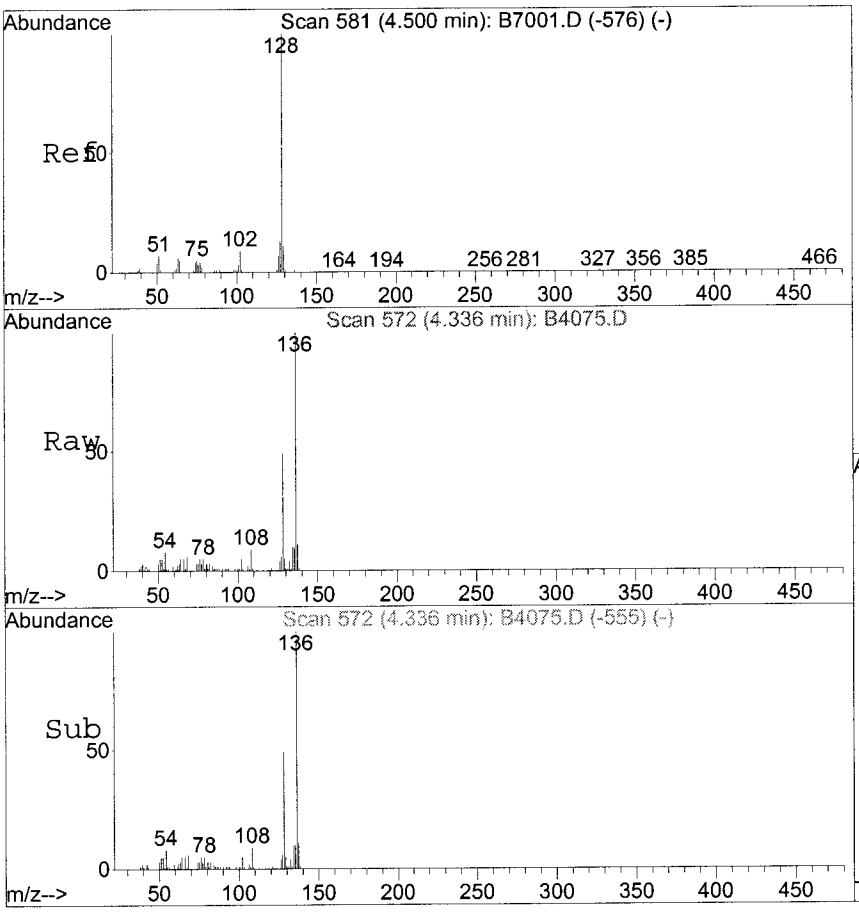
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4075.D
Acq On : 13 Nov 2015 00:21
Operator : KIM
Sample : MW-25,E15-10258-011,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 70 Sample Multiplier: 1

Quant Time: Nov 16 16:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

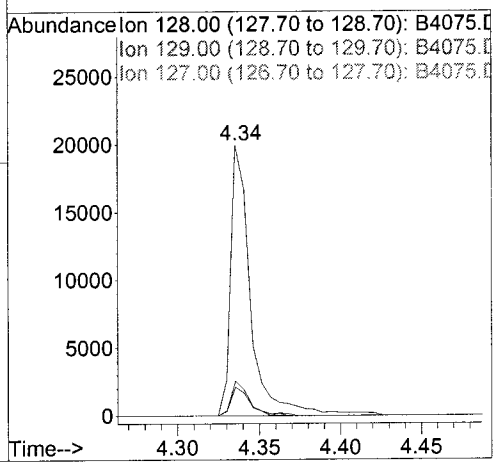


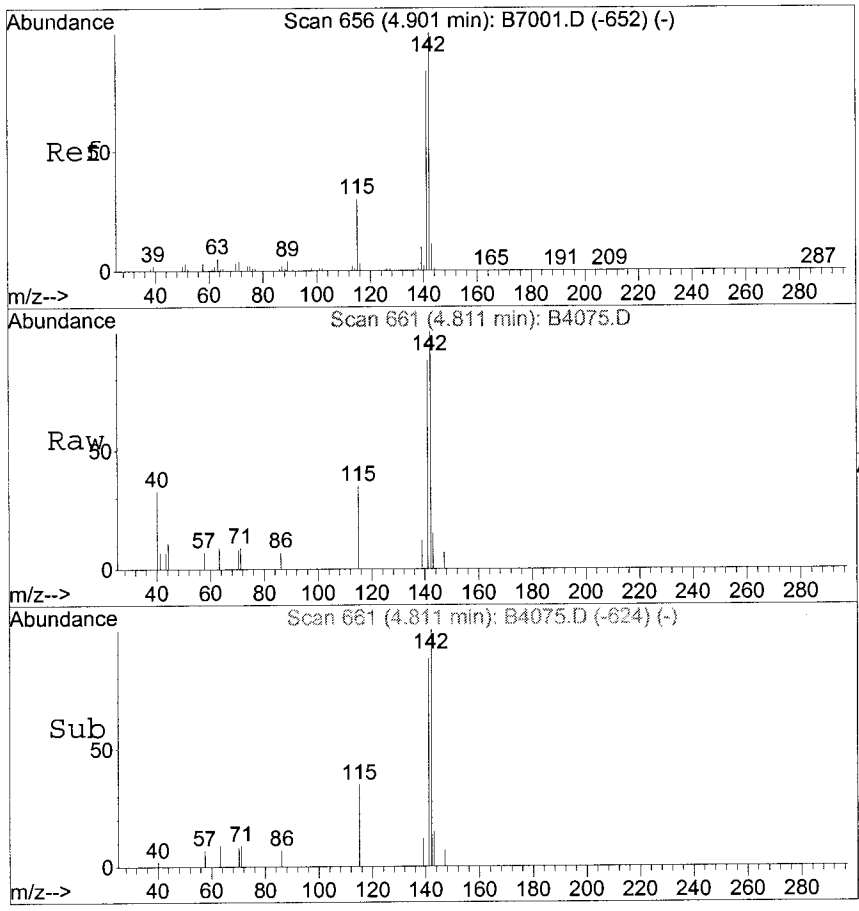


#34
Naphthalene
Concen: 2.92 UG
RT: 4.34 min Scan# 572
Delta R.T. -0.02 min
Lab File: B4075.D
Acq: 13 Nov 2015 00:21

Tgt Ion:128 Resp: 17068

Ion	Ratio	Lower	Upper
128	100		
129	10.1	0.0	22.6
127	11.4	0.0	0.0#

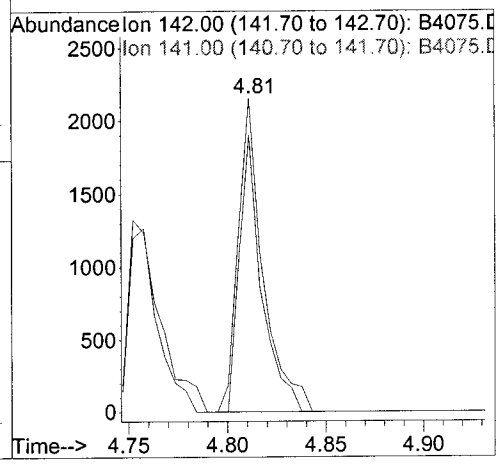




#41
2-Methylnaphthalene
Concen: 0.51 UG m
RT: 4.81 min Scan# 661
Delta R.T. 0.06 min
Lab File: B4075.D
Acq: 13 Nov 2015 00:21

Tgt Ion:142 Resp: 1896

Ion	Ratio	Lower	Upper
142	100		
141	67.9	0.0	168.2



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4057.D
Acq On : 12 Nov 2015 19:25
Operator : KIM
Sample : MW-25,E15-10258-011,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Nov 16 13:53:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	26127	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	78874	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	36692	1.00	UG	-0.03
66) Phenanthrene-d10	4.18	188	54364	1.00	UG	-0.05
82) Chrysene-d12	5.89	240	39178m	1.00	UG	-0.11
92) Perylene-d12	7.16	264	36368	1.00	UG	-0.11

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

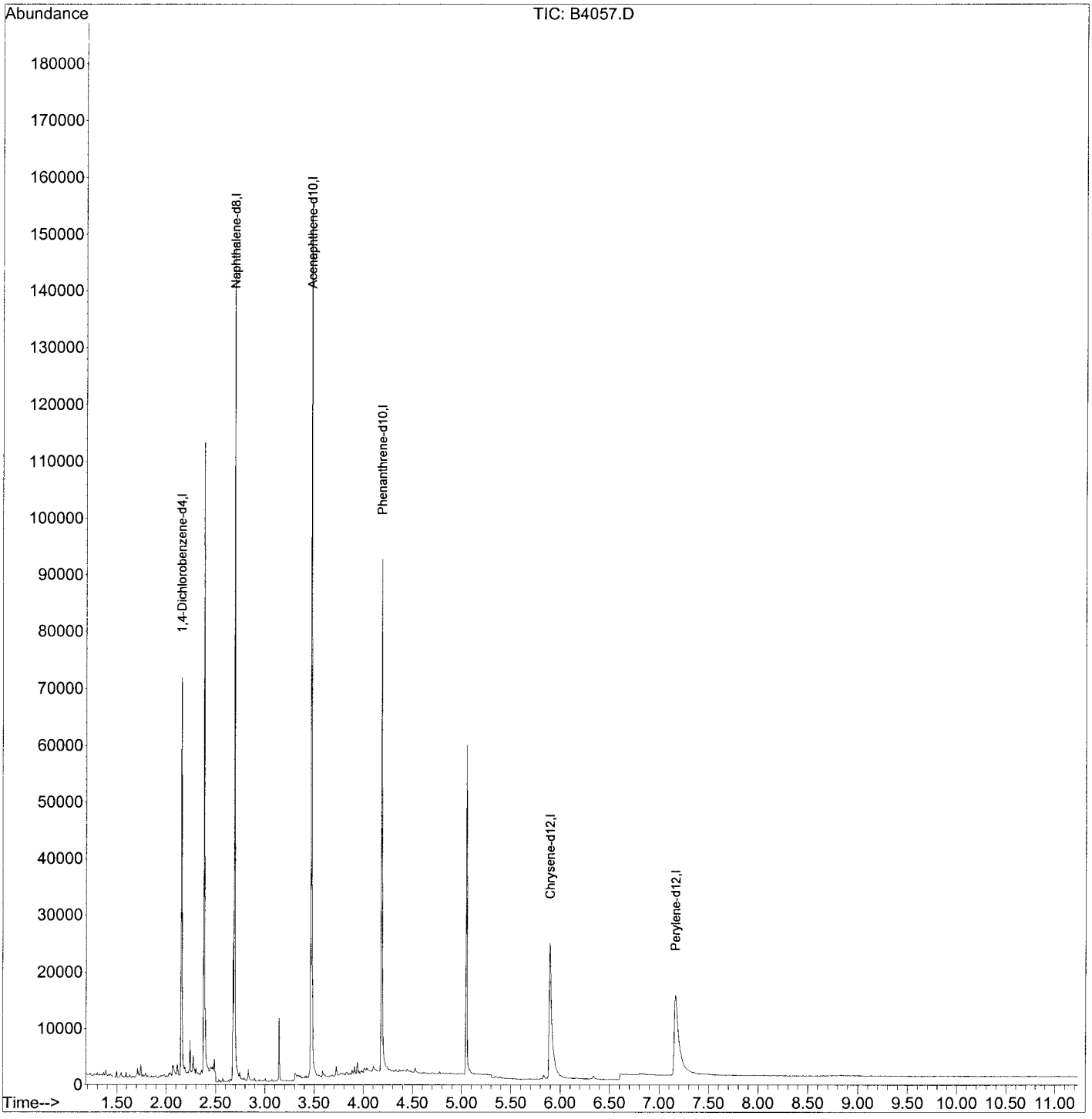
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4057.D
Acq On : 12 Nov 2015 19:25
Operator : KIM
Sample : MW-25,E15-10258-011,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 52 Sample Multiplier: 1

Quant Time: Nov 16 13:53:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4076.D
Acq On : 13 Nov 2015 00:38
Operator : KIM
Sample : MW-19RR,E15-10258-012,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Nov 16 16:04:16 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	92901	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	367366	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	206378	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	329033	40.00	UG	-0.03
82) Chrysene-d12	7.81	240	290842	40.00	UG	-0.09
92) Perylene-d12	9.00	264	161978	40.00	UG	-0.13
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	108785	48.79	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	97.58%		
47) 2-Fluorobiphenyl	4.94	172	207235	39.92	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	79.84%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.13	244	248671	38.81	UG	-0.06
Spiked Amount 50.000	Range 23 - 124		Recovery =	77.62%		

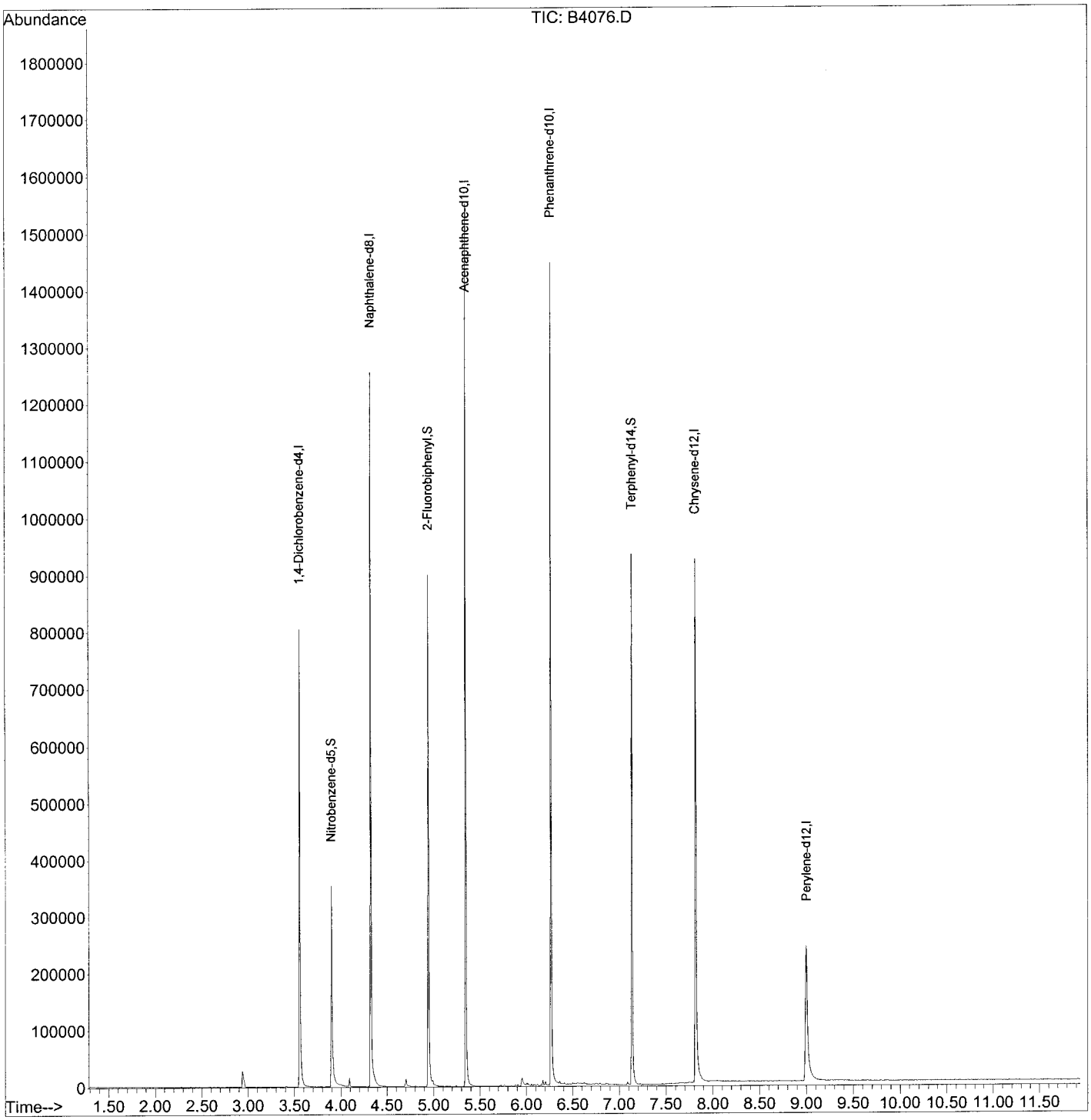
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4076.D
Acq On : 13 Nov 2015 00:38
Operator : KIM
Sample : MW-19RR,E15-10258-012,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 71 Sample Multiplier: 1

Quant Time: Nov 16 16:04:16 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4058.D
Acq On : 12 Nov 2015 19:41
Operator : KIM
Sample : MW-19RR,E15-10258-012,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Nov 16 13:55:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

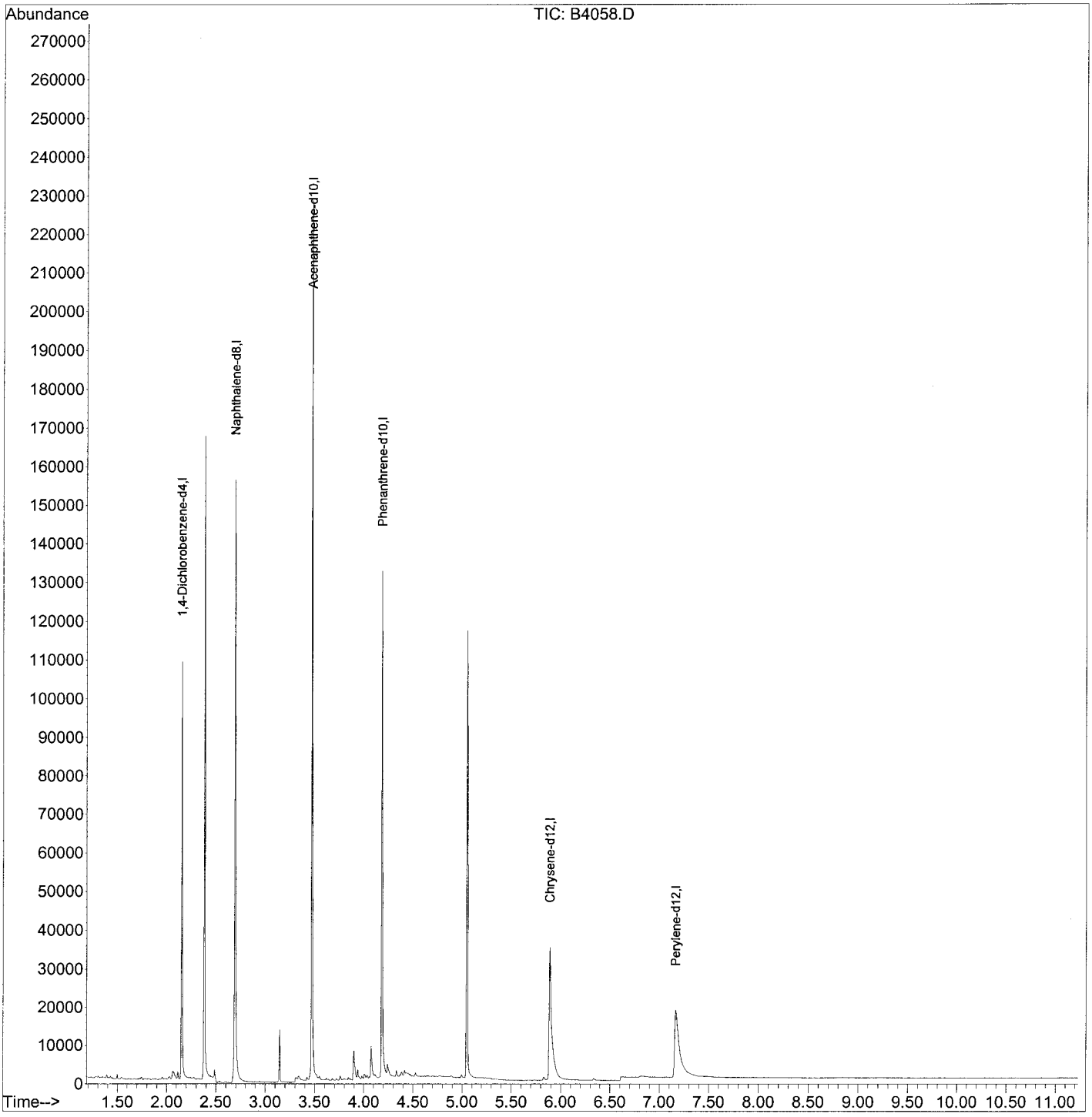
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	36751	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	99376	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	52164	1.00	UG	-0.03
66) Phenanthrene-d10	4.18	188	74206m	1.00	UG	-0.05
82) Chrysene-d12	5.89	240	42034m	1.00	UG	-0.11
92) Perylene-d12	7.16	264	43410m	1.00	UG	-0.11
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4058.D
Acq On : 12 Nov 2015 19:41
Operator : KIM
Sample : MW-19RR,E15-10258-012,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 53 Sample Multiplier: 1

Quant Time: Nov 16 13:55:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4077.D
Acq On : 13 Nov 2015 00:55
Operator : KIM
Sample : FB-11062,E15-10258-013,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Nov 16 16:04:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	81922	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	320412	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	180889	40.00	UG	-0.02
66) Phenanthrene-d10	6.25	188	286007	40.00	UG	-0.04
82) Chrysene-d12	7.83	240	250433	40.00	UG	-0.07
92) Perylene-d12	9.04	264	135458	40.00	UG	-0.09
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	74629	38.38	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	76.76%		
47) 2-Fluorobiphenyl	4.94	172	157100	34.52	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	69.04%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.15	244	188484	34.17	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery =	68.34%		

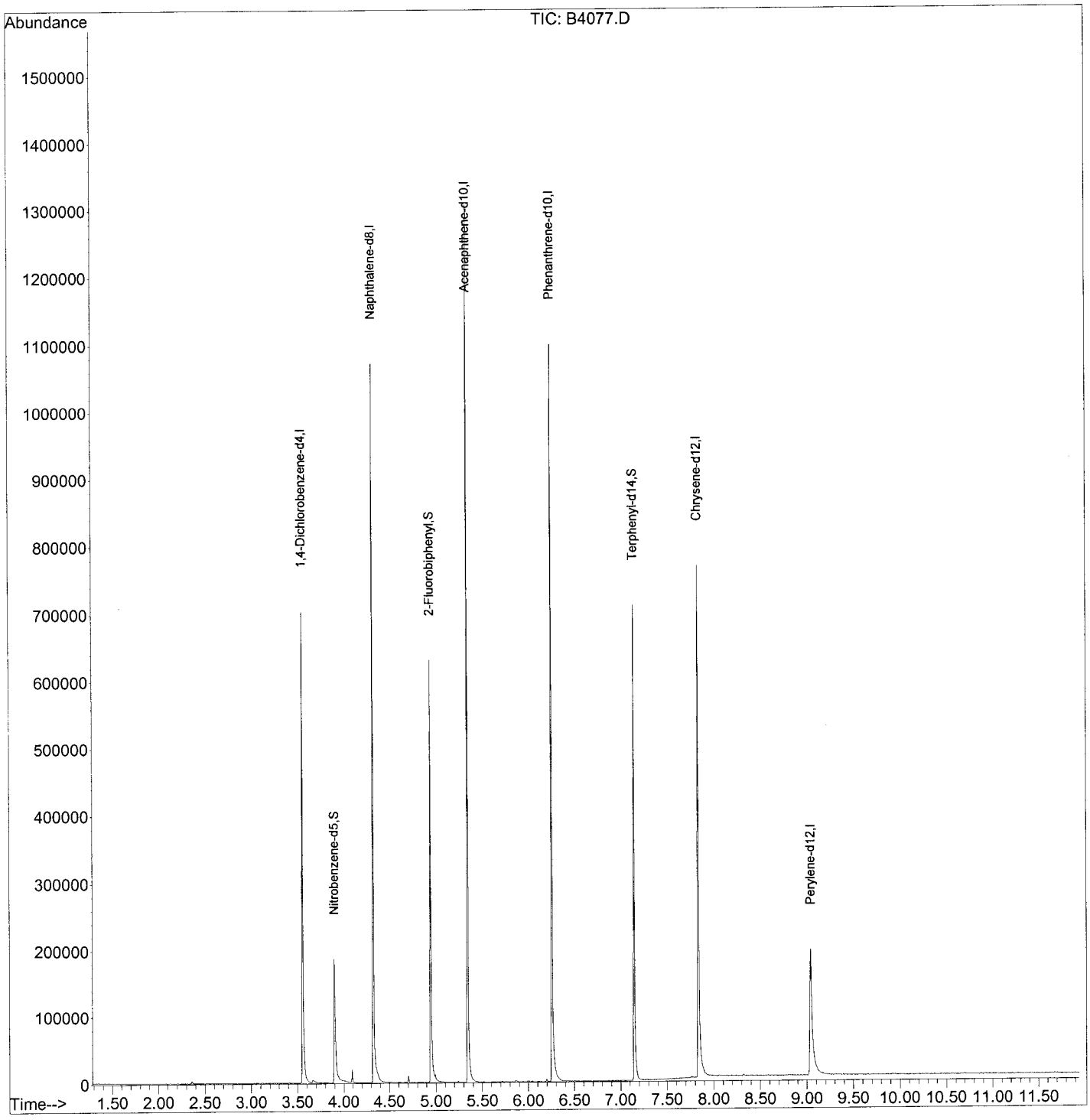
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4077.D
Acq On : 13 Nov 2015 00:55
Operator : KIM
Sample : FB-11062,E15-10258-013,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 72 Sample Multiplier: 1

Quant Time: Nov 16 16:04:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



E15-10258

0426

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4059.D
Acq On : 12 Nov 2015 19:57
Operator : KIM
Sample : FB-11062015,E15-10258-013,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Nov 16 13:56:26 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	34025m	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	89652m	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	46813m	1.00	UG	-0.03
66) Phenanthrene-d10	4.19	188	66735m	1.00	UG	-0.05
82) Chrysene-d12	5.90	240	41398m	1.00	UG	-0.10
92) Perylene-d12	7.18	264	36896m	1.00	UG	-0.10

System Monitoring Compounds						
4) 2-Fluorophenol		0.00	112	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
6) Phenol-d5		0.00	99	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
24) Nitrobenzene-d5		0.00	82	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
47) 2-Fluorobiphenyl		0.00	172	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#
70) 2,4,6-Tribromophenol		0.00	330	0	0.00	UG
Spiked Amount	1.000	Range	40 - 140	Recovery	=	0.00%#
84) Terphenyl-d14		0.00	244	0	0.00	UG
Spiked Amount	0.500	Range	40 - 140	Recovery	=	0.00%#

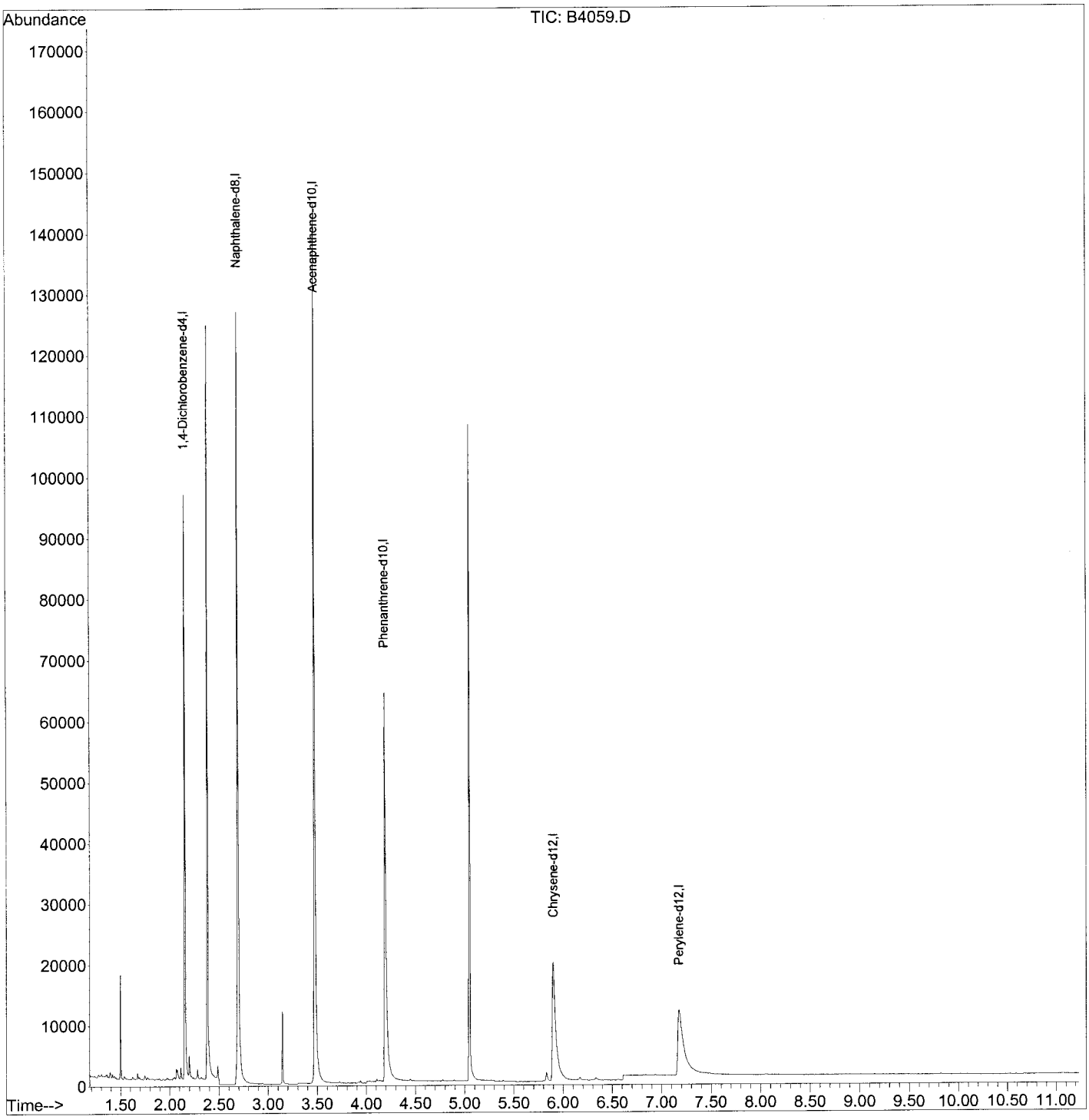
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4059.D
Acq On : 12 Nov 2015 19:57
Operator : KIM
Sample : FB-11062015,E15-10258-013,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Nov 16 13:56:26 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4078.D
Acq On : 13 Nov 2015 1:13
Operator : KIM
Sample : MW-24-2,E15-10258-014,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Nov 16 16:05:03 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

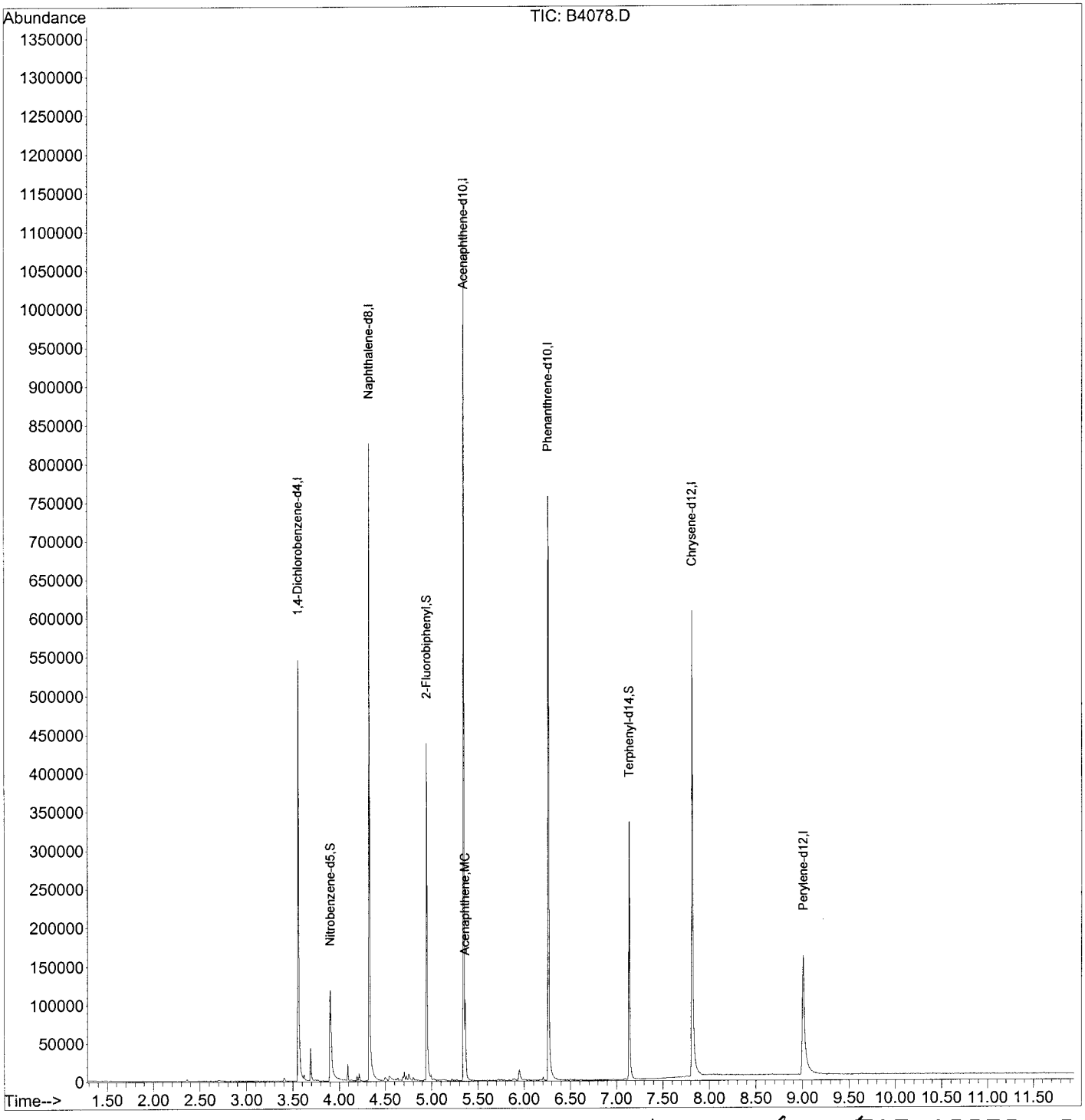
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	64610	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	254224	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	146886	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	233263	40.00	UG	-0.04
82) Chrysene-d12	7.81	240	205697	40.00	UG	-0.09
92) Perylene-d12	9.00	264	113422	40.00	UG	-0.13
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	58650	38.01	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery =	76.02%		
47) 2-Fluorobiphenyl	4.94	172	105099	28.44	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	56.88%		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.13	244	99365	21.93	UG	-0.06
Spiked Amount 50.000	Range 23 - 124		Recovery =	43.86%		
Target Compounds						Qvalue
55) Acenaphthene	5.37	153	16475	5.38	UG	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

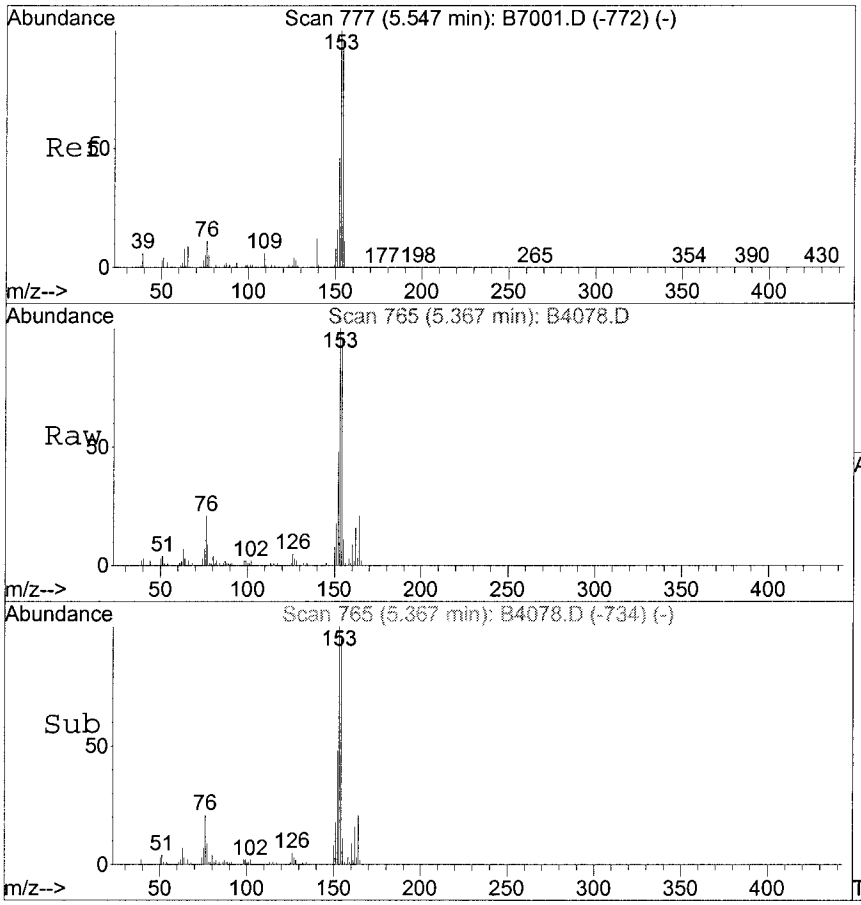
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4078.D
Acq On : 13 Nov 2015 1:13
Operator : KIM
Sample : MW-24-2,E15-10258-014,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 73 Sample Multiplier: 1

Quant Time: Nov 16 16:05:03 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



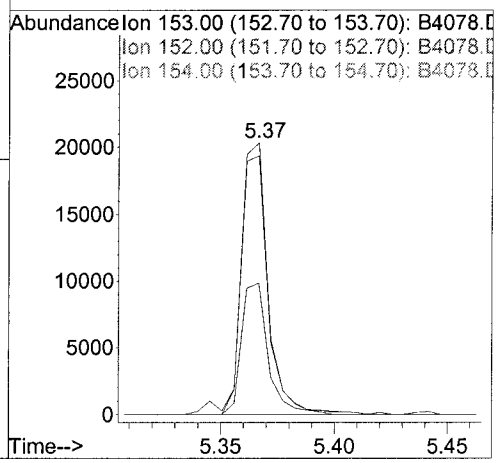
Jean Claude E15-10258 Q430



#55
Acenaphthene
Concen: 5.38 UG
RT: 5.37 min Scan# 765
Delta R.T. -0.02 min
Lab File: B4078.D
Acq: 13 Nov 2015 1:13

Tgt Ion:153 Resp: 16475

Ion	Ratio	Lower	Upper
153	100		
152	48.6	0.0	94.2
154	99.1	0.0	193.4



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4060.D
Acq On : 12 Nov 2015 20:13
Operator : KIM
Sample : MW-24-2,E15-10258-014,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Nov 16 13:56:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	33502	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	88998	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	48428	1.00	UG	-0.03
66) Phenanthrene-d10	4.18	188	71192	1.00	UG	-0.05
82) Chrysene-d12	5.90	240	41183m	1.00	UG	-0.10
92) Perylene-d12	7.16	264	42431	1.00	UG	-0.11

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

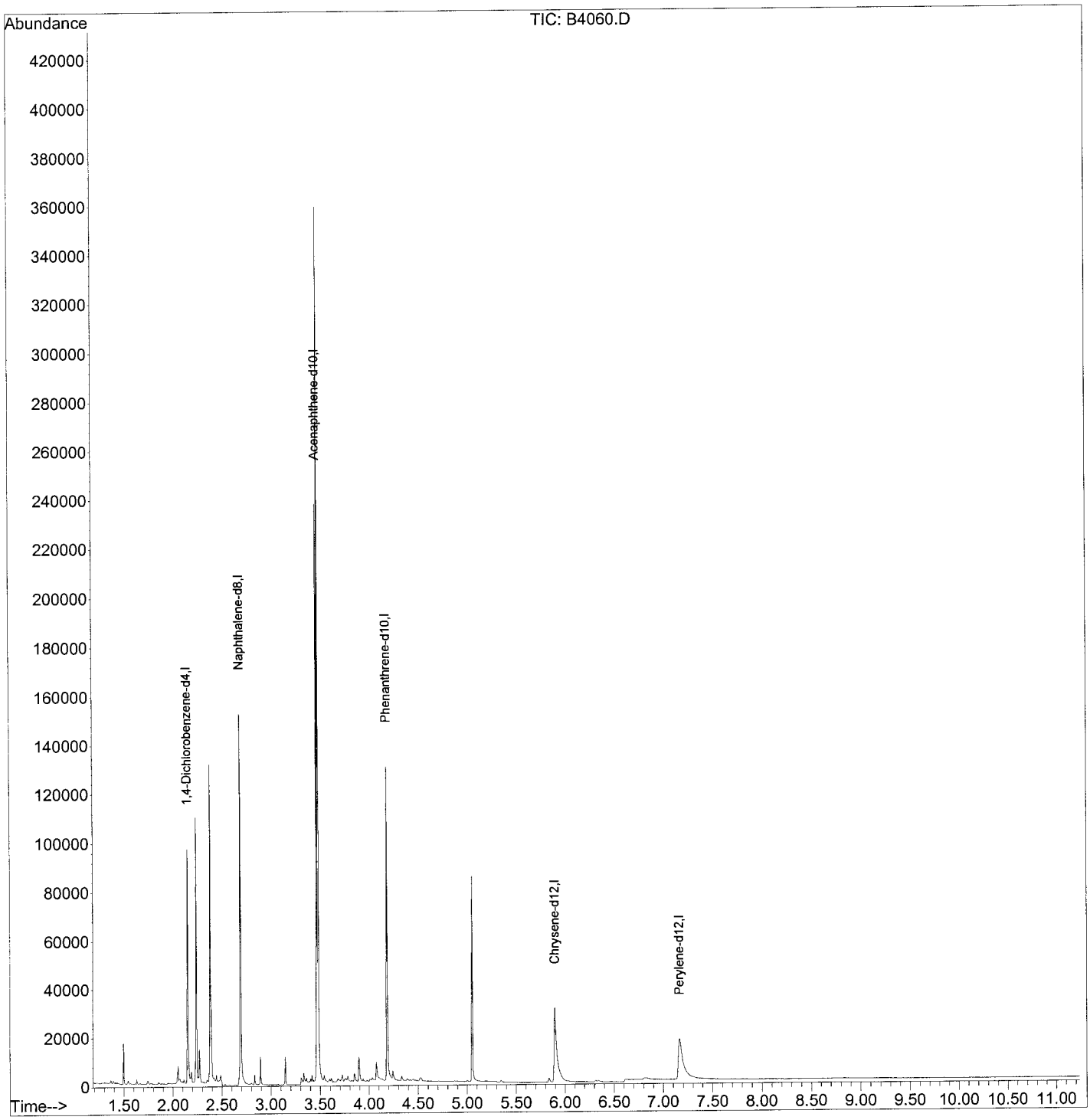
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4060.D
Acq On : 12 Nov 2015 20:13
Operator : KIM
Sample : MW-24-2,E15-10258-014,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 55 Sample Multiplier: 1

Quant Time: Nov 16 13:56:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



E15-10258

0433

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4079.D
Acq On : 13 Nov 2015 1:30
Operator : KIM
Sample : MW-24-1,E15-10258-015,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Nov 16 16:05:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	86175	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	372135	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	197791	40.00	UG	-0.02
66) Phenanthrene-d10	6.25	188	313165	40.00	UG	-0.04
82) Chrysene-d12	7.83	240	285349	40.00	UG	-0.07
92) Perylene-d12	9.04	264	162621	40.00	UG	-0.09
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.90	82	85669	37.93	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 75.86%			
47) 2-Fluorobiphenyl	4.94	172	169110	33.99	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery = 67.98%			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	7.15	244	156731	24.93	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 49.86%			

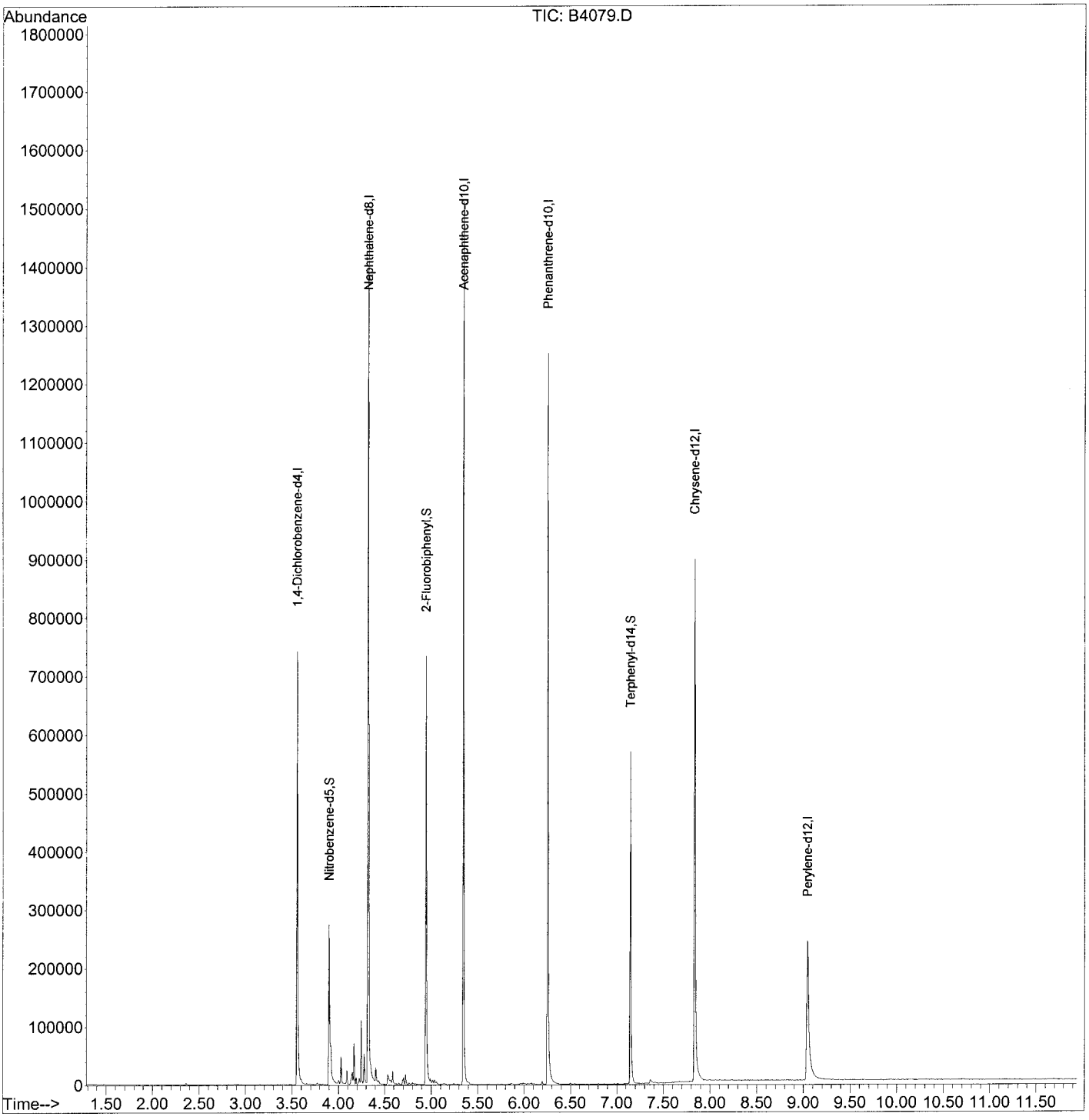
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4079.D
Acq On : 13 Nov 2015 1:30
Operator : KIM
Sample : MW-24-1,E15-10258-015,A,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 74 Sample Multiplier: 1

Quant Time: Nov 16 16:05:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4061.D
Acq On : 12 Nov 2015 20:29
Operator : KIM
Sample : MW-24-1,E15-10258-015,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Nov 16 13:58:16 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	32632	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	84073m	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	46242	1.00	UG	-0.03
66) Phenanthrene-d10	4.18	188	68740	1.00	UG	-0.05
82) Chrysene-d12	5.89	240	41014m	1.00	UG	-0.11
92) Perylene-d12	7.16	264	40684m	1.00	UG	-0.12

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

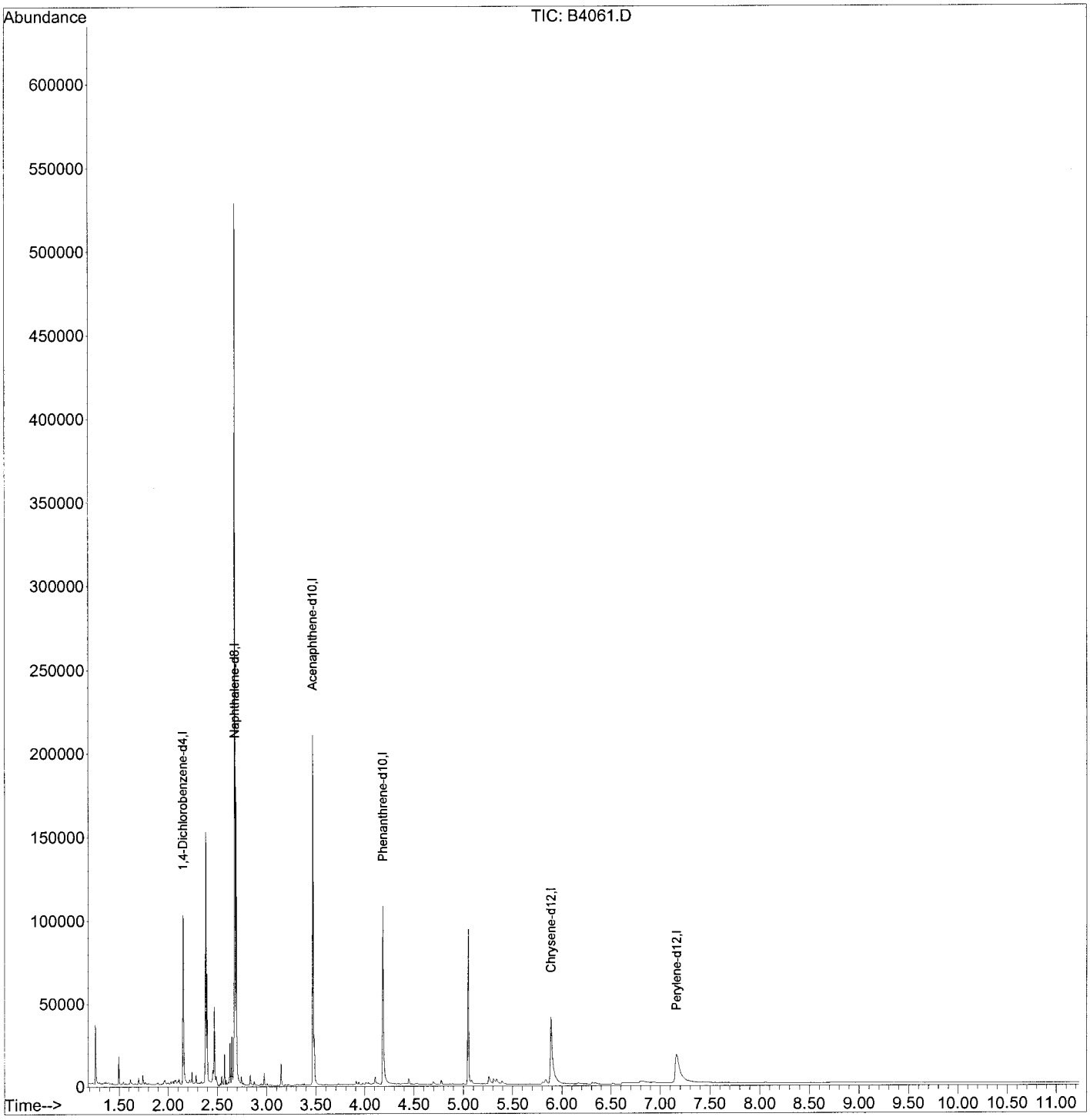
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4061.D
Acq On : 12 Nov 2015 20:29
Operator : KIM
Sample : MW-24-1,E15-10258-015,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 56 Sample Multiplier: 1

Quant Time: Nov 16 13:58:16 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4080.D
Acq On : 13 Nov 2015 1:47
Operator : KIM
Sample : MW-26,E15-10258-016,A,500ml,100,0.5
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 75 Sample Multiplier: 1

Quant Time: Nov 16 16:10:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	87477	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	339214	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	194784	40.00	UG	-0.02
66) Phenanthrene-d10	6.27	188	320941	40.00	UG	-0.02
82) Chrysene-d12	7.98	240	296878	40.00	UG	0.07
92) Perylene-d12	9.21	264	198211	40.00	UG	0.07
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	3.90	82	79085	38.42	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery =	76.84%		
47) 2-Fluorobiphenyl	4.94	172	174430	35.60	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery =	71.20%		
70) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	7.23	244	212685	32.52	UG	0.04
Spiked Amount 50.000	Range 23 - 124		Recovery =	65.04%		
Target Compounds						Qvalue
34) Naphthalene	4.34	128	82800	12.49	UG	# 100
41) 2-Methylnaphthalene	4.80	142	38218m	8.99	UG	
55) Acenaphthene	5.37	153	54095	13.32	UG	98
61) Fluorene	5.69	166	19267	3.97	UG	97
75) Phenanthrene	6.29	178	32914	5.09	UG	97
76) Anthracene	6.33	178	10227m	1.61	UG	
79) Fluoranthene	7.03	202	4058	0.61	UG	89
83) Pyrene	7.18	202	5458	0.74	UG	93

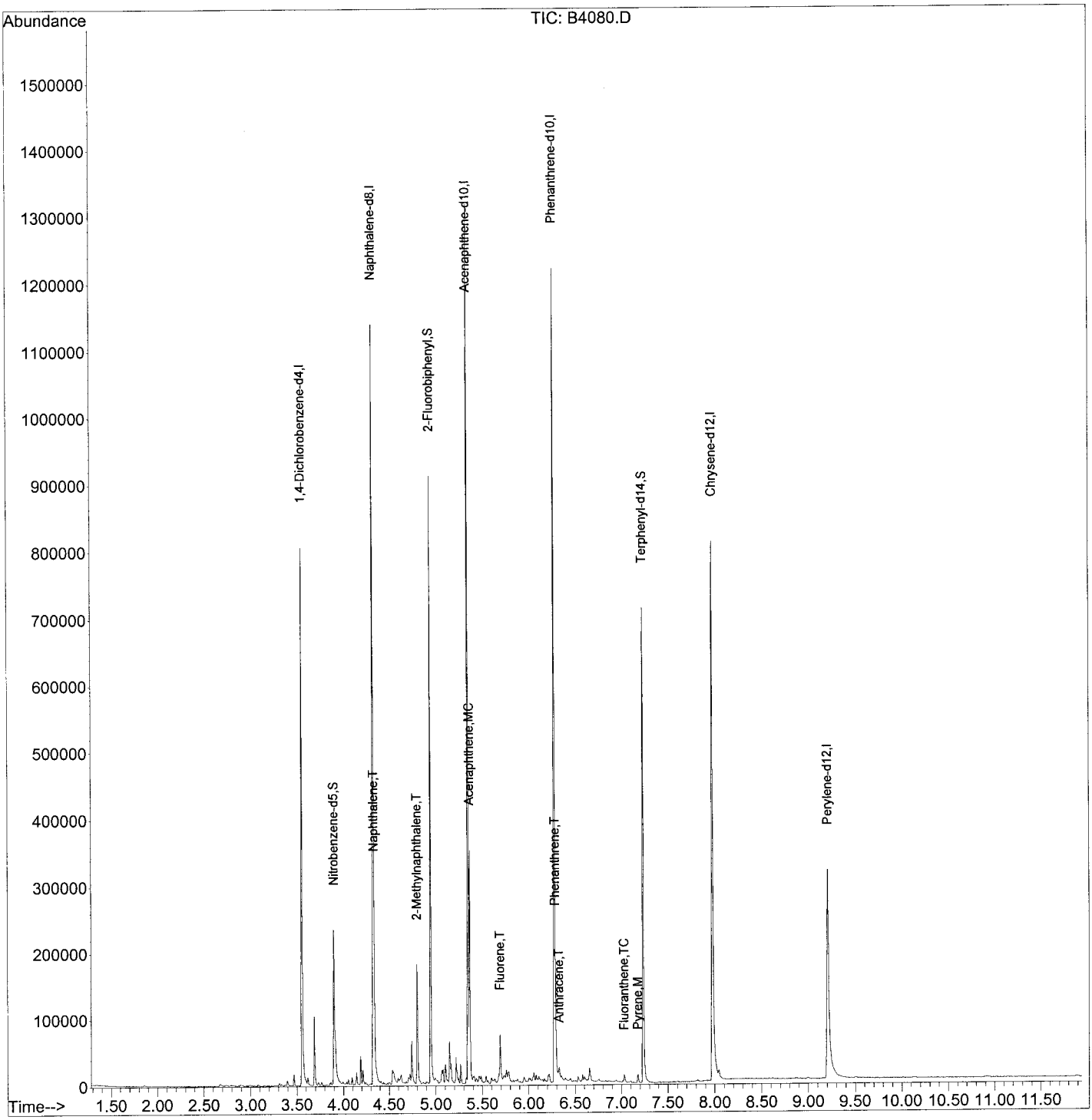
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Jan Clancy E15-10258.0438

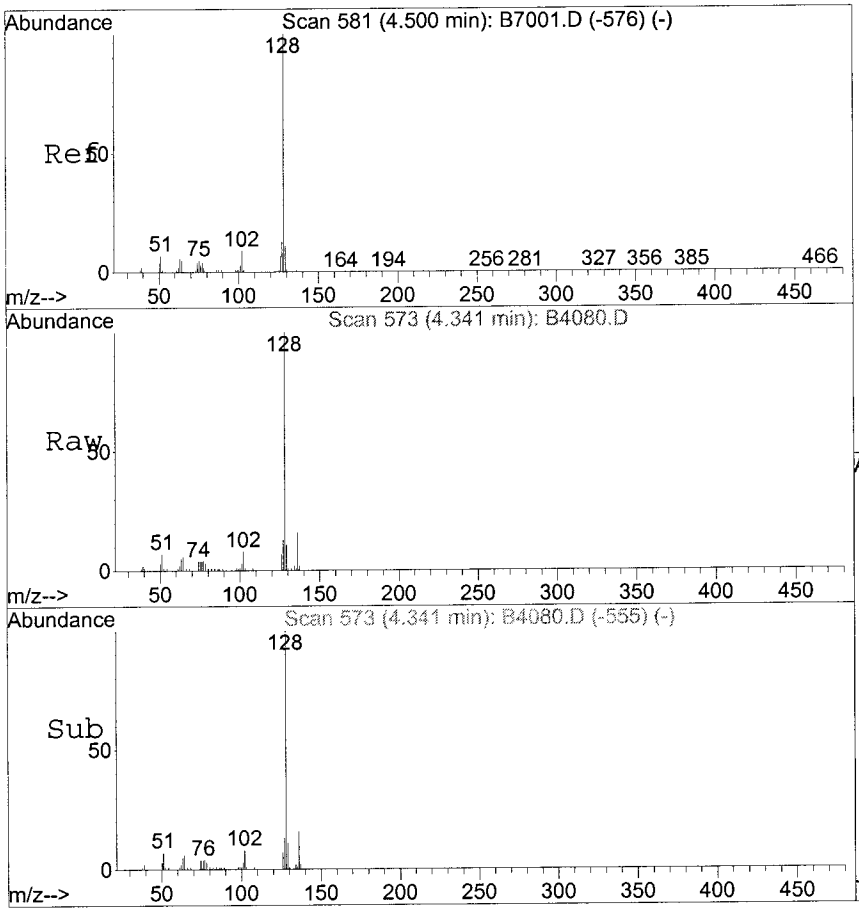
Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4080.D
Acq On : 13 Nov 2015 1:47
Operator : KIM
Sample : MW-26,E15-10258-016,A,500ml,100,0.5
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 75 Sample Multiplier: 1

Quant Time: Nov 16 16:10:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



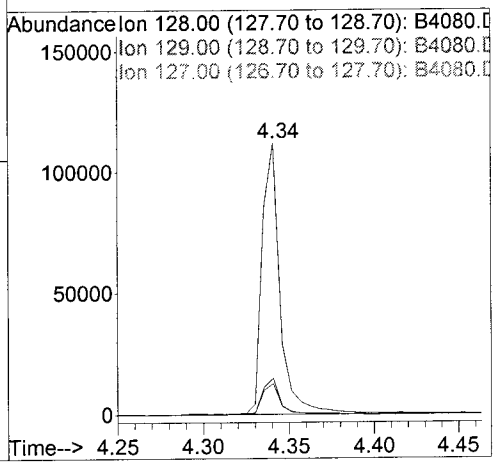
BW1115.M Mon Nov 16 16:10:35 2015 MSD_B

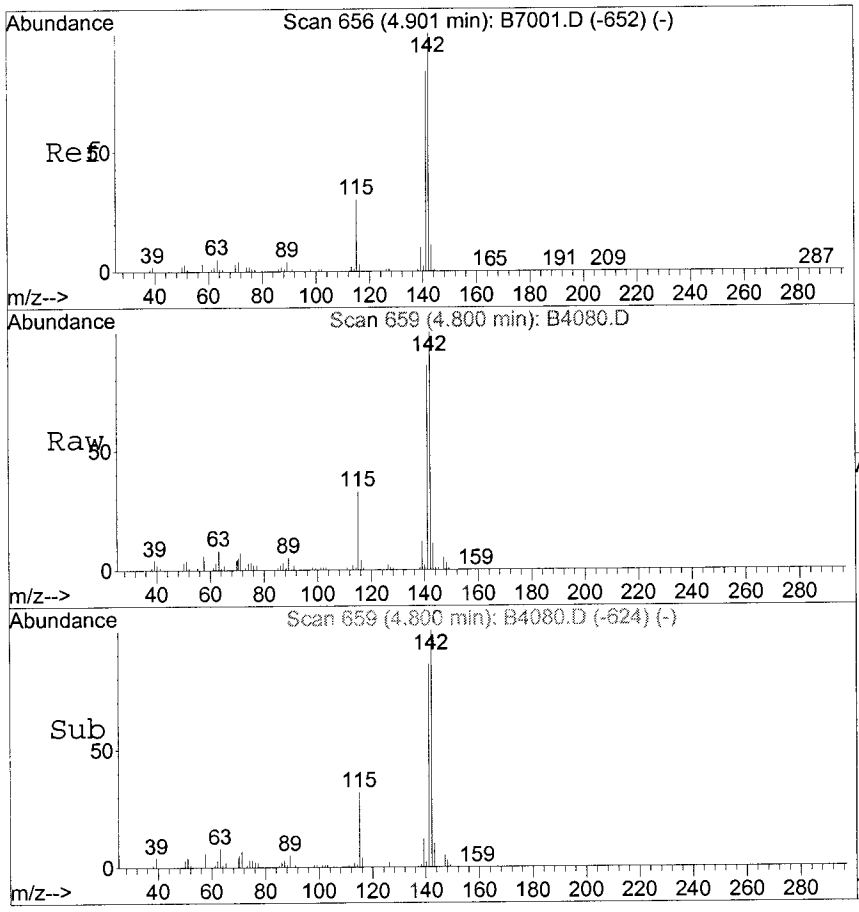


#34
Naphthalene
Concen: 12.49 UG
RT: 4.34 min Scan# 573
Delta R.T. -0.01 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:128 Resp: 82800

Ion	Ratio	Lower	Upper
128	100		
129	11.5	0.0	22.6
127	13.2	0.0	0.0#

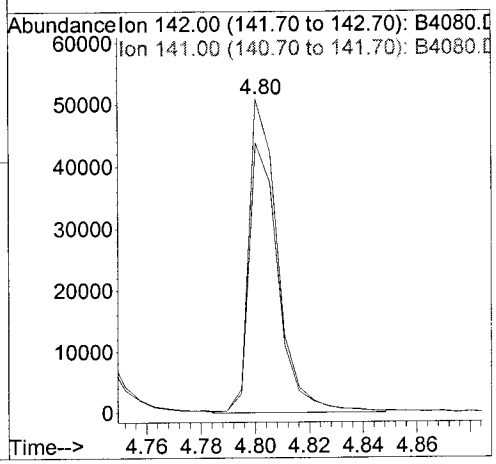


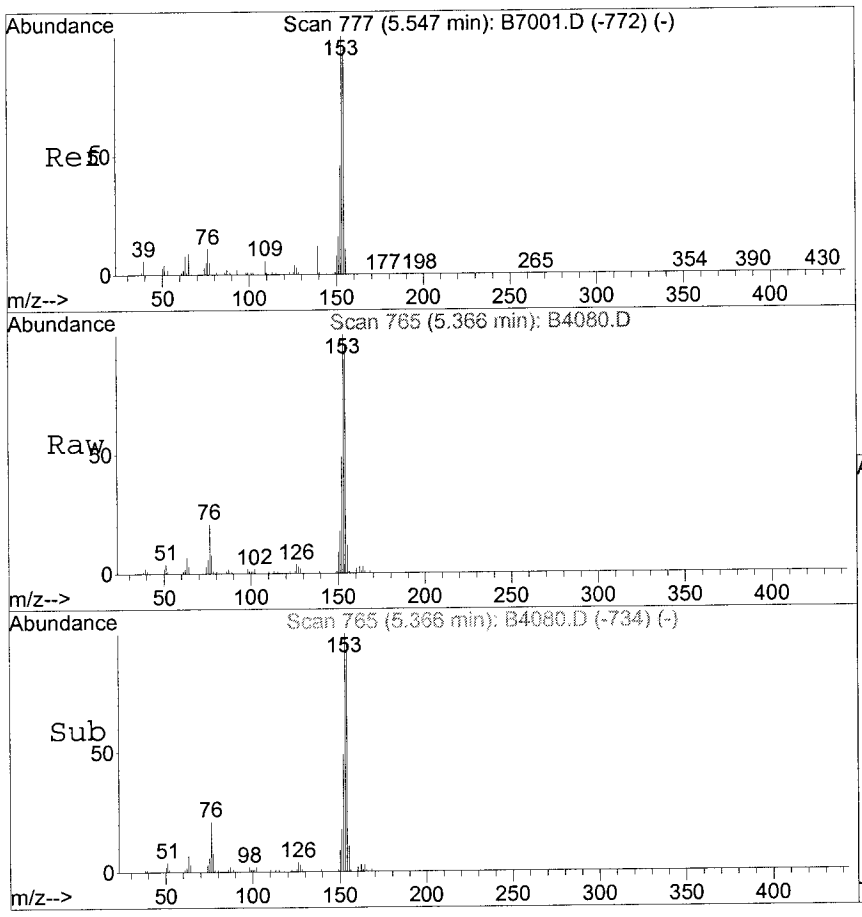


#41
2-Methylnaphthalene
Concen: 8.99 UG m
RT: 4.80 min Scan# 659
Delta R.T. 0.05 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:142 Resp: 38218

Ion	Ratio	Lower	Upper
142	100		
141	27.8	0.0	168.2

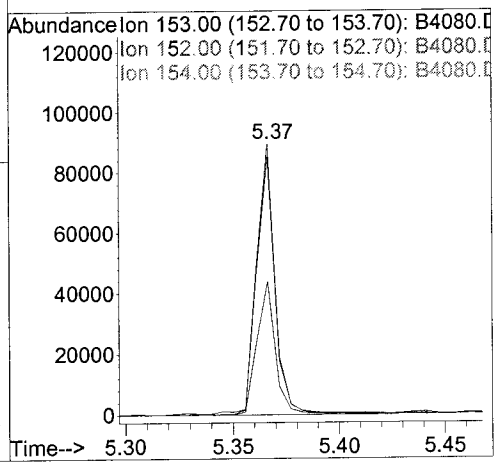


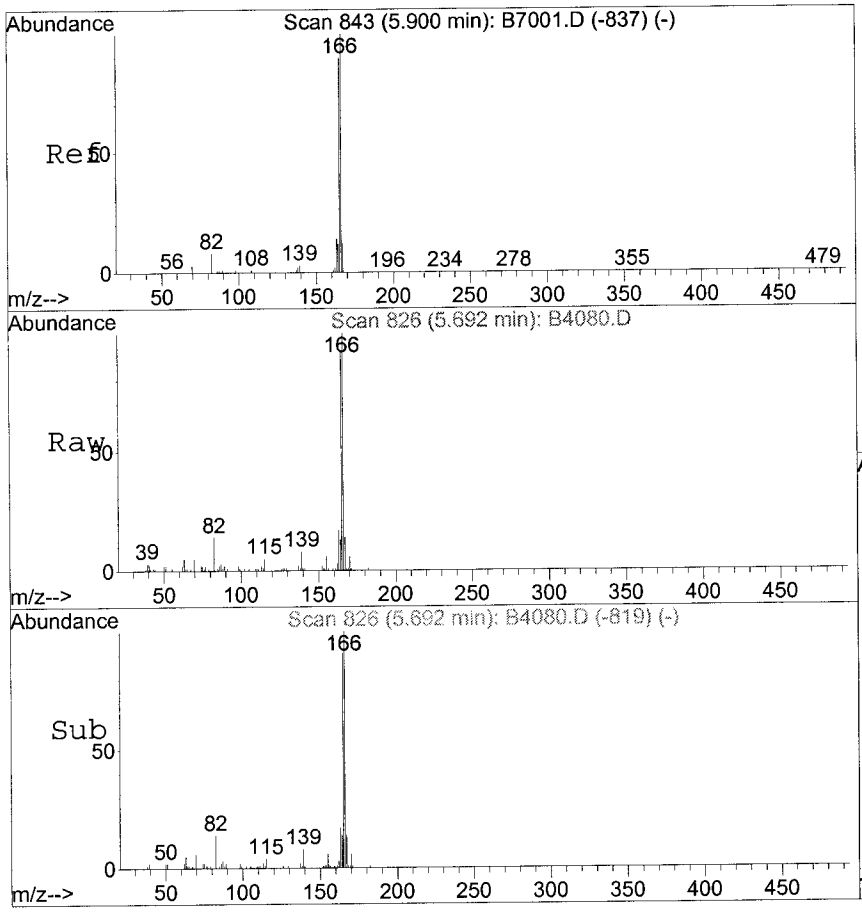


#55
Acenaphthene
Concen: 13.32 UG
RT: 5.37 min Scan# 765
Delta R.T. -0.02 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:153 Resp: 54095

Ion	Ratio	Lower	Upper
153	100		
152	49.3	0.0	94.2
154	95.4	0.0	193.4

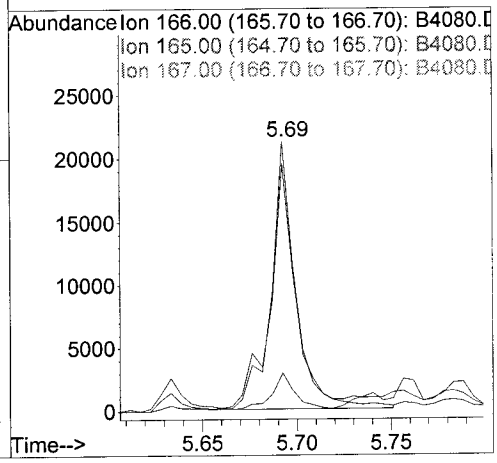


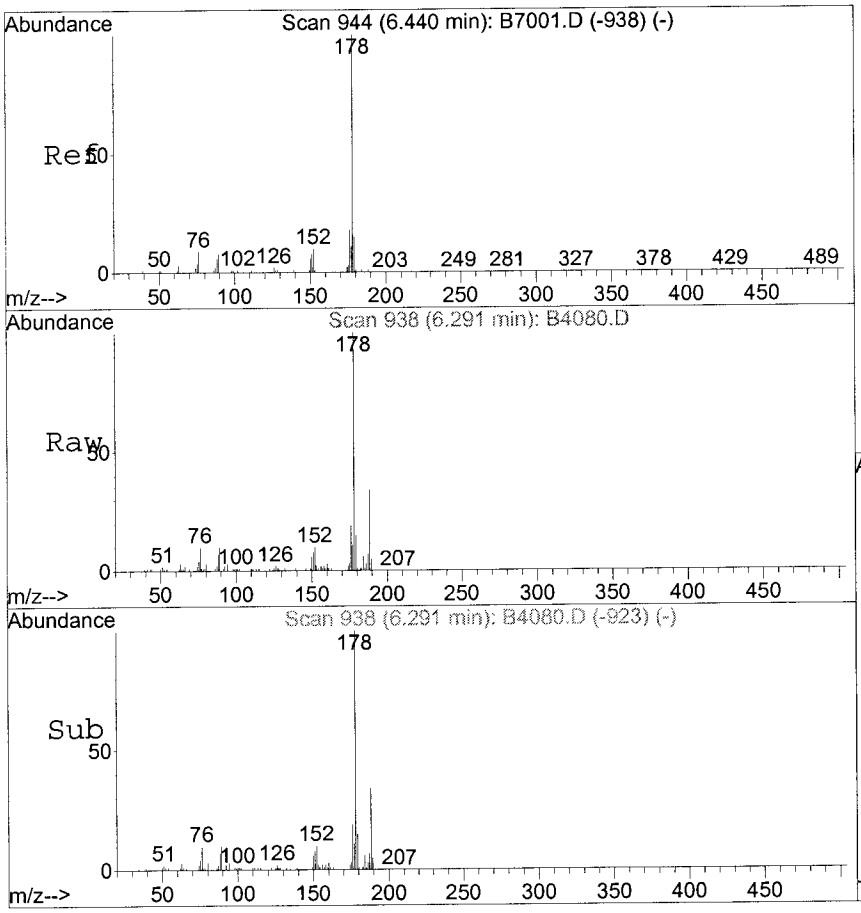


#61
Fluorene
Concen: 3.97 UG
RT: 5.69 min Scan# 826
Delta R.T. -0.03 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:166 Resp: 19267

Ion	Ratio	Lower	Upper
166	100		
165	94.2	0.0	182.6
167	12.4	0.0	26.4

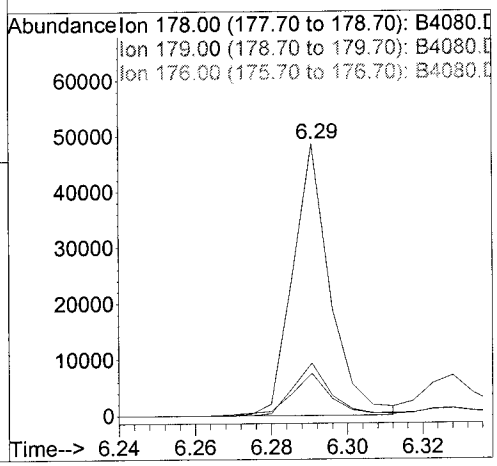


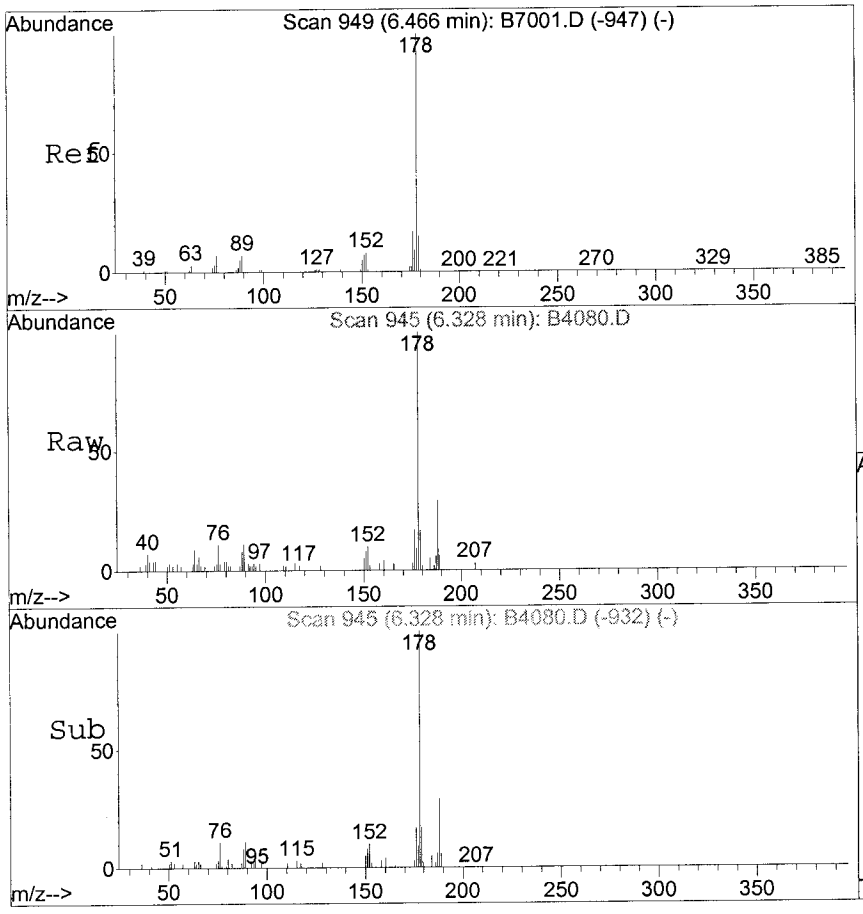


#75
Phenanthrene
Concen: 5.09 UG
RT: 6.29 min Scan# 938
Delta R.T. -0.02 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:178 Resp: 32914

Ion	Ratio	Lower	Upper
178	100		
179	17.0	0.0	30.4
176	19.2	0.0	36.8

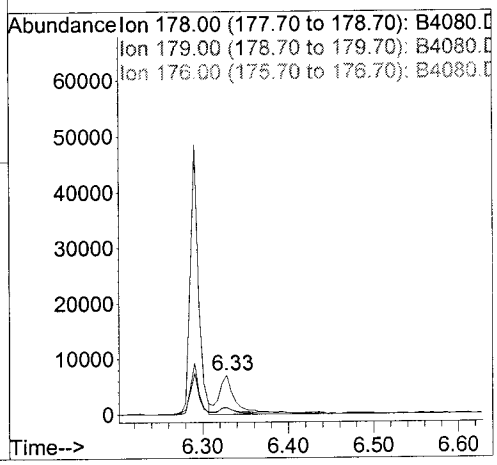


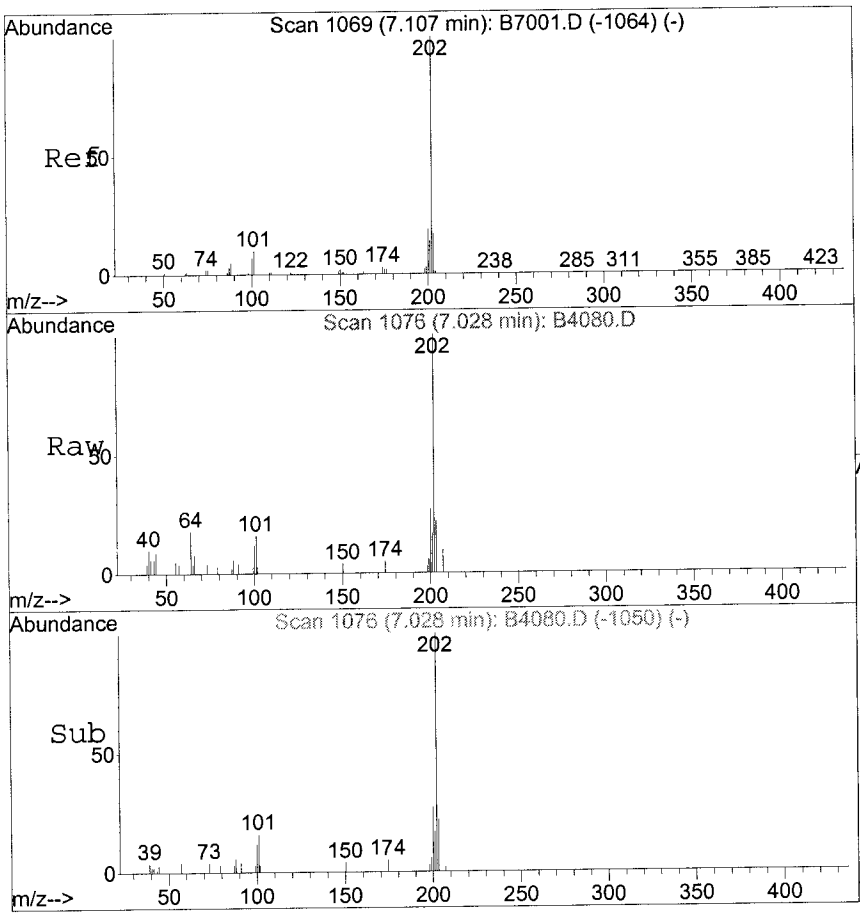


#76
Anthracene
Concen: 1.61 UG m
RT: 6.33 min Scan# 945
Delta R.T. -0.01 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:178 Resp: 10227

Ion	Ratio	Lower	Upper
178	100		
179	0.0	0.0	30.2
176	0.0	0.0	35.4

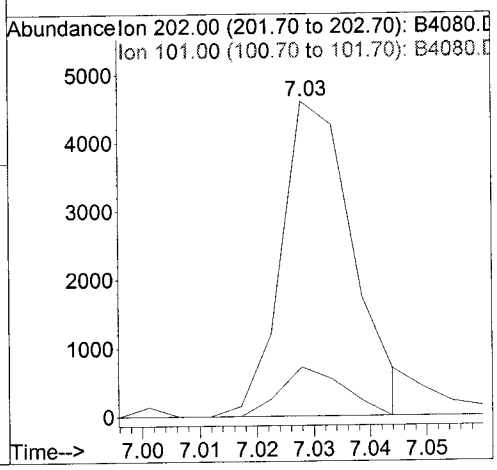


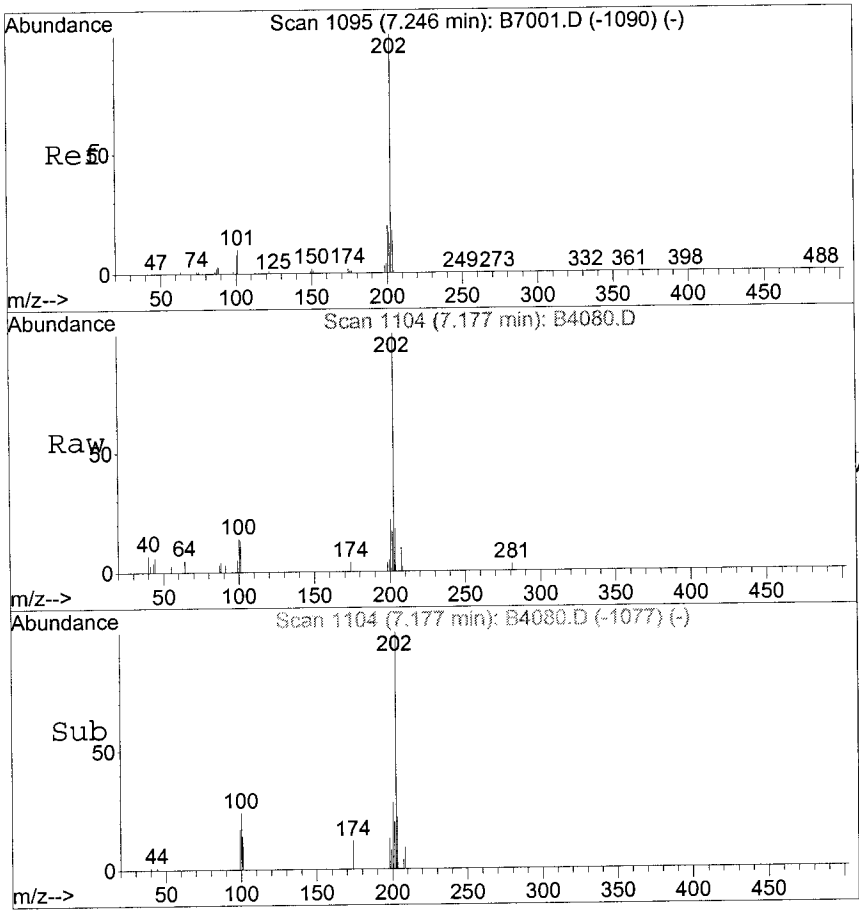


#79
Fluoranthene
Concen: 0.61 UG
RT: 7.03 min Scan# 1076
Delta R.T. 0.04 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:202 Resp: 4058

Ion	Ratio	Lower	Upper
202	100		
101	13.8	0.0	19.2

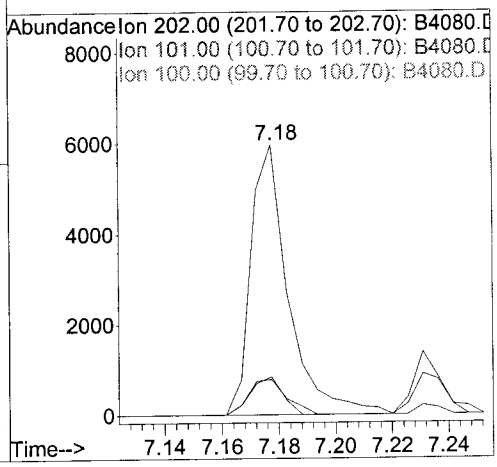




#83
Pyrene
Concen: 0.74 UG
RT: 7.18 min Scan# 1104
Delta R.T. 0.04 min
Lab File: B4080.D
Acq: 13 Nov 2015 1:47

Tgt Ion:202 Resp: 5458

Ion	Ratio	Lower	Upper
202	100		
101	13.2	0.0	21.8
100	12.0	0.0	18.0



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4062.D
Acq On : 12 Nov 2015 20:46
Operator : KIM
Sample : MW-26,E15-10258-016,Ia,500ml,100,0.5
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Nov 16 13:59:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.15	152	35307	1.00	UG	0.00
23) Naphthalene-d8	2.69	136	106713	1.00	UG	0.00
43) Acenaphthene-d10	3.47	164	52273	1.00	UG	-0.03
66) Phenanthrene-d10	4.18	188	71673m	1.00	UG	-0.05
82) Chrysene-d12	5.89	240	41797m	1.00	UG	-0.11
92) Perylene-d12	7.16	264	43188m	1.00	UG	-0.12

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

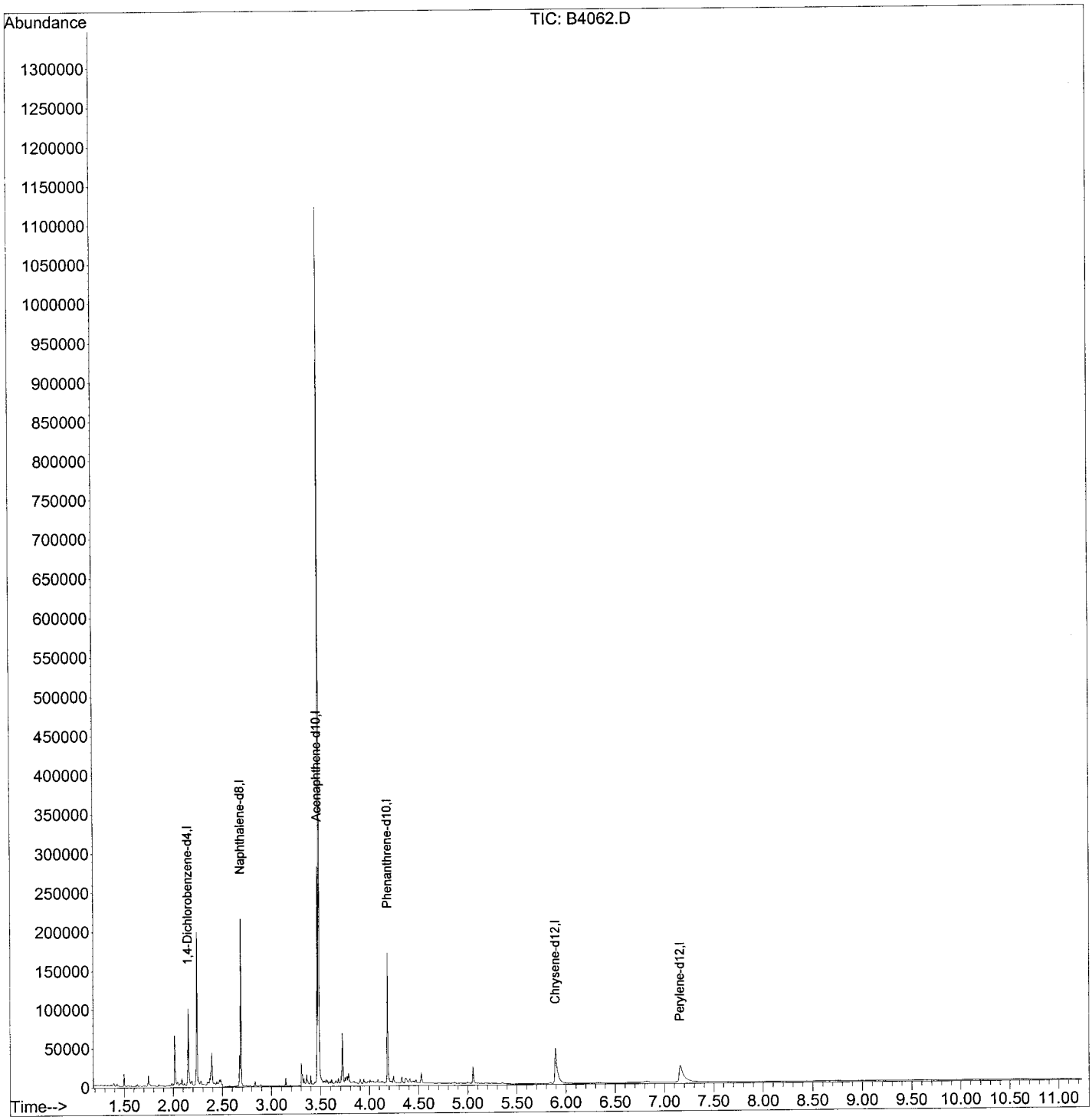
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4062.D
Acq On : 12 Nov 2015 20:46
Operator : KIM
Sample : MW-26,E15-10258-016,Ia,500ml,100,0.5
Misc : 151111-01,11/11/15,11/06/15,1
ALS Vial : 57 Sample Multiplier: 1

Quant Time: Nov 16 13:59:54 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5947.D
Acq On : 11 Nov 2015 21:26
Operator : JC
Sample : FB-11031,E15-10258-018,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Nov 12 10:03:38 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

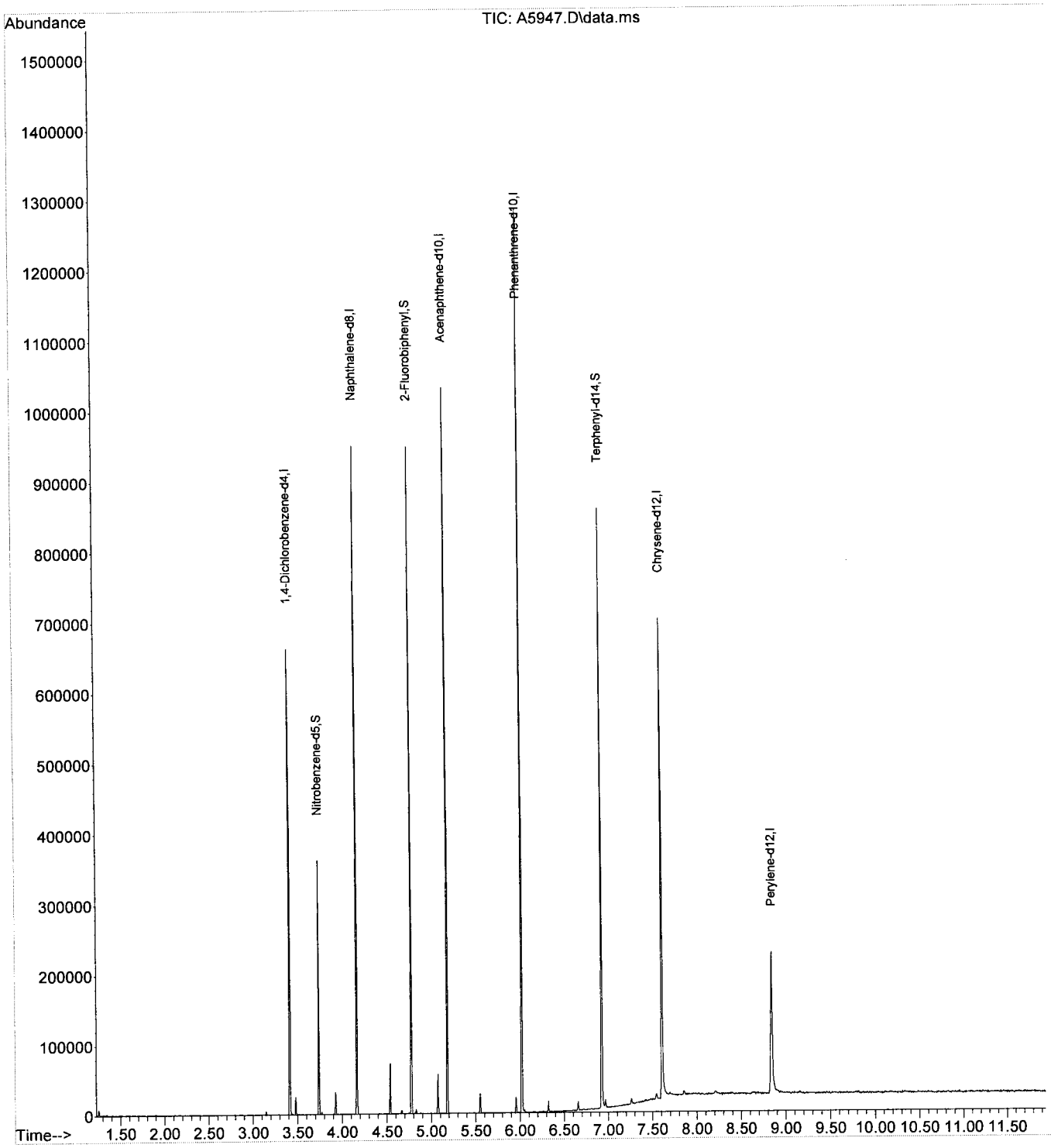
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	68095	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	270436	40.00	UG	0.00
43) Acenaphthene-d10	5.178	164	158929	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	257530	40.00	UG	0.00
82) Chrysene-d12	7.606	240	202259	40.00	UG	-0.02
92) Perylene-d12	8.842	264	97716	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	3.739	82	57010	33.51	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 67.02%			
47) 2-Fluorobiphenyl	4.777	172	150619	41.45	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 82.90%			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	6.927	244	178147m	43.75	UG	0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 87.50%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5947.D
Acq On : 11 Nov 2015 21:26
Operator : JC
Sample : FB-11031,E15-10258-018,A,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Nov 12 10:03:38 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0447

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5924.D
Acq On : 11 Nov 2015 15:45
Operator : JC
Sample : FB-11031,E15-10258-018,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 11 16:21:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	7448	1.00	UG	0.00
23) Naphthalene-d8	2.793	136	24015	1.00	UG	0.00
43) Acenaphthene-d10	3.576	164	12700	1.00	UG	0.00
66) Phenanthrene-d10	4.288	188	20480	1.00	UG	-0.01
82) Chrysene-d12	6.190	240	16588	1.00	UG	0.00
92) Perylene-d12	7.524	264	14475	1.00	UG	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		

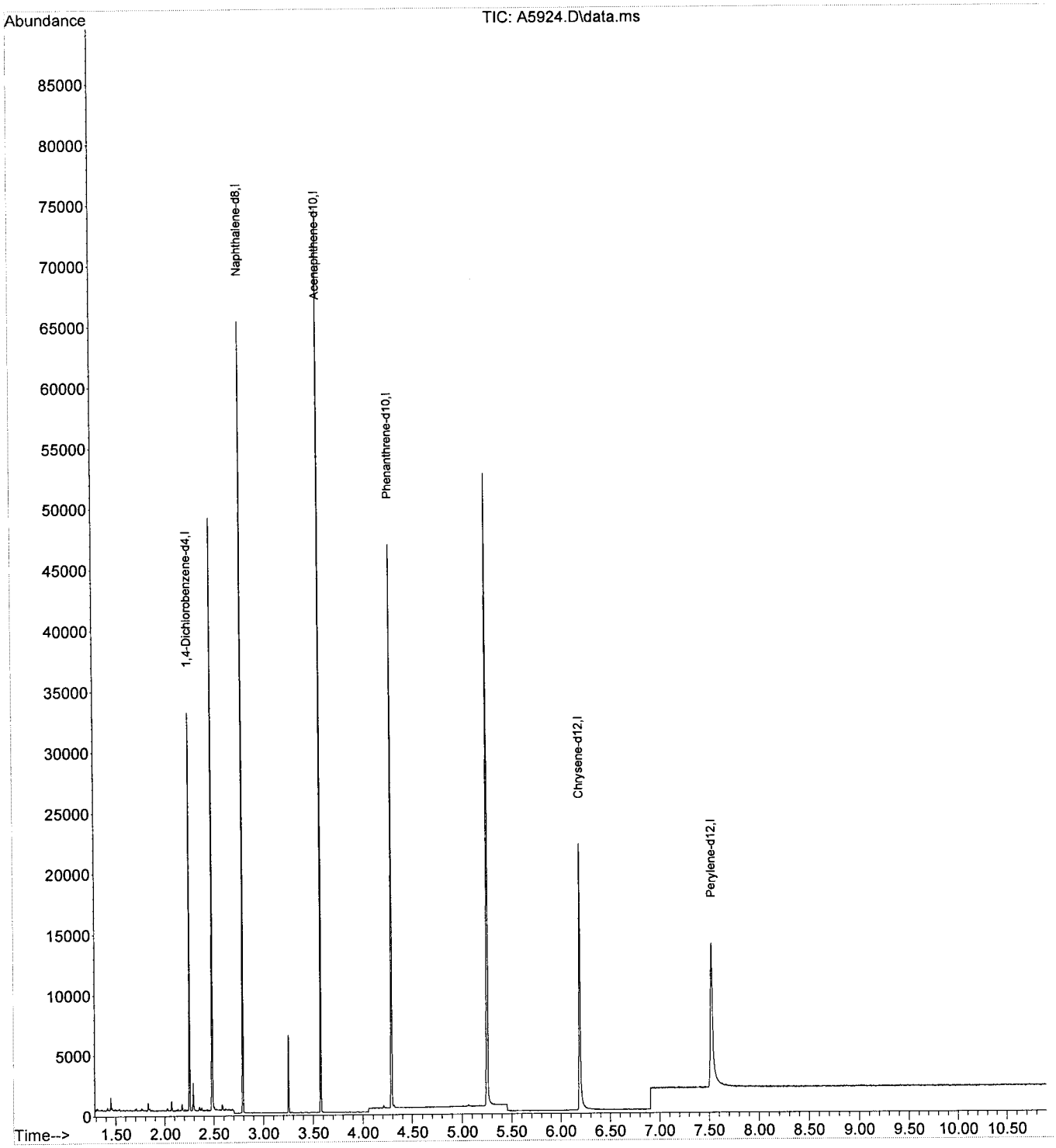
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5924.D
Acq On : 11 Nov 2015 15:45
Operator : JC
Sample : FB-11031,E15-10258-018,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,11/06/15,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 11 16:21:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



E15-10258 0449

SEMI-VOLATILE ORGANICS STANDARDS

Response Factor Report MSD_A

Method Path : C:\msdchem\1\METHODS\
Method File : AW1215.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Oct 29 15:43:59 2015
Response Via : Initial Calibration

Calibration Files
1 =A5897.D 10 =A5898.D 20 =A5899.D 40 =A5900.D 80 =A5901.D
160 =A5896.D

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------							
2)	T	N-Nitrosodimet...	0.438	0.605	0.585	0.644	0.610	0.652	0.589	13.26
3)	T	Pyridine	0.725	0.771	0.731	0.752	0.722	0.754	0.742	2.65
4)	S	2-Fluorophenol	0.954	0.921	0.910	0.941	0.944	0.971	0.940	2.34
5)	T	Benzaldehyde	0.818	0.771	0.745	0.843	0.804	0.928	0.818	7.81
6)	S	Phenol-d5	1.160	1.115	1.096	1.133	1.154	1.175	1.139	2.62
7)	MC	Phenol	1.620	1.168	1.205	1.230	1.251	1.249	1.287	12.91
8)	T	Aniline	0.561	0.565	0.559	0.581	0.548	0.567	0.563	1.95
9)	T	Bis(2-chloroet...	0.848	0.749	0.708	0.727	0.678	0.687	0.733	8.49
10)	M	2-Chlorophenol	1.205	0.937	0.974	0.993	0.941	1.004	1.009	9.87
11)	T	1,3-Dichlorobe...	1.334	1.110	1.104	1.150	1.107	1.126	1.155	7.72
12)	MC	1,4-Dichlorobe...	1.198	1.038	1.039	1.083	1.061	1.045	1.077	5.71
13)	T	Benzyl alcohol	0.761	0.634	0.626	0.638	0.647	0.624	0.655	8.03
14)	T	1,2-Dichlorobe...	1.152	1.041	1.025	1.033	1.033	1.011	1.049	4.92
15)	T	2-Methylphenol	1.019	0.820	0.832	0.838	0.816	0.801	0.854	9.55
16)	T	Bis(2-chlorois...	1.967	1.537	1.551	1.577	1.454	1.440	1.587	12.21
17)	T	4-Methylphenol	1.040	0.873	0.896	0.909	0.877	0.891	0.914	6.88
18)	MP	N-Nitrosodi-n-...	0.898	0.722	0.742	0.743	0.702	0.709	0.753	9.73
19)	T	Acetophenone	1.616	1.288	1.309	1.312	1.273	1.205	1.334	10.77
20)	T	3-Methylphenol	1.040	0.873	0.896	0.909	0.877	0.892	0.914	6.87
21)	T	Hexachloroethane	0.425	0.382	0.382	0.390	0.375	0.380	0.389	4.67
23)	I	Naphthalene-d8	----------ISTD----------							
24)	S	Nitrobenzene-d5	0.240	0.222	0.238	0.247	0.263	0.301	0.252	10.93
25)	T	Nitrobenzene	0.339	0.244	0.247	0.246	0.247	0.248	0.262	14.35
26)	T	Isophorone	0.502	0.458	0.481	0.471	0.469	0.471	0.475	3.19
27)	TC	2-Nitrophenol	0.131	0.108	0.120	0.125	0.125	0.135	0.124	7.41
28)	T	2,4-Dimethylph...	0.266	0.217	0.225	0.227	0.231	0.231	0.233	7.37
29)	T	Bis(2-chloroet...	0.307	0.269	0.281	0.277	0.276	0.278	0.281	4.64
30)	T	Benzoic acid	0.101	0.103	0.108	0.120	0.098	0.106	0.106	7.25
31)	T	2,4-Dimethylan...	0.297	0.272	0.284	0.295	0.295	0.298	0.290	3.61
32)	TC	2,4-Dichloroph...	0.212	0.183	0.186	0.190	0.197	0.193	0.194	5.29
33)	M	1,2,4-Trichlor...	0.220	0.213	0.218	0.214	0.217	0.217	0.217	1.22
34)	T	Naphthalene	0.796	0.662	0.698	0.679	0.679	0.691	0.701	6.91
35)	T	4-Chloroaniline	0.414	0.337	0.356	0.365	0.371	0.369	0.369	6.95
36)	T	4-Aminotoluene	0.448	0.447	0.463	0.444	0.481	0.464	0.458	3.16
37)	TC	Hexachlorobuta...	0.136	0.114	0.121	0.120	0.123	0.124	0.123	6.01
38)	T	Caprolactam	0.110	0.097	0.102	0.103	0.099	0.101	0.102	4.26
39)	T	2-Aminotoluene	0.448	0.447	0.463	0.444	0.481	0.464	0.458	3.16
40)	MC	4-Chloro-3-met...	0.240	0.183	0.190	0.194	0.200	0.199	0.201	9.89
41)	T	2-Methylnaphth...	0.479	0.448	0.443	0.452	0.467	0.449	0.456	3.03
43)	I	Acenaphthene-d10	----------ISTD----------							
44)	TP	Hexachlorocycl...	0.199	0.203	0.216	0.226	0.242	0.268	0.226	11.47
45)	TC	2,4,6-Trichlor...	0.243	0.229	0.243	0.237	0.233	0.253	0.240	3.50
46)	T	2,4,5-Trichlor...	0.234	0.240	0.250	0.251	0.243	0.260	0.247	3.70
47)	S	2-Fluorobiphenyl	0.956	0.931	0.905	0.926	0.885	0.884	0.915	3.11
48)	T	1,1'-Biphenyl	1.273	0.988	0.996	0.980	1.002	0.980	1.037	11.20
49)	T	2-Chloronaphth...	0.824	0.765	0.758	0.766	0.722	0.780	0.769	4.34
50)	T	2-Nitroaniline	0.193	0.182	0.198	0.199	0.201	0.207	0.197	4.39
51)	T	Dimethyl phtha...	0.980	0.839	0.860	0.873	0.844	0.867	0.877	5.96
52)	T	2,6-Dinitrotol...	0.146	0.141	0.162	0.169	0.179	0.185	0.164	10.79
53)	T	Acenaphthylene	1.322	1.127	1.182	1.197	1.161	1.178	1.194	5.62

54)	T	3-Nitroaniline	0.196	0.201	0.220	0.225	0.239	0.254	0.223	9.87
55)	MC	Acenaphthene	0.917	0.729	0.749	0.743	0.724	0.736	0.766	9.72
56)	TP	2,4-Dinitrophenol		0.054	0.056	0.079	0.079	0.081	0.070	19.46
57)	MP	4-Nitrophenol	0.177	0.144	0.165	0.175	0.173	0.197	0.172	10.14
58)	M	2,4-Dinitrotol...	0.137	0.184	0.204	0.224	0.231	0.241	0.203	18.86
59)	T	Dibenzofuran	1.190	1.021	1.019	1.013	1.005	0.986	1.039	7.21
60)	T	Diethyl phthalate	0.934	0.801	0.841	0.861	0.809	0.854	0.850	5.59
61)	T	Fluorene	0.885	0.799	0.823	0.820	0.819	0.820	0.828	3.55
62)	T	4-Chlorophenyl...	0.457	0.423	0.436	0.428	0.419	0.429	0.432	3.15
63)	T	4-Nitroaniline	0.169	0.191	0.204	0.210	0.202	0.225	0.200	9.46
64)	T	1,2,4,5-Tetrac...	0.405	0.355	0.368	0.360	0.359	0.376	0.370	5.02
65)	T	2,3,4,6-Tetrac...	0.159	0.169	0.182	0.186	0.189	0.198	0.181	7.80
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-...		0.052	0.056	0.070	0.071	0.078	0.066	16.67
68)	TC	N-Nitrosodiphe...	0.406	0.372	0.387	0.383	0.379	0.387	0.386	3.01
69)	T	1,2-Diphenylhy...	0.552	0.521	0.554	0.526	0.535	0.533	0.537	2.52
70)	S	2,4,6-Tribromo...	0.077	0.079	0.082	0.078	0.081	0.079	0.079	2.45
71)	T	4-Bromophenyl ...	0.157	0.143	0.153	0.147	0.148	0.158	0.151	3.89
72)	T	Hexachlorobenzene	0.177	0.160	0.164	0.162	0.166	0.170	0.167	3.69
73)	T	Atrazine	0.154	0.126	0.145	0.138	0.144	0.145	0.142	6.57
74)	MC	Pentachlorophenol	0.067	0.079	0.094	0.099	0.098	0.111	0.091	17.21
75)	T	Phenanthrene	0.862	0.693	0.709	0.693	0.703	0.688	0.725	9.32
76)	T	Anthracene	0.773	0.669	0.713	0.694	0.712	0.712	0.712	4.85
77)	T	Carbazole	0.753	0.650	0.666	0.670	0.664	0.669	0.679	5.48
78)	T	Di-n-butyl pht...	0.955	0.795	0.865	0.844	0.863	0.882	0.867	6.05
79)	TC	Fluoranthene	0.792	0.694	0.745	0.725	0.731	0.729	0.736	4.38
80)	T	Benzidine	0.355	0.364	0.405	0.435	0.440	0.584	0.430	19.29
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	1.021	0.914	0.964	0.980	1.000	0.955	0.973	3.81
84)	S	Terphenyl-d14	0.866	0.802	0.802	0.802	0.804	0.755	0.805	4.38
85)	T	3,3'-Dimethylb...		0.519	0.575	0.688	0.756	0.848	0.677	19.67
86)	T	Butyl benzyl p...	0.459	0.430	0.450	0.462	0.464	0.462	0.454	2.86
87)	T	3,3'-Dichlorob...	0.285	0.270	0.286	0.298	0.274	0.247	0.276	6.39
88)	T	Benzo[a]anthra...	0.936	0.750	0.813	0.818	0.810	0.816	0.824	7.38
89)	T	Chrysene	0.994	0.788	0.793	0.818	0.787	0.817	0.833	9.62
90)	T	Bis(2-ethylhex...	0.652	0.559	0.592	0.618	0.616	0.630	0.611	5.30
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl pht...	0.958	0.907	0.995	0.998	0.957	0.977	0.965	3.46
94)	T	Benzo[b]fluora...	0.759	0.727	0.674	0.730	0.722	0.806	0.736	5.96
95)	T	Benzo[k]fluora...	0.985	0.713	0.858	0.796	0.800	0.788	0.823	11.13
96)	TC	Benzo[a]pyrene	0.790	0.658	0.682	0.743	0.751	0.776	0.733	7.13
97)	T	Indeno[1,2,3-c...	0.667	0.653	0.775	0.842	0.869	0.926	0.789	14.08
98)	T	Dibenz[a,h]ant...	0.507	0.536	0.595	0.696	0.726	0.738	0.633	15.83
99)	T	Benzo[g,h,i]pe...	0.674	0.624	0.700	0.754	0.769	0.799	0.720	9.10

(#) = Out of Range

AW1215.M Thu Oct 29 15:44:07 2015 MSD_A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5896.D
Acq On : 29 Oct 2015 12:07
Operator : JC
Sample : ABN068-15,ICC0160BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 13:17:05 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 28 11:35:52 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.419	152	56303m	40.00	UG	0.09
23) Naphthalene-d8	4.167	136	219048	40.00	UG	0.08
43) Acenaphthene-d10	5.184	164	125843	40.00	UG	0.09
66) Phenanthrene-d10	6.023	188	203614m	40.00	UG	0.08
82) Chrysene-d12	7.628	240	155801	40.00	UG	0.02
92) Perylene-d12	8.863	264	162869	40.00	UG	0.07
System Monitoring Compounds						
4) 2-Fluorophenol	2.632	112	136635	111.95	UG	0.09
Spiked Amount 100.000	Range 10 - 83		Recovery = 111.95%#			
6) Phenol-d5	3.189	99	165389	108.44	UG	0.08
Spiked Amount 100.000	Range 10 - 91		Recovery = 108.44%#			
24) Nitrobenzene-d5	3.745	82	82383	59.09	UG	0.08
Spiked Amount 50.000	Range 25 - 94		Recovery = 118.18%#			
47) 2-Fluorobiphenyl	4.777	172	139026	49.58	UG	0.08
Spiked Amount 50.000	Range 23 - 102		Recovery = 99.16%			
70) 2,4,6-Tribromophenol	5.633	330	40431	83.22	UG	0.09
Spiked Amount 100.000	Range 27 - 110		Recovery = 83.22%			
84) Terphenyl-d14	6.933	244	147107	47.86	UG	0.04
Spiked Amount 50.000	Range 33 - 113		Recovery = 95.72%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.627	74	146838	180.76	UG	99
3) Pyridine	1.670	52	169738	167.71	UG	96
7) Phenol	3.194	94	281281	168.42	UG	80
8) Aniline	3.226	66	127605m	174.12	UG	
9) Bis(2-chloroethyl) ether	3.253	63	154648m	162.53	UG	
10) 2-Chlorophenol	3.312	128	226196m	172.25	UG	
11) 1,3-Dichlorobenzene	3.402	146	253557m	158.97	UG	
12) 1,4-Dichlorobenzene	3.429	146	235403m	155.81	UG	
13) Benzyl alcohol	3.488	108	140489	165.96	UG	95
14) 1,2-Dichlorobenzene	3.542	146	227684m	156.08	UG	
15) 2-Methylphenol	3.552	108	180321m	161.49	UG	
16) Bis(2-chloroisopropyl)...	3.584	45	324213	163.56	UG	96
17) 4-Methylphenol	3.638	108	200605m	162.55	UG	
18) N-Nitrosodi-n-propylamine	3.665	70	159714m	153.02	UG	
19) Acetophenone	3.654	105	271376	147.51	UG	98
20) 3-Methylphenol	3.638	108	200808m	162.72	UG	
21) Hexachloroethane	3.734	117	85621	153.78	UG	92
25) Nitrobenzene	3.761	77	217255	152.94	UG	97
26) Isophorone	3.895	82	413058	159.62	UG	99
27) 2-Nitrophenol	3.948	139	117990	196.19	UG	97
28) 2,4-Dimethylphenol	3.948	107	202528	162.73	UG	98
29) Bis(2-chloroethoxy) me...	4.002	93	243567	163.35	UG	98
30) Benzoic acid	4.007	122	92581m	168.83	UG	
31) 2,4-Dimethylaniline	4.066	121	261543	169.10	UG	99
32) 2,4-Dichlorophenol	4.087	162	169431	163.75	UG	98
33) 1,2,4-Trichlorobenzene	4.141	180	190520	153.87	UG	98
34) Naphthalene	4.183	128	605346	158.95	UG #	72
35) 4-Chloroaniline	4.194	127	323574	164.09	UG	91
36) 4-Aminotoluene	3.675	106	406417	170.83	UG	93
37) Hexachlorobutadiene	4.280	225	108605	143.58	UG	98
38) Caprolactam	4.397	55	88766	175.40	UG	88
39) 2-Aminotoluene	3.675	106	406417	170.83	UG	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5896.D
Acq On : 29 Oct 2015 12:07
Operator : JC
Sample : ABN068-15,ICC0160BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 13:17:05 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 28 11:35:52 2015
Response via : Initial Calibration

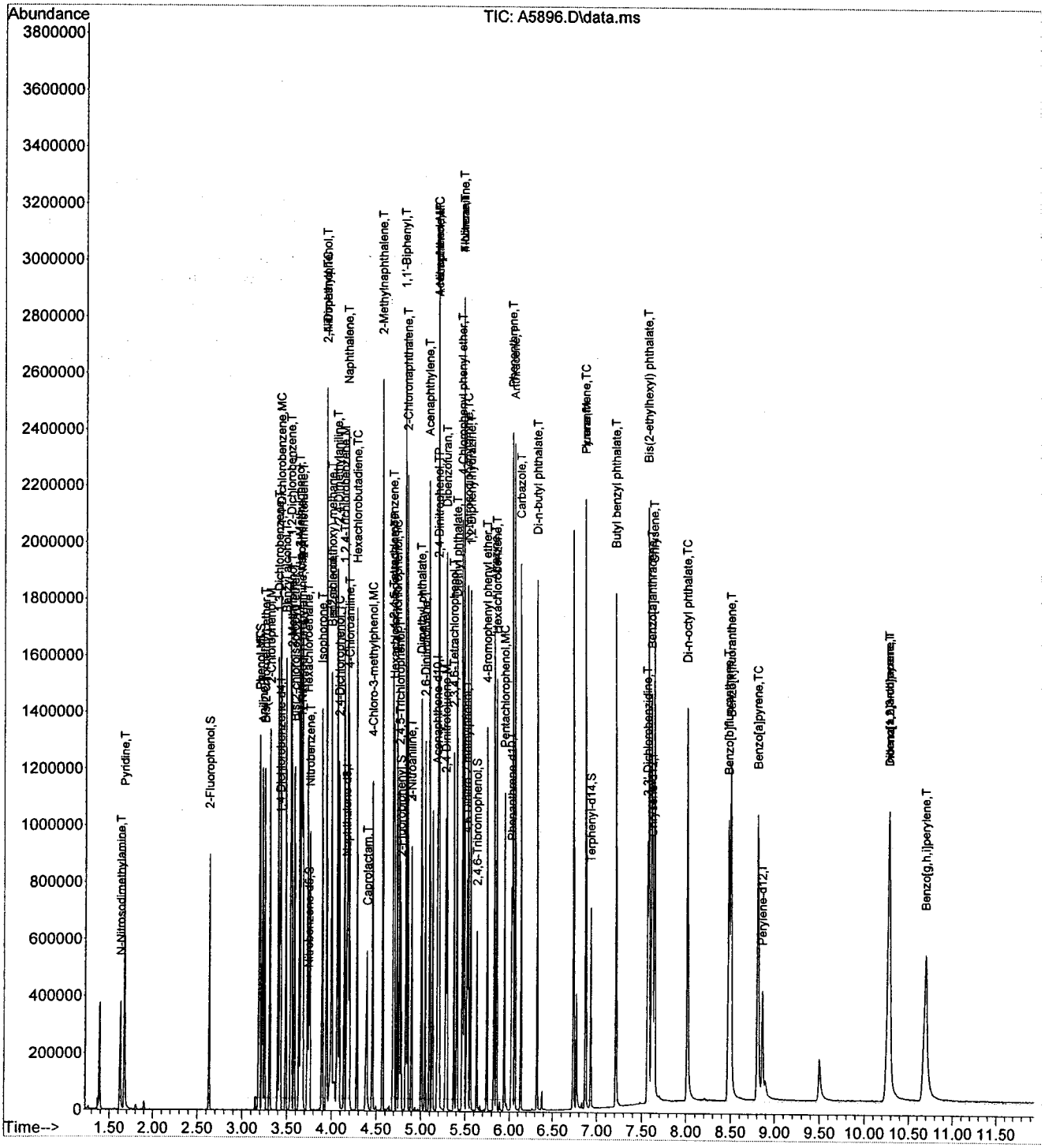
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) 4-Chloro-3-methylphenol	4.462	107	174454	172.27	UG	98
41) 2-Methylnaphthalene	4.574	142	393733	154.96	UG	100
44) Hexachlorocyclopentadiene	4.708	237	134931	184.92	UG	99
45) 2,4,6-Trichlorophenol	4.740	196	127424	191.07	UG	100
46) 2,4,5-Trichlorophenol	4.766	196	131048	183.46	UG	99
48) 1,1'-Biphenyl	4.836	154	493502	160.75	UG	99
49) 2-Chloronaphthalene	4.857	162	392805	174.51	UG	100
50) 2-Nitroaniline	4.900	65	104369	186.66	UG	98
51) Dimethyl phthalate	5.007	163	436577	168.43	UG	99
52) 2,6-Dinitrotoluene	5.050	165	93247	186.77	UG	100
53) Acenaphthylene	5.098	152	592797	168.52	UG	99
54) 3-Nitroaniline	4.900	138	127814	202.56	UG	96
55) Acenaphthene	5.205	153	370368	157.52	UG	94
56) 2,4-Dinitrophenol	5.194	184	40780m	246.51	UG	
57) 4-Nitrophenol	5.200	139	99109	199.55	UG	91
58) 2,4-Dinitrotoluene	5.280	165	121526m	187.68	UG	
59) Dibenzofuran	5.291	168	496537	160.13	UG	99
60) Diethyl phthalate	5.408	149	429733	163.34	UG	98
61) Fluorene	5.488	166	412696	160.71	UG	98
62) 4-Chlorophenyl phenyl ...	5.467	204	215894	157.26	UG	96
63) 4-Nitroaniline	5.488	138	113305	197.75	UG	95
64) 1,2,4,5-Tetrachloroben...	4.697	216	189318	165.47	UG	100
65) 2,3,4,6-Tetrachlorophenol	5.371	232	99563	194.87	UG	81
67) 4,6-Dinitro-2-methylph...	5.521	198	63912m	202.47	UG	
68) N-Nitrosodiphenylamine	5.531	169	315390	172.41	UG	97
69) 1,2-Diphenylhydrazine	5.563	77	434142	174.79	UG	97
71) 4-Bromophenyl phenyl e...	5.751	248	128694	158.80	UG	96
72) Hexachlorobenzene	5.857	284	138668	145.52	UG	95
73) Atrazine	5.831	200	117702	169.39	UG	96
74) Pentachlorophenol	5.943	266	90080	212.28	UG	99
75) Phenanthrene	6.039	178	560728m	159.67	UG	
76) Anthracene	6.066	178	580027	164.26	UG	100
77) Carbazole	6.136	167	545075	170.10	UG	99
78) Di-n-butyl phthalate	6.328	149	718561	172.78	UG	99
79) Fluoranthene	6.874	202	593499	164.02	UG	93
83) Pyrene	6.874	202	595442	169.79	UG	98
86) Butyl benzyl phthalate	7.216	149	287662	192.59	UG	98
87) 3,3'-Dichlorobenzidine	7.564	252	153701	159.35	UG	96
88) Benzo[a]anthracene	7.617	228	508790	167.67	UG	99
89) Chrysene	7.644	228	509221	176.51	UG	99
90) Bis(2-ethylhexyl) phth...	7.580	149	392678	202.12	UG	98
93) Di-n-octyl phthalate	8.018	149	636771	195.49	UG	100
94) Benzo[b]fluoranthene	8.484	252	525180	181.54	UG	99
95) Benzo[k]fluoranthene	8.510	252	513240	151.04	UG	97
96) Benzo[a]pyrene	8.815	252	505290	189.69	UG	98
97) Indeno[1,2,3-cd]pyrene	10.286	276	603582	200.08	UG	92
98) Dibenz[a,h]anthracene	10.286	278	480982	201.66	UG	96
99) Benzo[g,h,i]perylene	10.703	276	520601m	185.65	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5896.D
Acq On : 29 Oct 2015 12:07
Operator : JC
Sample : ABN068-15,ICC0160BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 13:17:05 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 28 11:35:52 2015
Response via : Initial Calibration



E15-10258 0455

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5897.D
Acq On : 29 Oct 2015 12:34
Operator : JC
Sample : ABN063-15,ICC001BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 29 12:45:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:07:02 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	62204	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	266811	40.00	UG	0.00
43) Acenaphthene-d10	5.184	164	153810	40.00	UG	0.00
66) Phenanthrene-d10	6.029	188	250924	40.00	UG	0.00
82) Chrysene-d12	7.649	240	194781	40.00	UG	0.02
92) Perylene-d12	8.896	264	168071	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	2.632	112	148325	108.01	UG	0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 108.01%#			
6) Phenol-d5	3.183	99	180434	105.41	UG	0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 105.41%#			
24) Nitrobenzene-d5	3.740	82	80045	47.33	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 94.66%#			
47) 2-Fluorobiphenyl	4.777	172	183884	53.75	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 107.50%#			
70) 2,4,6-Tribromophenol	5.633	330	48201	85.32	UG	0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 85.32%			
84) Terphenyl-d14	6.954	244	210859	55.03	UG	0.02
Spiked Amount 50.000	Range 33 - 113		Recovery = 110.06%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.638	74	681	0.75	UG #	76
3) Pyridine	1.702	52	1127	1.00	UG	86
7) Phenol	3.189	94	2520	1.36	UG #	1
8) Aniline	3.221	66	872	1.06	UG	91
9) Bis(2-chloroethyl) ether	3.247	63	1319	1.23	UG	87
10) 2-Chlorophenol	3.306	128	1874	1.30	UG	94
11) 1,3-Dichlorobenzene	3.397	146	2074	1.21	UG #	91
12) 1,4-Dichlorobenzene	3.424	146	1863	1.14	UG #	36
13) Benzyl alcohol	3.483	108	1183	1.27	UG	88
14) 1,2-Dichlorobenzene	3.536	146	1792	1.14	UG	94
15) 2-Methylphenol	3.547	108	1584	1.30	UG	94
16) Bis(2-chloroisopropyl)...	3.579	45	3059	1.37	UG	98
17) 4-Methylphenol	3.627	108	1617	1.21	UG	96
18) N-Nitrosodi-n-propylamine	3.649	70	1397	1.22	UG	85
19) Acetophenone	3.649	105	2513	1.26	UG	75
20) 3-Methylphenol	3.627	108	1617	1.21	UG	96
21) Hexachloroethane	3.729	117	661	1.10	UG	78
25) Nitrobenzene	3.750	77	2258	1.31	UG	88
26) Isophorone	3.889	82	3351	1.06	UG	97
27) 2-Nitrophenol	3.943	139	874	1.20	UG	91
28) 2,4-Dimethylphenol	3.943	107	1775	1.18	UG	85
29) Bis(2-chloroethoxy) me...	3.996	93	2047	1.13	UG	95
30) Benzoic acid	3.953	122	672m	1.01	UG	
31) 2,4-Dimethylaniline	4.055	121	1984	1.05	UG	99
32) 2,4-Dichlorophenol	4.076	162	1413	1.15	UG	92
33) 1,2,4-Trichlorobenzene	4.141	180	1470	1.00	UG	96
34) Naphthalene	4.178	128	5312	1.16	UG #	72
35) 4-Chloroaniline	4.194	127	2763	1.17	UG	95
36) 4-Aminotoluene	3.670	106	2985	1.04	UG	94
37) Hexachlorobutadiene	4.280	225	908	1.04	UG	94
38) Caprolactam	4.355	55	731m	1.18	UG	
39) 2-Aminotoluene	3.670	106	2985	1.04	UG	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5897.D
Acq On : 29 Oct 2015 12:34
Operator : JC
Sample : ABN063-15,ICC001BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 29 12:45:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:07:02 2015
Response via : Initial Calibration

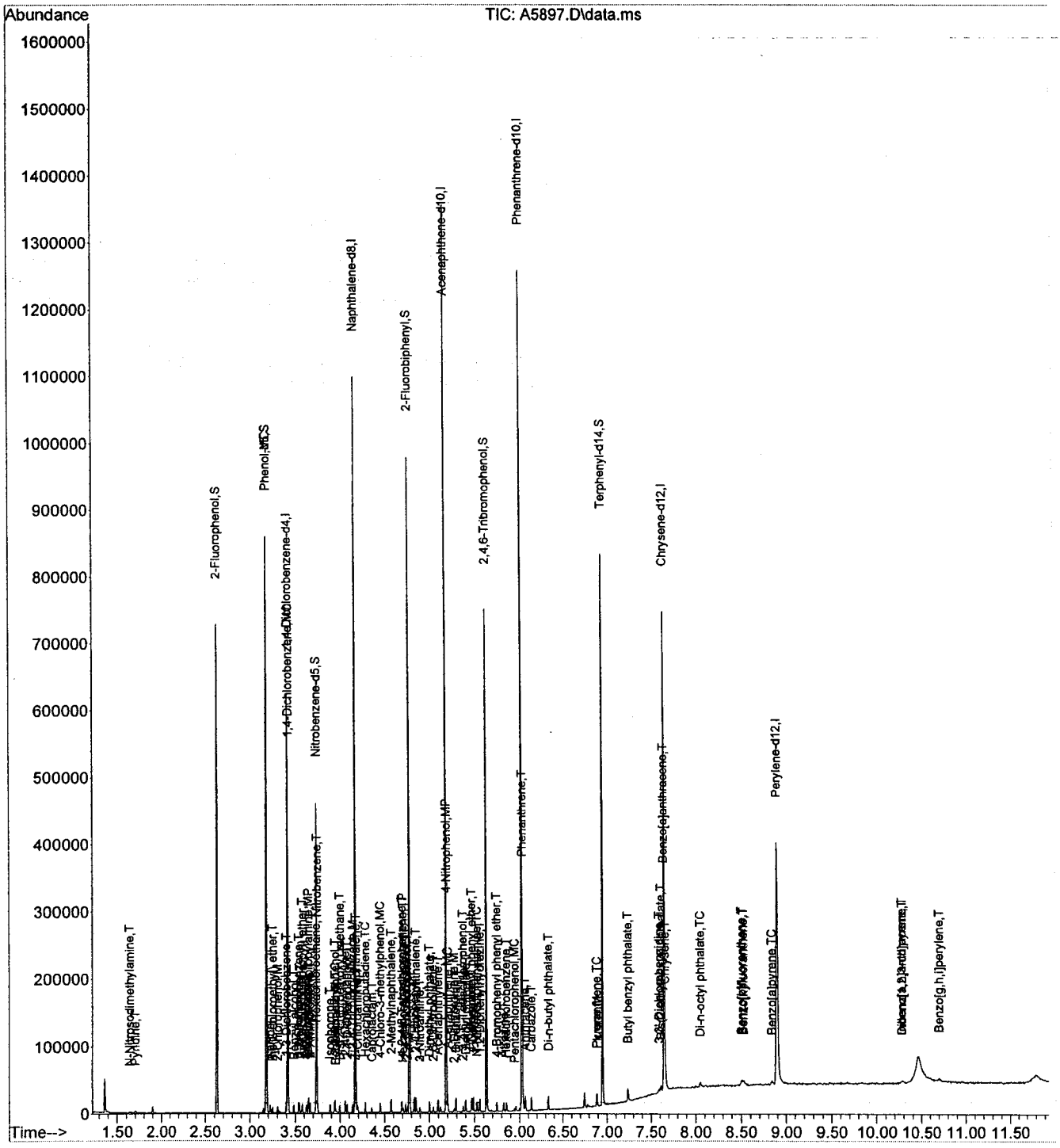
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
40) 4-Chloro-3-methylphenol	4.451	107	1598	1.30	UG		85
41) 2-Methylnaphthalene	4.574	142	3195	1.06	UG		98
44) Hexachlorocyclopentadiene	4.708	237	767	0.87	UG		95
45) 2,4,6-Trichlorophenol	4.734	196	933	1.17	UG		97
46) 2,4,5-Trichlorophenol	4.756	196	901	1.05	UG		92
48) 1,1'-Biphenyl	4.836	154	4894	1.33	UG		100
49) 2-Chloronaphthalene	4.852	162	3170	1.16	UG		96
50) 2-Nitroaniline	4.895	65	741	1.08	UG		86
51) Dimethyl phthalate	5.002	163	3770	1.20	UG		99
52) 2,6-Dinitrotoluene	5.045	165	560	0.92	UG		91
53) Acenaphthylene	5.098	152	5085	1.20	UG		96
54) 3-Nitroaniline	4.895	138	755	0.98	UG		93
55) Acenaphthene	5.200	153	3527	1.26	UG		91
57) 4-Nitrophenol	5.194	139	679m	1.09	UG		
58) 2,4-Dinitrotoluene	5.275	165	527m	0.66	UG		
59) Dibenzofuran	5.291	168	4575	1.24	UG		91
60) Diethyl phthalate	5.403	149	3592	1.13	UG		97
61) Fluorene	5.489	166	3404	1.11	UG		97
62) 4-Chlorophenyl phenyl ...	5.467	204	1759	1.10	UG		87
63) 4-Nitroaniline	5.472	138	650	0.91	UG		84
64) 1,2,4,5-Tetrachloroben...	4.692	216	1558	1.15	UG		96
65) 2,3,4,6-Tetrachlorophenol	5.371	232	612	0.96	UG		78
68) N-Nitrosodiphenylamine	5.531	169	2549	1.17	UG		95
69) 1,2-Diphenylhydrazine	5.558	77	3461	1.12	UG		96
71) 4-Bromophenyl phenyl e...	5.751	248	987	1.03	UG		94
72) Hexachlorobenzene	5.858	284	1113	1.01	UG		81
73) Atrazine	5.825	200	967	1.15	UG		94
74) Pentachlorophenol	5.943	266	418	0.81	UG		84
75) Phenanthrene	6.039	178	5407	1.30	UG		97
76) Anthracene	6.066	178	4852	1.16	UG		100
77) Carbazole	6.136	167	4724	1.21	UG		96
78) Di-n-butyl phthalate	6.334	149	5991	1.18	UG		99
79) Fluoranthene	6.885	202	4970	1.15	UG		93
83) Pyrene	6.885	202	4970	1.15	UG		97
86) Butyl benzyl phthalate	7.238	149	2236	1.19	UG		81
87) 3,3'-Dichlorobenzidine	7.591	252	1387	1.16	UG	#	25
88) Benzo[a]anthracene	7.639	228	4557	1.21	UG		98
89) Chrysene	7.665	228	4841	1.34	UG		95
90) Bis(2-ethylhexyl) phth...	7.612	149	3175	1.30	UG		92
93) Di-n-octyl phthalate	8.051	149	4024	1.19	UG		92
94) Benzo[b]fluoranthene	8.505	252	3188m	1.06	UG		
95) Benzo[k]fluoranthene	8.527	252	4137	1.21	UG		89
96) Benzo[a]pyrene	8.837	252	3319	1.21	UG	#	72
97) Indeno[1,2,3-cd]pyrene	10.281	276	2802	0.89	UG		98
98) Dibenz[a,h]anthracene	10.286	278	2132	0.87	UG		78
99) Benzo[g,h,i]perylene	10.703	276	2833	0.97	UG		82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5897.D
Acq On : 29 Oct 2015 12:34
Operator : JC
Sample : ABN063-15,ICC001BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 29 12:45:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:07:02 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5898.D
Acq On : 29 Oct 2015 12:50
Operator : JC
Sample : ABN064-15,ICC010BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 29 13:19:02 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:09:18 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	62438	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	260286	40.00	UG	0.00
43) Acenaphthene-d10	5.178	164	144688m	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	243461	40.00	UG	0.00
82) Chrysene-d12	7.617	240	184803	40.00	UG	-0.03
92) Perylene-d12	8.853	264	161030	40.00	UG	-0.04
System Monitoring Compounds						
4) 2-Fluorophenol	2.632	112	143814	102.42	UG	0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 102.42%#			
6) Phenol-d5	3.183	99	174041	100.51	UG	0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 100.51%#			
24) Nitrobenzene-d5	3.739	82	72199	43.92	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 87.84%			
47) 2-Fluorobiphenyl	4.777	172	168392	52.33	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 104.66%#			
70) 2,4,6-Tribromophenol	5.627	330	48039	89.04	UG	0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 89.04%			
84) Terphenyl-d14	6.933	244	185312	49.61	UG	-0.02
Spiked Amount 50.000	Range 33 - 113		Recovery = 99.22%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.616	74	9450	10.92	UG	98
3) Pyridine	1.675	52	12040	11.01	UG	93
7) Phenol	3.188	94	18230	9.41	UG	74
8) Aniline	3.226	66	8812	10.52	UG	93
9) Bis(2-chloroethyl) ether	3.247	63	11693	10.77	UG	86
10) 2-Chlorophenol	3.306	128	14632	9.88	UG	96
11) 1,3-Dichlorobenzene	3.397	146	17329	9.83	UG	99
12) 1,4-Dichlorobenzene	3.424	146	16200	9.83	UG	96
13) Benzyl alcohol	3.483	108	9890	10.45	UG	95
14) 1,2-Dichlorobenzene	3.536	146	16244	10.12	UG	100
15) 2-Methylphenol	3.547	108	12795	9.97	UG	95
16) Bis(2-chloroisopropyl)...	3.579	45	23984	10.34	UG	96
17) 4-Methylphenol	3.627	108	13626	9.90	UG	95
18) N-Nitrosodi-n-propylamine	3.654	70	11271	9.88	UG	92
19) Acetophenone	3.648	105	20104	9.94	UG	77
20) 3-Methylphenol	3.627	108	13626	9.90	UG	95
21) Hexachloroethane	3.729	117	5970	9.97	UG	87
25) Nitrobenzene	3.750	77	15878	9.31	UG	100
26) Isophorone	3.889	82	29776	9.79	UG	97
27) 2-Nitrophenol	3.943	139	7056	9.38	UG	95
28) 2,4-Dimethylphenol	3.943	107	14099	9.31	UG	97
29) Bis(2-chloroethoxy) me...	3.996	93	17533	9.69	UG	97
30) Benzoic acid	3.959	122	6711m	10.29	UG	
31) 2,4-Dimethylaniline	4.055	121	17693	9.44	UG	99
32) 2,4-Dichlorophenol	4.076	162	11898	9.59	UG	99
33) 1,2,4-Trichlorobenzene	4.141	180	13877	9.79	UG	97
34) Naphthalene	4.178	128	43085	9.52	UG #	72
35) 4-Chloroaniline	4.189	127	21904	9.26	UG	95
36) 4-Aminotoluene	3.670	106	29072	10.14	UG	93
37) Hexachlorobutadiene	4.280	225	7404	8.76	UG	99
38) Caprolactam	4.354	55	6302	8.23	UG	84
39) 2-Aminotoluene	3.670	106	29072	10.14	UG	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5898.D
Acq On : 29 Oct 2015 12:50
Operator : JC
Sample : ABN064-15,ICC010BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 29 13:19:02 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:09:18 2015
Response via : Initial Calibration

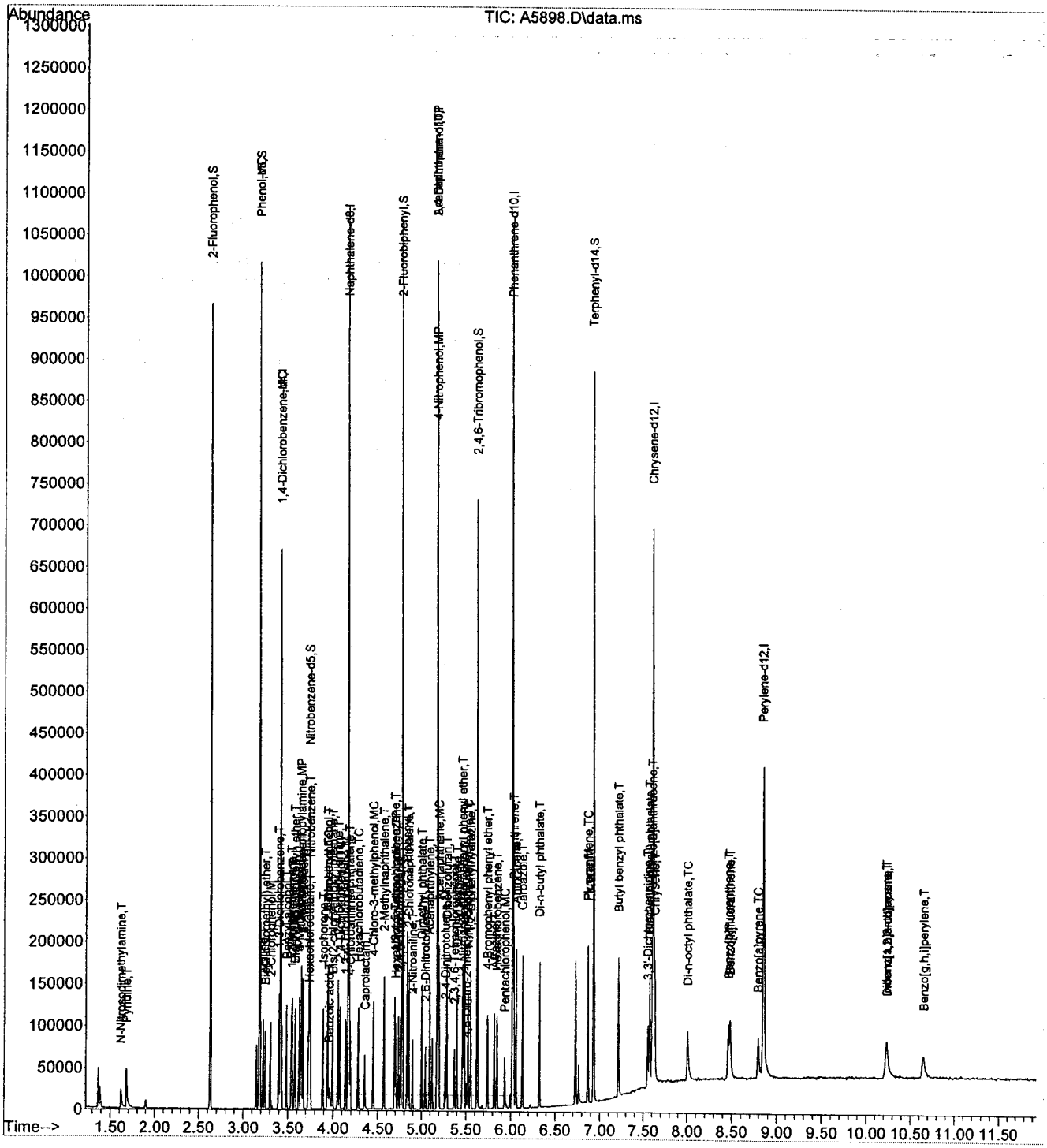
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
40) 4-Chloro-3-methylphenol	4.451	107	11917	9.36 UG	96
41) 2-Methylnaphthalene	4.568	142	29124	9.96 UG	99
44) Hexachlorocyclopentadiene	4.702	237	7348	8.81 UG	99
45) 2,4,6-Trichlorophenol	4.734	196	8299	10.63 UG	99
46) 2,4,5-Trichlorophenol	4.756	196	8699	10.57 UG	99
48) 1,1'-Biphenyl	4.830	154	35727	10.11 UG	100
49) 2-Chloronaphthalene	4.852	162	27659	10.66 UG	98
50) 2-Nitroaniline	4.895	65	6580	10.08 UG	94
51) Dimethyl phthalate	5.002	163	30360	10.19 UG	99
52) 2,6-Dinitrotoluene	5.044	165	5104	8.71 UG	89
53) Acenaphthylene	5.093	152	40750	10.01 UG	98
54) 3-Nitroaniline	4.895	138	7276	9.69 UG	93
55) Acenaphthene	5.200	153	26352	9.77 UG	98
56) 2,4-Dinitrophenol	5.183	184	1946m	8.13 UG	
57) 4-Nitrophenol	5.189	139	5193	8.36 UG	85
58) 2,4-Dinitrotoluene	5.269	165	6666	9.00 UG	81
59) Dibenzofuran	5.285	168	36943	10.50 UG	97
60) Diethyl phthalate	5.397	149	28991	9.97 UG	98
61) Fluorene	5.483	166	28915	10.02 UG	97
62) 4-Chlorophenyl phenyl ...	5.462	204	15313	10.27 UG	93
63) 4-Nitroaniline	5.472	138	6892	10.06 UG	98
64) 1,2,4,5-Tetrachloroben...	4.691	216	12833	9.86 UG	96
65) 2,3,4,6-Tetrachlorophenol	5.371	232	6117	10.09 UG	81
67) 4,6-Dinitro-2-methylph...	5.504	198	3193m	7.79 UG	
68) N-Nitrosodiphenylamine	5.526	169	22619	10.54 UG	98
69) 1,2-Diphenylhydrazine	5.553	77	31684	10.67 UG	95
71) 4-Bromophenyl phenyl e...	5.745	248	8729	9.63 UG	95
72) Hexachlorobenzene	5.852	284	9766	9.28 UG	91
73) Atrazine	5.820	200	7682	9.30 UG	96
74) Pentachlorophenol	5.938	266	4833	9.41 UG	99
75) Phenanthrene	6.034	178	42207	10.18 UG	99
76) Anthracene	6.061	178	40705	9.88 UG	99
77) Carbazole	6.130	167	39567	10.26 UG	99
78) Di-n-butyl phthalate	6.323	149	48361	9.96 UG	100
79) Fluoranthene	6.868	202	42247	9.99 UG	90
83) Pyrene	6.868	202	42247	10.00 UG	95
86) Butyl benzyl phthalate	7.211	149	19857	10.75 UG	96
87) 3,3'-Dichlorobenzidine	7.553	252	12457	10.53 UG	91
88) Benzo[a]anthracene	7.601	228	34634	9.46 UG	98
89) Chrysene	7.633	228	36420	10.18 UG	99
90) Bis(2-ethylhexyl) phth...	7.574	149	25810	10.42 UG	98
93) Di-n-octyl phthalate	8.008	149	36518	10.96 UG	99
94) Benzo[b]fluoranthene	8.468	252	29255	9.89 UG	97
95) Benzo[k]fluoranthene	8.484	252	28705	8.80 UG	95
96) Benzo[a]pyrene	8.794	252	26505	9.59 UG	96
97) Indeno[1,2,3-cd]pyrene	10.238	276	26301	8.71 UG	93
98) Dibenz[a,h]anthracene	10.238	278	21579	8.96 UG	93
99) Benzo[g,h,i]perylene	10.655	276	25131	9.19 UG	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5898.D
Acq On : 29 Oct 2015 12:50
Operator : JC
Sample : ABN064-15,ICC010BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 29 13:19:02 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:09:18 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5899.D
Acq On : 29 Oct 2015 13:06
Operator : JC
Sample : ABN065-15,ICC020BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 29 12:41:47 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:14:35 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.419	152	63912	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	257802	40.00	UG		0.00
43) Acenaphthene-d10	5.184	164	145736	40.00	UG		0.00
66) Phenanthrene-d10	6.023	188	238714	40.00	UG		0.00
82) Chrysene-d12	7.612	240	184534	40.00	UG		0.00
92) Perylene-d12	8.847	264	160008	40.00	UG		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	2.632	112	145360	99.76	UG		0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 99.76%#				
6) Phenol-d5	3.183	99	175082	98.16	UG		0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 98.16%#				
24) Nitrobenzene-d5	3.745	82	76611	47.07	UG		0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 94.14%#				
47) 2-Fluorobiphenyl	4.777	172	164933	50.67	UG		0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 101.34%				
70) 2,4,6-Tribromophenol	5.628	330	48963	93.70	UG		0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 93.70%				
84) Terphenyl-d14	6.933	244	184916	49.41	UG		0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 98.82%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.616	74	18710	20.71	UG		100
3) Pyridine	1.675	52	23348	20.21	UG		94
7) Phenol	3.189	94	38510	19.22	UG		99
8) Aniline	3.226	66	17863	20.49	UG		95
9) Bis(2-chloroethyl) ether	3.247	63	22620	19.86	UG		95
10) 2-Chlorophenol	3.306	128	31140	20.05	UG		98
11) 1,3-Dichlorobenzene	3.397	146	35278	19.32	UG		100
12) 1,4-Dichlorobenzene	3.429	146	33189	19.50	UG		99
13) Benzyl alcohol	3.483	108	19997	20.07	UG		99
14) 1,2-Dichlorobenzene	3.542	146	32746	19.67	UG		99
15) 2-Methylphenol	3.547	108	26603	19.96	UG		98
16) Bis(2-chloroisopropyl)...	3.579	45	49557	20.41	UG		95
17) 4-Methylphenol	3.627	108	28634	20.13	UG		99
18) N-Nitrosodi-n-propylamine	3.654	70	23711	20.05	UG		92
19) Acetophenone	3.649	105	41835	20.01	UG		78
20) 3-Methylphenol	3.627	108	28634	20.12	UG		99
21) Hexachloroethane	3.729	117	12208	19.72	UG		88
25) Nitrobenzene	3.750	77	31902	18.76	UG		97
26) Isophorone	3.889	82	62019	20.44	UG		98
27) 2-Nitrophenol	3.943	139	15498	20.58	UG		97
28) 2,4-Dimethylphenol	3.943	107	29028	19.20	UG		96
29) Bis(2-chloroethoxy) me...	3.996	93	36248	20.15	UG		97
30) Benzoic acid	3.969	122	13898	20.60	UG	#	60
31) 2,4-Dimethylaniline	4.060	121	36566	19.57	UG		100
32) 2,4-Dichlorophenol	4.076	162	24040	19.31	UG		99
33) 1,2,4-Trichlorobenzene	4.141	180	28112	19.86	UG		98
34) Naphthalene	4.178	128	89982	20.00	UG	#	73
35) 4-Chloroaniline	4.194	127	45863	19.49	UG		97
36) 4-Aminotoluene	3.670	106	59676	20.51	UG		94
37) Hexachlorobutadiene	4.280	225	15612	18.81	UG		97
38) Caprolactam	4.360	55	13149	16.90	UG		85
39) 2-Aminotoluene	3.670	106	59676	20.51	UG		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5899.D
Acq On : 29 Oct 2015 13:06
Operator : JC
Sample : ABN065-15,ICC020BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 29 12:41:47 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:14:35 2015
Response via : Initial Calibration

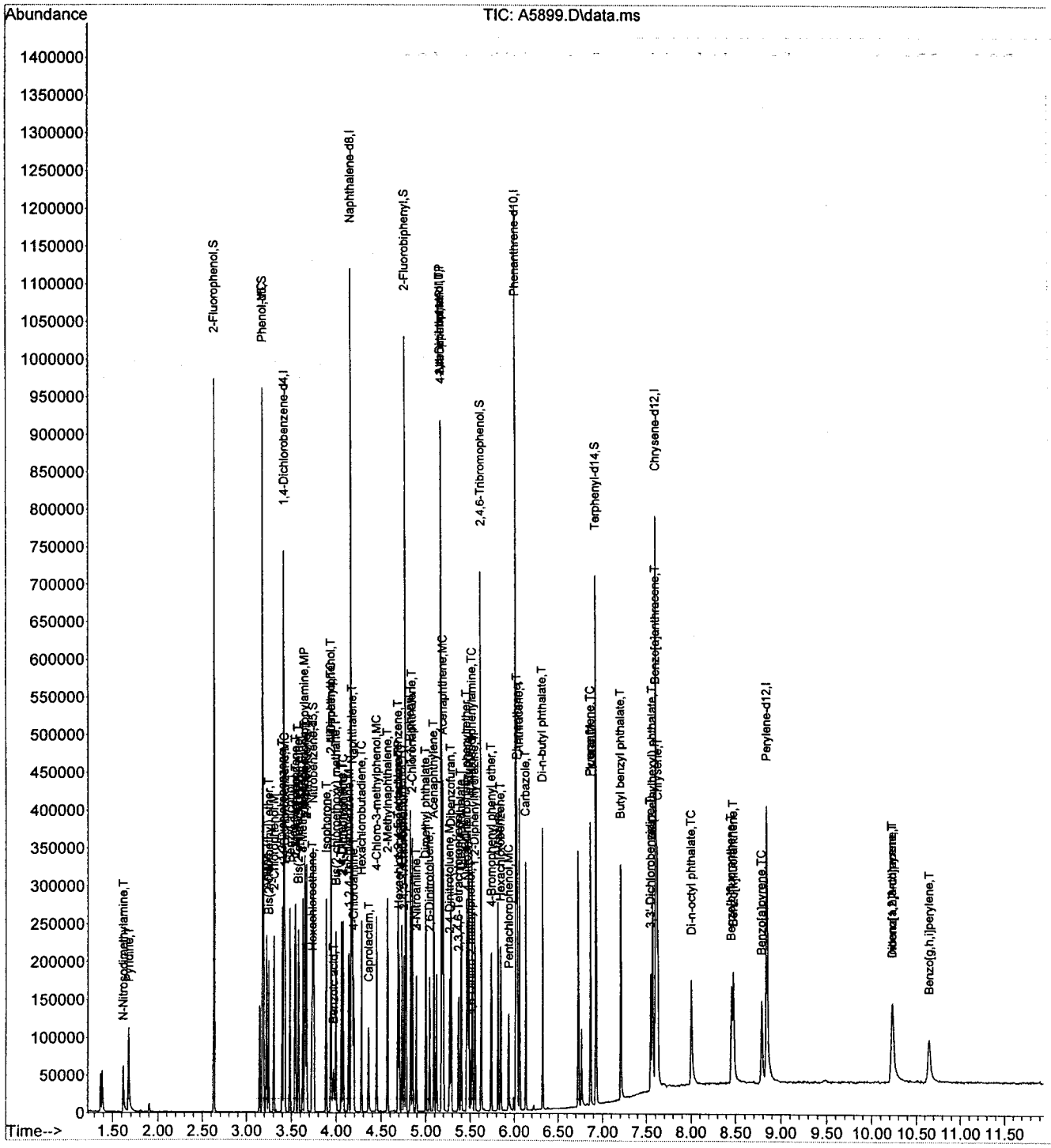
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) 4-Chloro-3-methylphenol	4.451	107	24547	19.20	UG	98
41) 2-Methylnaphthalene	4.574	142	57068	19.48	UG	99
44) Hexachlorocyclopentadiene	4.702	237	15716	19.86	UG	99
45) 2,4,6-Trichlorophenol	4.734	196	17686	21.72	UG	97
46) 2,4,5-Trichlorophenol	4.756	196	18228	21.38	UG	99
48) 1,1'-Biphenyl	4.831	154	72596	20.08	UG	100
49) 2-Chloronaphthalene	4.852	162	55267	20.62	UG	98
50) 2-Nitroaniline	4.895	65	14441	21.34	UG	92
51) Dimethyl phthalate	5.002	163	62633	20.50	UG	99
52) 2,6-Dinitrotoluene	5.045	165	11801	21.11	UG	97
53) Acenaphthylene	5.093	152	86139	20.77	UG	99
54) 3-Nitroaniline	4.895	138	16036	21.22	UG	99
55) Acenaphthene	5.200	153	54587	19.92	UG	96
56) 2,4-Dinitrophenol	5.184	184	4093	16.48	UG	72
57) 4-Nitrophenol	5.189	139	11988	19.91	UG	96
58) 2,4-Dinitrotoluene	5.269	165	14850	20.68	UG	80
59) Dibenzofuran	5.285	168	74271	20.58	UG	98
60) Diethyl phthalate	5.398	149	61281	20.75	UG	98
61) Fluorene	5.483	166	59950	20.44	UG	99
62) 4-Chlorophenyl phenyl ...	5.462	204	31756	20.89	UG	94
63) 4-Nitroaniline	5.472	138	14900	21.11	UG	98
64) 1,2,4,5-Tetrachloroben...	4.692	216	26786	20.29	UG	99
65) 2,3,4,6-Tetrachlorophenol	5.371	232	13280	21.21	UG	83
67) 4,6-Dinitro-2-methylph...	5.510	198	6691	17.40	UG	92
68) N-Nitrosodiphenylamine	5.526	169	46191	21.15	UG	97
69) 1,2-Diphenylhydrazine	5.553	77	66119	22.05	UG	95
71) 4-Bromophenyl phenyl e...	5.745	248	18244	20.10	UG	94
72) Hexachlorobenzene	5.852	284	19616	18.81	UG	92
73) Atrazine	5.820	200	17258	20.77	UG	94
74) Pentachlorophenol	5.938	266	11255	22.77	UG	98
75) Phenanthrene	6.034	178	84610	20.25	UG	99
76) Anthracene	6.061	178	85080	20.51	UG	100
77) Carbazole	6.130	167	79446	20.36	UG	98
78) Di-n-butyl phthalate	6.323	149	103197	20.87	UG	100
79) Fluoranthene	6.868	202	88973	20.81	UG	91
83) Pyrene	6.868	202	88973	20.70	UG	96
86) Butyl benzyl phthalate	7.211	149	41546	21.42	UG	98
87) 3,3'-Dichlorobenzidine	7.548	252	26346	21.55	UG	93
88) Benzo[a]anthracene	7.601	228	74972	20.38	UG	99
89) Chrysene	7.628	228	73164	20.03	UG	99
90) Bis(2-ethylhexyl) phth...	7.569	149	54596	21.04	UG	98
93) Di-n-octyl phthalate	8.002	149	79585	22.60	UG	100
94) Benzo[b]fluoranthene	8.457	252	53905	18.39	UG	98
95) Benzo[k]fluoranthene	8.478	252	68662	21.11	UG	98
96) Benzo[a]pyrene	8.789	252	54549	19.40	UG	93
97) Indeno[1,2,3-cd]pyrene	10.233	276	62033	20.58	UG	92
98) Dibenz[a,h]anthracene	10.233	278	47625	19.83	UG	96
99) Benzo[g,h,i]perylene	10.650	276	56010	20.59	UG	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5899.D
Acq On : 29 Oct 2015 13:06
Operator : JC
Sample : ABN065-15,ICC020BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 29 12:41:47 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:14:35 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5900.D
Acq On : 29 Oct 2015 13:22
Operator : JC
Sample : ABN066-15,ICC040BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 29 12:43:26 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:40:55 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	59139	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	242279	40.00	UG		0.00
43) Acenaphthene-d10	5.184	164	138240	40.00	UG		0.00
66) Phenanthrene-d10	6.023	188	229551	40.00	UG		0.00
82) Chrysene-d12	7.612	240	169839	40.00	UG		0.00
92) Perylene-d12	8.853	264	156067	40.00	UG		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	2.632	112	139091	102.38	UG		0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 102.38%#				
6) Phenol-d5	3.183	99	167465	101.00	UG		0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 101.00%#				
24) Nitrobenzene-d5	3.745	82	74715	48.74	UG		0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 97.48%#				
47) 2-Fluorobiphenyl	4.777	172	159932	51.26	UG		0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 102.52%#				
70) 2,4,6-Tribromophenol	5.627	330	44629	90.89	UG		0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 90.89%				
84) Terphenyl-d14	6.927	244	170316	49.91	UG		0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 99.82%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.616	74	38084	45.22	UG		98
3) Pyridine	1.669	52	44497	41.30	UG		96
7) Phenol	3.188	94	72717	38.97	UG		89
8) Aniline	3.226	66	34362	42.12	UG		98
9) Bis(2-chloroethyl) ether	3.247	63	42986	40.29	UG		92
10) 2-Chlorophenol	3.306	128	58746	40.09	UG		96
11) 1,3-Dichlorobenzene	3.397	146	68030	40.20	UG		98
12) 1,4-Dichlorobenzene	3.429	146	64077	40.36	UG		96
13) Benzyl alcohol	3.483	108	37716	40.02	UG		99
14) 1,2-Dichlorobenzene	3.541	146	61091	39.39	UG		98
15) 2-Methylphenol	3.547	108	49574	39.64	UG		99
16) Bis(2-chloroisopropyl)...	3.579	45	93237	40.87	UG		95
17) 4-Methylphenol	3.627	108	53778	40.20	UG		100
18) N-Nitrosodi-n-propylamine	3.654	70	43953	39.91	UG		93
19) Acetophenone	3.648	105	77580	39.67	UG		77
20) 3-Methylphenol	3.627	108	53778	40.19	UG		100
21) Hexachloroethane	3.729	117	23082	40.08	UG		88
25) Nitrobenzene	3.755	77	59676	37.29	UG		98
26) Isophorone	3.889	82	114029	39.74	UG		99
27) 2-Nitrophenol	3.943	139	30341	41.43	UG		99
28) 2,4-Dimethylphenol	3.943	107	54896	38.59	UG		95
29) Bis(2-chloroethoxy) me...	3.996	93	67121	39.40	UG		99
30) Benzoic acid	3.980	122	29002m	45.06	UG		
31) 2,4-Dimethylaniline	4.060	121	71519	40.64	UG		99
32) 2,4-Dichlorophenol	4.076	162	46017	39.20	UG		97
33) 1,2,4-Trichlorobenzene	4.141	180	51883	38.89	UG		98
34) Naphthalene	4.178	128	164387	38.54	UG	#	73
35) 4-Chloroaniline	4.194	127	88538	39.80	UG		94
36) 4-Aminotoluene	3.670	106	107451	38.83	UG		96
37) Hexachlorobutadiene	4.280	225	29002	37.57	UG		99
38) Caprolactam	4.365	55	24981	33.55	UG		85
39) 2-Aminotoluene	3.670	106	107451	38.83	UG		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5900.D
Acq On : 29 Oct 2015 13:22
Operator : JC
Sample : ABN066-15,ICC040BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 29 12:43:26 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:40:55 2015
Response via : Initial Calibration

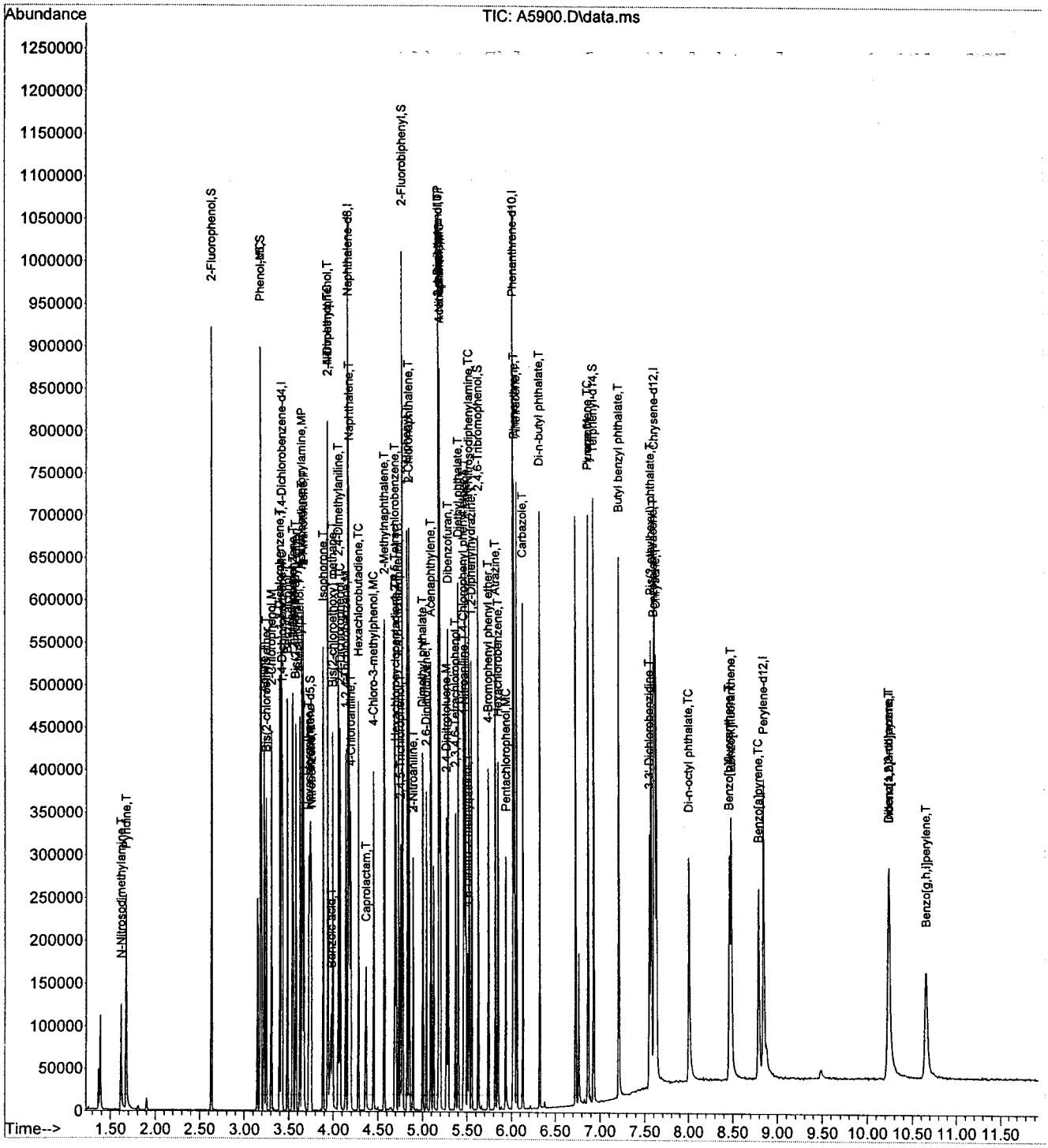
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) 4-Chloro-3-methylphenol	4.451	107	46912	38.64	UG	94
41) 2-Methylnaphthalene	4.574	142	109530	39.71	UG	99
44) Hexachlorocyclopentadiene	4.702	237	31307	40.66	UG	98
45) 2,4,6-Trichlorophenol	4.734	196	32813	40.72	UG	99
46) 2,4,5-Trichlorophenol	4.761	196	34667	41.39	UG	98
48) 1,1'-Biphenyl	4.830	154	135458	38.63	UG	100
49) 2-Chloronaphthalene	4.852	162	105876	40.52	UG	99
50) 2-Nitroaniline	4.895	65	27467	41.39	UG	95
51) Dimethyl phthalate	5.007	163	120618	40.45	UG	99
52) 2,6-Dinitrotoluene	5.044	165	23333	42.60	UG	96
53) Acenaphthylene	5.098	152	165434	40.97	UG	99
54) 3-Nitroaniline	4.895	138	31086	41.91	UG	98
55) Acenaphthene	5.200	153	102731	38.68	UG	95
56) 2,4-Dinitrophenol	5.189	184	10864	44.28	UG	95
57) 4-Nitrophenol	5.194	139	24150	41.26	UG	97
58) 2,4-Dinitrotoluene	5.269	165	30916	44.28	UG	76
59) Dibenzofuran	5.285	168	139976	39.88	UG	97
60) Diethyl phthalate	5.403	149	118989	41.25	UG	98
61) Fluorene	5.483	166	113400	39.69	UG	98
62) 4-Chlorophenyl phenyl ...	5.467	204	59151	39.98	UG	92
63) 4-Nitroaniline	5.472	138	28967	41.90	UG	95
64) 1,2,4,5-Tetrachloroben...	4.691	216	49813	38.98	UG	98
65) 2,3,4,6-Tetrachlorophenol	5.371	232	25732	42.05	UG	83
67) 4,6-Dinitro-2-methylph...	5.510	198	16096	43.50	UG	90
68) N-Nitrosodiphenylamine	5.526	169	87925	40.72	UG	96
69) 1,2-Diphenylhydrazine	5.553	77	120731	40.80	UG	97
71) 4-Bromophenyl phenyl e...	5.745	248	33809	38.24	UG	95
72) Hexachlorobenzene	5.852	284	37301	37.21	UG	93
73) Atrazine	5.820	200	31591	38.65	UG	96
74) Pentachlorophenol	5.938	266	22732	45.77	UG	98
75) Phenanthrene	6.034	178	159188	38.93	UG	98
76) Anthracene	6.061	178	159414	39.15	UG	100
77) Carbazole	6.130	167	153763	40.07	UG	99
78) Di-n-butyl phthalate	6.323	149	193849	39.59	UG	100
79) Fluoranthene	6.868	202	166495	39.48	UG	91
83) Pyrene	6.868	202	166495	41.23	UG	96
86) Butyl benzyl phthalate	7.211	149	78507	42.42	UG	97
87) 3,3'-Dichlorobenzidine	7.553	252	50611	43.82	UG	98
88) Benzo[a]anthracene	7.601	228	138932	40.38	UG	100
89) Chrysene	7.628	228	138974	40.52	UG	99
90) Bis(2-ethylhexyl) phth...	7.569	149	105021	42.37	UG	96
93) Di-n-octyl phthalate	8.002	149	155702	43.10	UG	99
94) Benzo[b]fluoranthene	8.462	252	113996	39.24	UG	98
95) Benzo[k]fluoranthene	8.484	252	124178	38.80	UG	98
96) Benzo[a]pyrene	8.794	252	116035	41.52	UG	98
97) Indeno[1,2,3-cd]pyrene	10.243	276	131347	43.23	UG	91
98) Dibenz[a,h]anthracene	10.243	278	108601	45.18	UG	96
99) Benzo[g,h,i]perylene	10.661	276	117647	42.95	UG	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5900.D
Acq On : 29 Oct 2015 13:22
Operator : JC
Sample : ABN066-15,ICC040BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 29 12:43:26 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:40:55 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5901.D
Acq On : 29 Oct 2015 13:38
Operator : JC
Sample : ABN067-15,ICC080BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 29 13:14:32 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:47:18 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	61059	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	238201	40.00	UG		0.00
43) Acenaphthene-d10	5.183	164	140150	40.00	UG		0.00
66) Phenanthrene-d10	6.023	188	225470	40.00	UG		0.00
82) Chrysene-d12	7.622	240	164851	40.00	UG		0.01
92) Perylene-d12	8.858	264	162019	40.00	UG		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	2.632	112	144153	101.34	UG		0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 101.34%#				
6) Phenol-d5	3.183	99	176144	101.82	UG		0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 101.82%#				
24) Nitrobenzene-d5	3.745	82	78204	52.13	UG		0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 104.26%#				
47) 2-Fluorobiphenyl	4.777	172	155023	48.45	UG		0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 96.90%				
70) 2,4,6-Tribromophenol	5.633	330	45637	97.73	UG		0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 97.73%				
84) Terphenyl-d14	6.932	244	165658	50.15	UG		0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 100.30%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.621	74	74455	83.56	UG		99
3) Pyridine	1.669	52	88138	77.94	UG		96
7) Phenol	3.194	94	152757	78.09	UG		83
8) Aniline	3.226	66	66864	78.26	UG		98
9) Bis(2-chloroethyl) ether	3.247	63	82792	74.03	UG		95
10) 2-Chlorophenol	3.306	128	114929	74.84	UG		96
11) 1,3-Dichlorobenzene	3.402	146	135175	76.50	UG		100
12) 1,4-Dichlorobenzene	3.429	146	129627	78.27	UG		97
13) Benzyl alcohol	3.488	108	79063	80.19	UG		96
14) 1,2-Dichlorobenzene	3.541	146	126124	78.47	UG		99
15) 2-Methylphenol	3.552	108	99616	76.38	UG		99
16) Bis(2-chloroisopropyl)...	3.579	45	177561	73.94	UG		95
17) 4-Methylphenol	3.632	108	107072	76.93	UG		99
18) N-Nitrosodi-n-propylamine	3.659	70	85701	74.62	UG		94
19) Acetophenone	3.654	105	155469	76.65	UG		74
20) 3-Methylphenol	3.632	108	107072	76.92	UG		99
21) Hexachloroethane	3.734	117	45853	76.88	UG		90
25) Nitrobenzene	3.755	77	117641	75.00	UG		100
26) Isophorone	3.889	82	223639	79.39	UG		100
27) 2-Nitrophenol	3.943	139	59750	81.10	UG		98
28) 2,4-Dimethylphenol	3.943	107	110006	78.89	UG		98
29) Bis(2-chloroethoxy) me...	3.996	93	131404	78.33	UG		99
30) Benzoic acid	3.991	122	46590m	73.34	UG		
31) 2,4-Dimethylaniline	4.060	121	140701	81.53	UG		99
32) 2,4-Dichlorophenol	4.082	162	93911	81.17	UG		98
33) 1,2,4-Trichlorobenzene	4.140	180	103522	79.12	UG		99
34) Naphthalene	4.178	128	323320	77.20	UG	#	70
35) 4-Chloroaniline	4.194	127	176548	80.40	UG		84
36) 4-Aminotoluene	3.675	106	229280	85.13	UG		94
37) Hexachlorobutadiene	4.280	225	58547	77.96	UG		98
38) Caprolactam	4.381	55	47214	77.93	UG		90
39) 2-Aminotoluene	3.675	106	229280	85.13	UG		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5901.D
Acq On : 29 Oct 2015 13:38
Operator : JC
Sample : ABN067-15,ICC080BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 29 13:14:32 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:47:18 2015
Response via : Initial Calibration

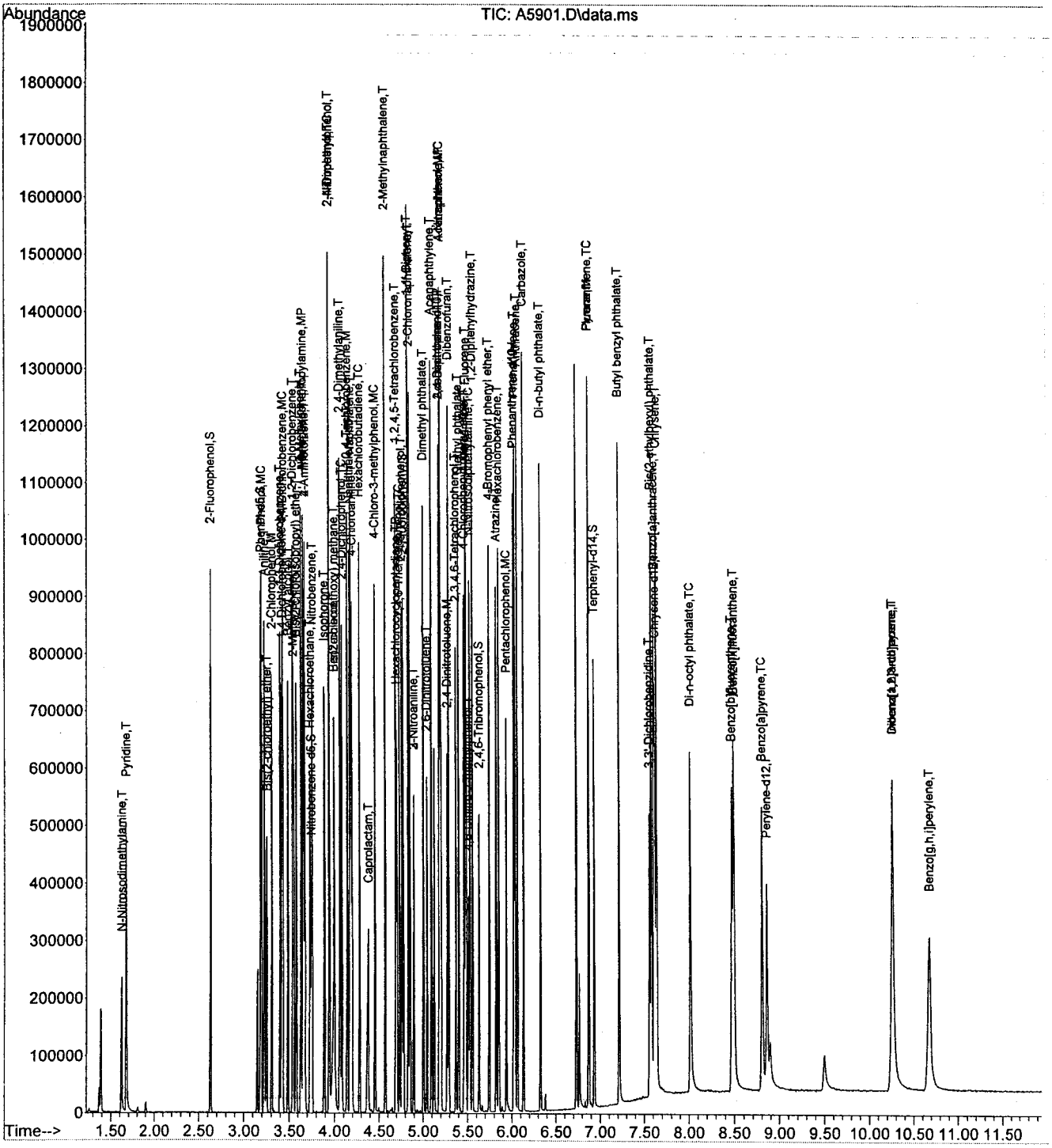
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
40) 4-Chloro-3-methylphenol	4.456	107	95472	79.94 UG	95
41) 2-Methylnaphthalene	4.574	142	222546	82.01 UG	99
44) Hexachlorocyclopentadiene	4.707	237	67819	85.33 UG	99
45) 2,4,6-Trichlorophenol	4.734	196	65373	78.41 UG	99
46) 2,4,5-Trichlorophenol	4.761	196	68228	79.06 UG	98
48) 1,1'-Biphenyl	4.836	154	280914	78.01 UG	100
49) 2-Chloronaphthalene	4.852	162	202305	74.77 UG	99
50) 2-Nitroaniline	4.900	65	56343	82.33 UG	98
51) Dimethyl phthalate	5.007	163	236458	76.71 UG	99
52) 2,6-Dinitrotoluene	5.050	165	50117	88.48 UG	99
53) Acenaphthylene	5.098	152	325360	78.00 UG	99
54) 3-Nitroaniline	4.900	138	67030	87.04 UG	99
55) Acenaphthene	5.199	153	202978	74.96 UG	96
56) 2,4-Dinitrophenol	5.189	184	22275m	92.92 UG	
57) 4-Nitrophenol	5.194	139	48608	80.50 UG	98
58) 2,4-Dinitrotoluene	5.274	165	64658	90.83 UG	99
59) Dibenzofuran	5.290	168	281654	77.93 UG	99
60) Diethyl phthalate	5.403	149	226833	76.15 UG	99
61) Fluorene	5.488	166	229585	78.41 UG	99
62) 4-Chlorophenyl phenyl ...	5.467	204	117535	77.32 UG	95
63) 4-Nitroaniline	5.478	138	56586	79.58 UG	98
64) 1,2,4,5-Tetrachloroben...	4.691	216	100547	76.81 UG	98
65) 2,3,4,6-Tetrachlorophenol	5.371	232	53008	84.10 UG	81
67) 4,6-Dinitro-2-methylph...	5.515	198	31994m	84.24 UG	
68) N-Nitrosodiphenylamine	5.531	169	171109	78.99 UG	97
69) 1,2-Diphenylhydrazine	5.558	77	241139	81.65 UG	97
71) 4-Bromophenyl phenyl e...	5.745	248	66759	76.70 UG	93
72) Hexachlorobenzene	5.852	284	75000	77.08 UG	95
73) Atrazine	5.825	200	65043	80.61 UG	97
74) Pentachlorophenol	5.938	266	44178m	88.34 UG	
75) Phenanthrene	6.039	178	316826	77.85 UG	100
76) Anthracene	6.066	178	320871	79.58 UG	99
77) Carbazole	6.136	167	299345	78.02 UG	99
78) Di-n-butyl phthalate	6.328	149	389299	79.65 UG	100
79) Fluoranthene	6.874	202	329790	78.98 UG	92
83) Pyrene	6.874	202	329790	82.82 UG	97
86) Butyl benzyl phthalate	7.216	149	152855	82.75 UG	97
87) 3,3'-Dichlorobenzidine	7.564	252	90336	79.07 UG	97
88) Benzo[a]anthracene	7.612	228	267018	79.02 UG	99
89) Chrysene	7.638	228	259570	76.35 UG	99
90) Bis(2-ethylhexyl) phth...	7.580	149	203191	81.89 UG	98
93) Di-n-octyl phthalate	8.013	149	310191	80.17 UG	99
94) Benzo[b]fluoranthene	8.473	252	233908	77.86 UG	98
95) Benzo[k]fluoranthene	8.494	252	259094	77.17 UG	98
96) Benzo[a]pyrene	8.804	252	243215	82.07 UG	97
97) Indeno[1,2,3-cd]pyrene	10.265	276	281730	88.03 UG	89
98) Dibenz[a,h]anthracene	10.265	278	235130	92.06 UG	96
99) Benzo[g,h,i]perylene	10.682	276	249203	86.02 UG	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5901.D
Acq On : 29 Oct 2015 13:38
Operator : JC
Sample : ABN067-15,ICC080BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 29 13:14:32 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 13:47:18 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5902.D
Acq On : 29 Oct 2015 13:55
Operator : JC
Sample : ABN074-15,ICC160BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 29 14:43:32 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration

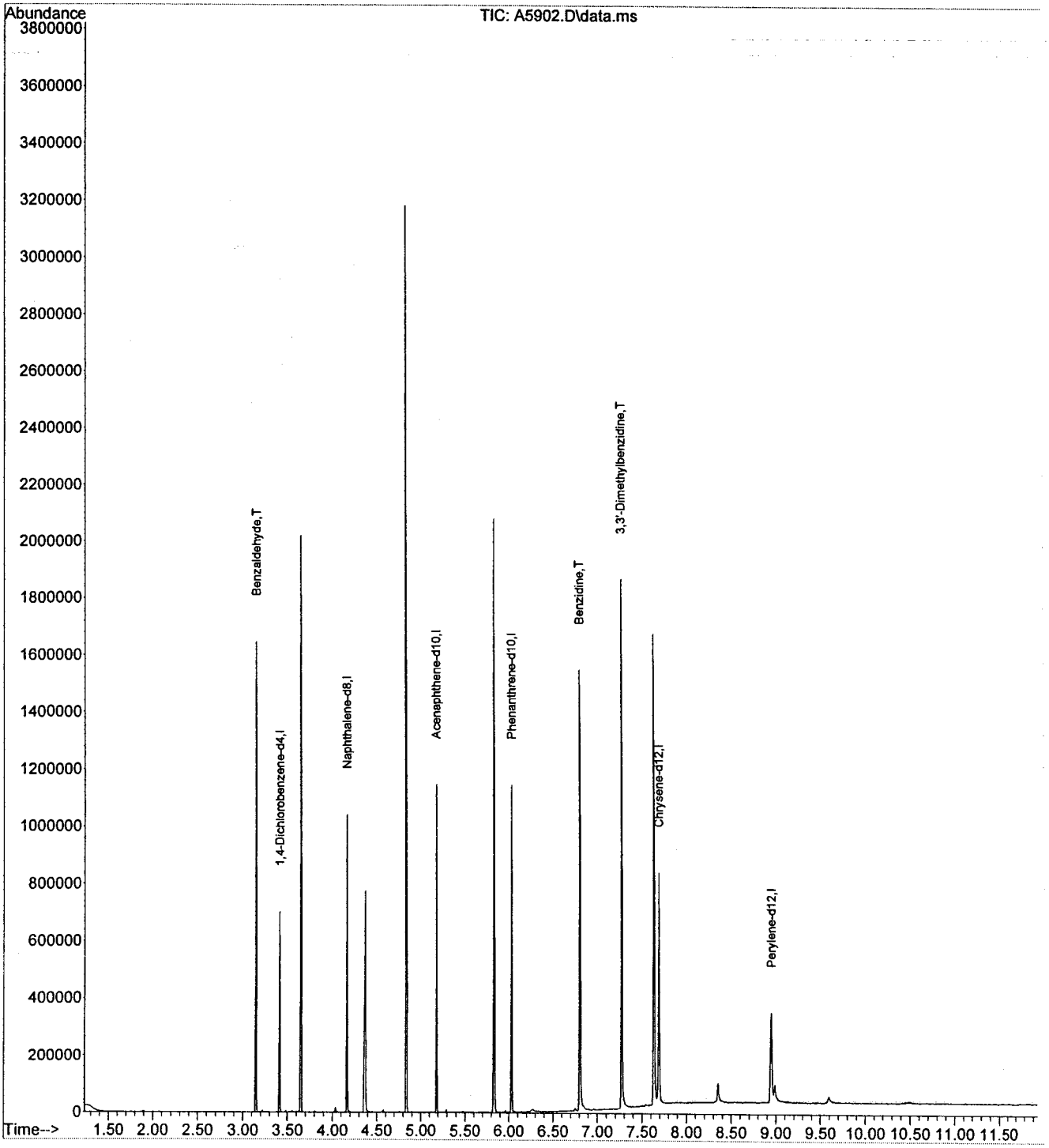
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	60995	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	250247	40.00	UG		0.00
43) Acenaphthene-d10	5.184	164	145681	40.00	UG		0.00
66) Phenanthrene-d10	6.034	188	245439	40.00	UG		0.01
82) Chrysene-d12	7.692	240	213932	40.00	UG		0.07
92) Perylene-d12	8.949	264	144985	40.00	UG		0.09
System Monitoring Compounds							
4) 2-Fluorophenol	0.000	112	0	0.00	UG		
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%	#		
6) Phenol-d5	0.000	99	0d	0.00	UG		
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%	#		
24) Nitrobenzene-d5	0.000	82	0d	0.00	UG		
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%	#		
47) 2-Fluorobiphenyl	0.000	172	0d	0.00	UG		
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%	#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG		
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%	#		
84) Terphenyl-d14	0.000	244	0d	0.00	UG		
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%	#		
Target Compounds							Qvalue
5) Benzaldehyde	3.151	106	208990	156.33	UG		95
80) Benzidine	6.809	184	475704m	229.78	UG		
85) 3,3'-Dimethylbenzidine	7.269	212	528427	118.29	UG	#	60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5902.D
Acq On : 29 Oct 2015 13:55
Operator : JC
Sample : ABN074-15,ICC160BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 29 14:43:32 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5903.D
Acq On : 29 Oct 2015 14:11
Operator : JC
Sample : ABN073-15,ICC080BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 29 14:38:40 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration

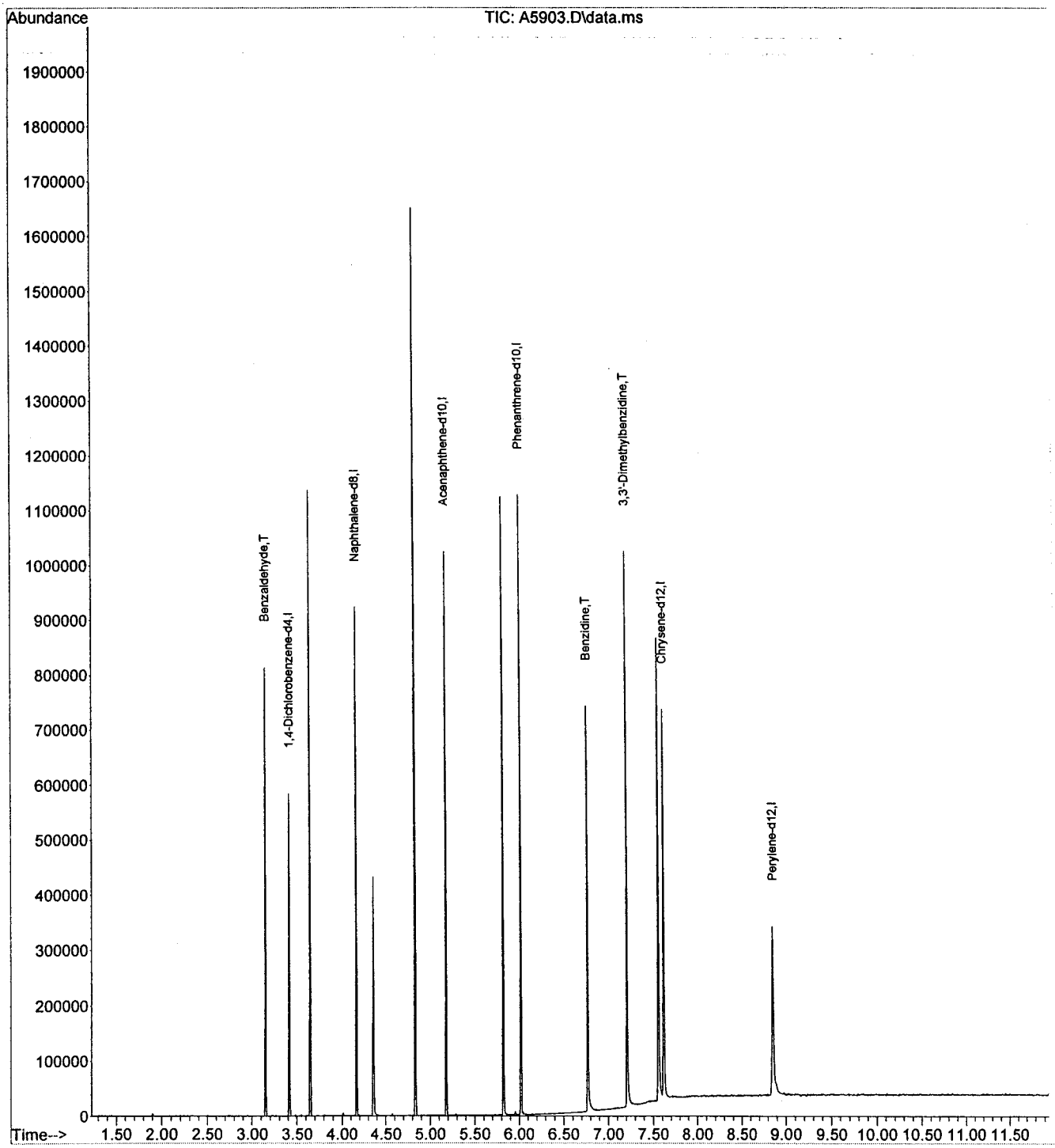
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	55649	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	233451	40.00	UG	0.00
43) Acenaphthene-d10	5.183	164	133514	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	220424	40.00	UG	0.00
82) Chrysene-d12	7.617	240	187870	40.00	UG	0.00
92) Perylene-d12	8.858	264	138912	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0d	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0d	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.151	106	98213	80.53	UG	96
80) Benzidine	6.772	184	198360m	106.69	UG	
85) 3,3'-Dimethylbenzidine	7.211	212	249221	63.53	UG	# 60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5903.D
Acq On : 29 Oct 2015 14:11
Operator : JC
Sample : ABN073-15,ICC080BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 29 14:38:40 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5904.D
Acq On : 29 Oct 2015 14:26
Operator : JC
Sample : ABN072-15,ICC040BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 29 14:30:35 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration

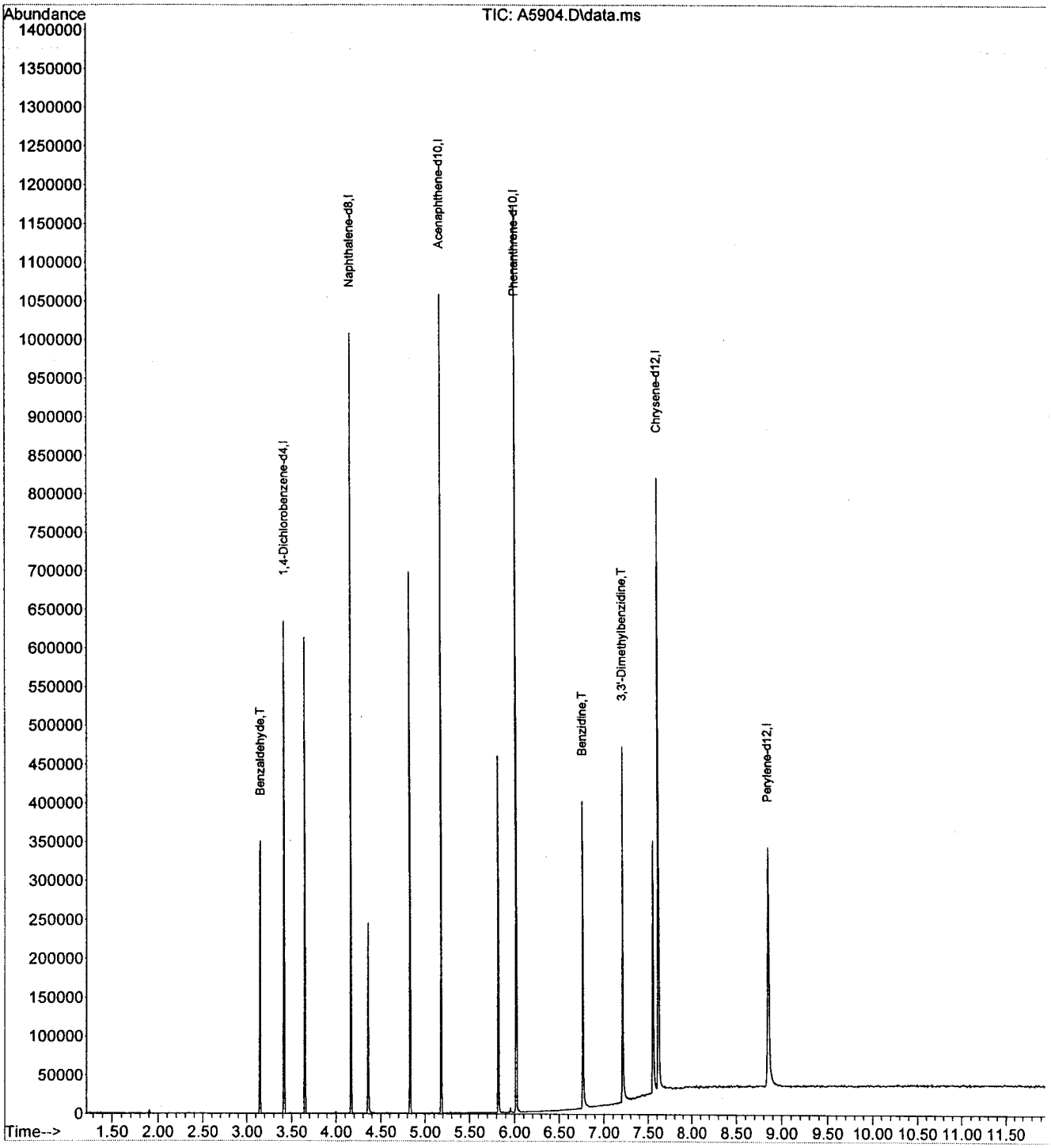
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	58664	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	241608	40.00	UG	0.00
43) Acenaphthene-d10	5.183	164	138410	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	233832	40.00	UG	0.00
82) Chrysene-d12	7.617	240	198370	40.00	UG	0.00
92) Perylene-d12	8.853	264	142303	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0d	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.151	106	49868m	38.79	UG	
80) Benzidine	6.767	184	99808m	50.60	UG	
85) 3,3'-Dimethylbenzidine	7.211	212	116918	28.22	UG	# 60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5904.D
Acq On : 29 Oct 2015 14:26
Operator : JC
Sample : ABN072-15,ICC040BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 29 14:30:35 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5905.D
Acq On : 29 Oct 2015 14:42
Operator : JC
Sample : ABN071-15,ICC020BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 29 14:39:07 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration

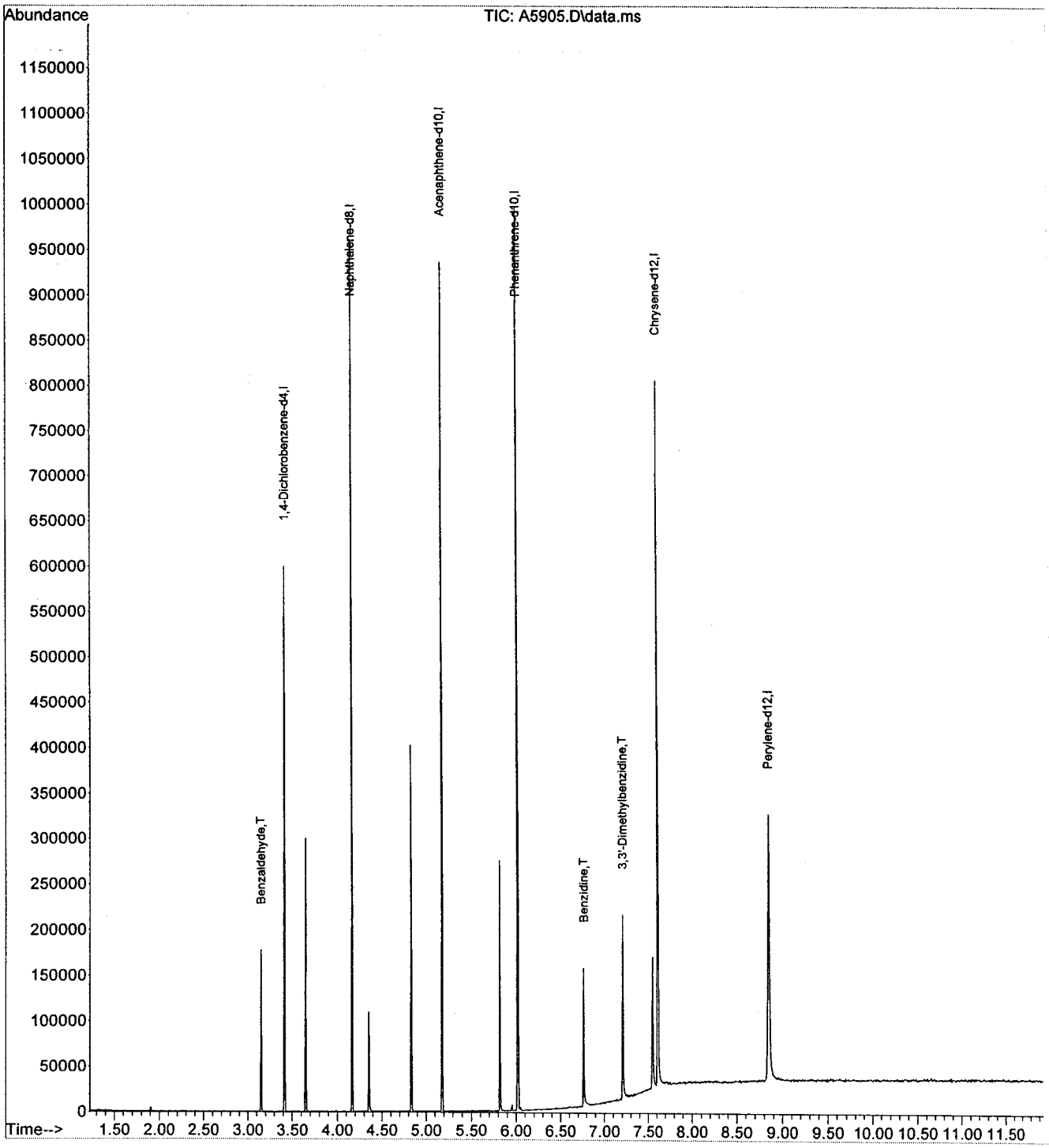
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	54531	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	225763	40.00	UG	0.00
43) Acenaphthene-d10	5.183	164	131679	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	217544	40.00	UG	0.00
82) Chrysene-d12	7.612	240	190961	40.00	UG	-0.01
92) Perylene-d12	8.847	264	138184	40.00	UG	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0d	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.146	106	23819	19.93	UG	95
80) Benzidine	6.767	184	48282m	26.31	UG	
85) 3,3'-Dimethylbenzidine	7.205	212	53010	13.29	UG	# 60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5905.D
Acq On : 29 Oct 2015 14:42
Operator : JC
Sample : ABN071-15,ICC020BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 29 14:39:07 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5906.D
Acq On : 29 Oct 2015 14:58
Operator : JC
Sample : ABN070-15,ICC010BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 29 14:33:03 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration

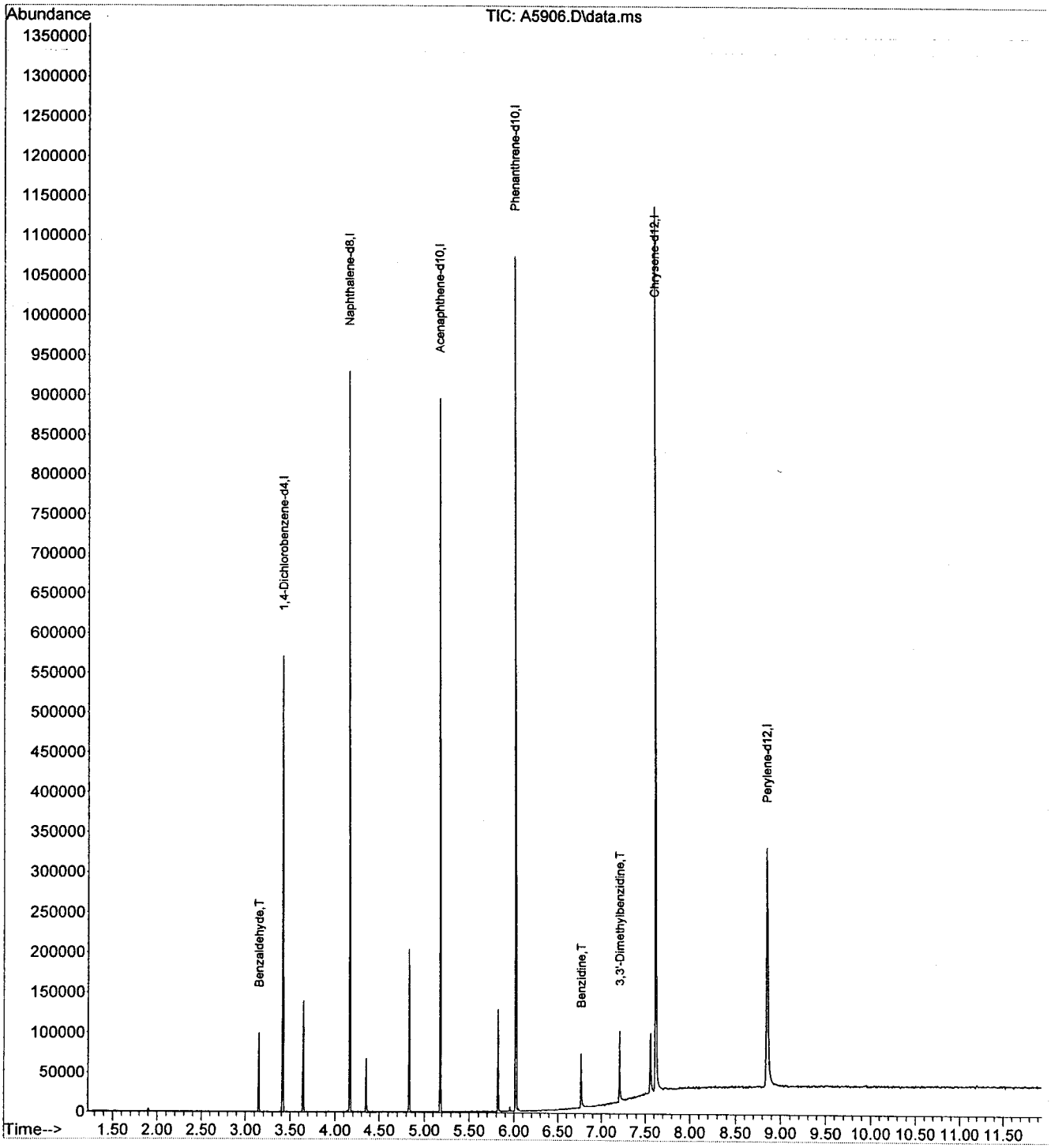
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	54193	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	221435	40.00	UG	0.00
43) Acenaphthene-d10	5.183	164	130708	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	218892	40.00	UG	0.00
82) Chrysene-d12	7.622	240	193353	40.00	UG	0.00
92) Perylene-d12	8.858	264	139820	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.146	106	12036	10.13	UG	94
80) Benzidine	6.767	184	22170m	12.01	UG	
85) 3,3'-Dimethylbenzidine	7.211	212	23985	5.94	UG #	60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5906.D
Acq On : 29 Oct 2015 14:58
Operator : JC
Sample : ABN070-15,ICC010BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 29 14:33:03 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5907.D
Acq On : 29 Oct 2015 15:14
Operator : JC
Sample : ABN069-15,ICC001BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 29 14:41:24 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration

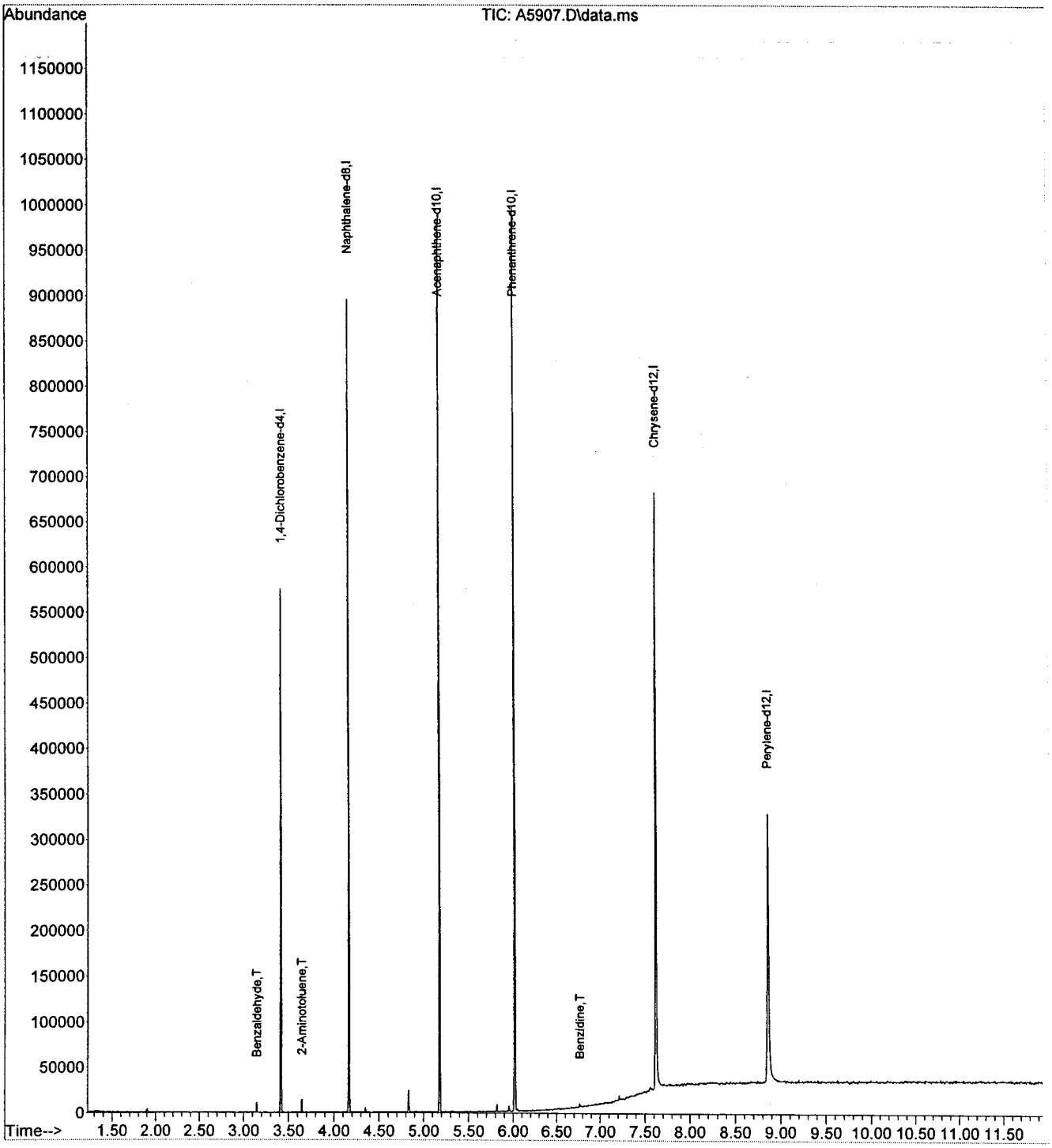
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	56549	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	228343	40.00	UG	0.00
43) Acenaphthene-d10	5.184	164	134788	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	227663	40.00	UG	0.00
82) Chrysene-d12	7.622	240	197960	40.00	UG	0.00
92) Perylene-d12	8.863	264	143309	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.146	106	1272	1.03	UG	94
39) 2-Aminotoluene	3.648	106	121	0.05	UG #	61
80) Benzidine	6.767	184	2227m	1.16	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5907.D
Acq On : 29 Oct 2015 15:14
Operator : JC
Sample : ABN069-15,ICC001BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 29 14:41:24 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 14:19:39 2015
Response via : Initial Calibration



Response Factor Report MSD_A

Method Path : C:\MSDCHEM\1\METHODS\
Method File : ASIM1215.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Oct 29 18:27:48 2015
Response Via : Initial Calibration

Calibration Files
0.1 =A5910.D 0.2 =A5911.D 0.5 =A5912.D 1.0 =A5913.D 2.0 =A5914.D

		Compound	0.1	0.2	0.5	1.0	2.0	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------						
23)	I	Naphthalene-d8	----------ISTD----------						
43)	I	Acenaphthene-d10	----------ISTD----------						
66)	I	Phenanthrene-d10	----------ISTD----------						
72)	T	Hexachlorobenzene	0.314	0.301	0.275	0.284	0.232	0.281	11.24
74)	M	Pentachlorophenol	0.031	0.036	0.027	0.032	0.038	0.033	13.12
82)	I	Chrysene-d12	----------ISTD----------						
88)	T	Benzo[a]anthracene	1.110	1.045	1.095	1.141	1.241	1.127	6.47
92)	I	Perylene-d12	----------ISTD----------						
94)	T	Benzo[b]fluorant...	0.867	0.856	0.918	1.008	1.149	0.960	12.68
95)	T	Benzo[k]fluorant...	1.506	1.469	1.539	1.624	1.746	1.577	7.01
96)	T	Benzo[a]pyrene	1.072	1.042	1.051	1.083	1.218	1.093	6.53
97)	T	Indeno[1,2,3-cd]...	0.971	0.761	0.880	0.908	1.148	0.934	15.19
98)	T	Dibenz[a,h]anthr...	0.823	0.656	0.671	0.761	0.810	0.744	10.44

(#) = Out of Range

ASIM1215.M Thu Oct 29 18:27:55 2015 MSD_A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5910.D
Acq On : 29 Oct 2015 16:01
Operator : JC
Sample : ABN056-15,ICC000.1SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 29 17:26:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration

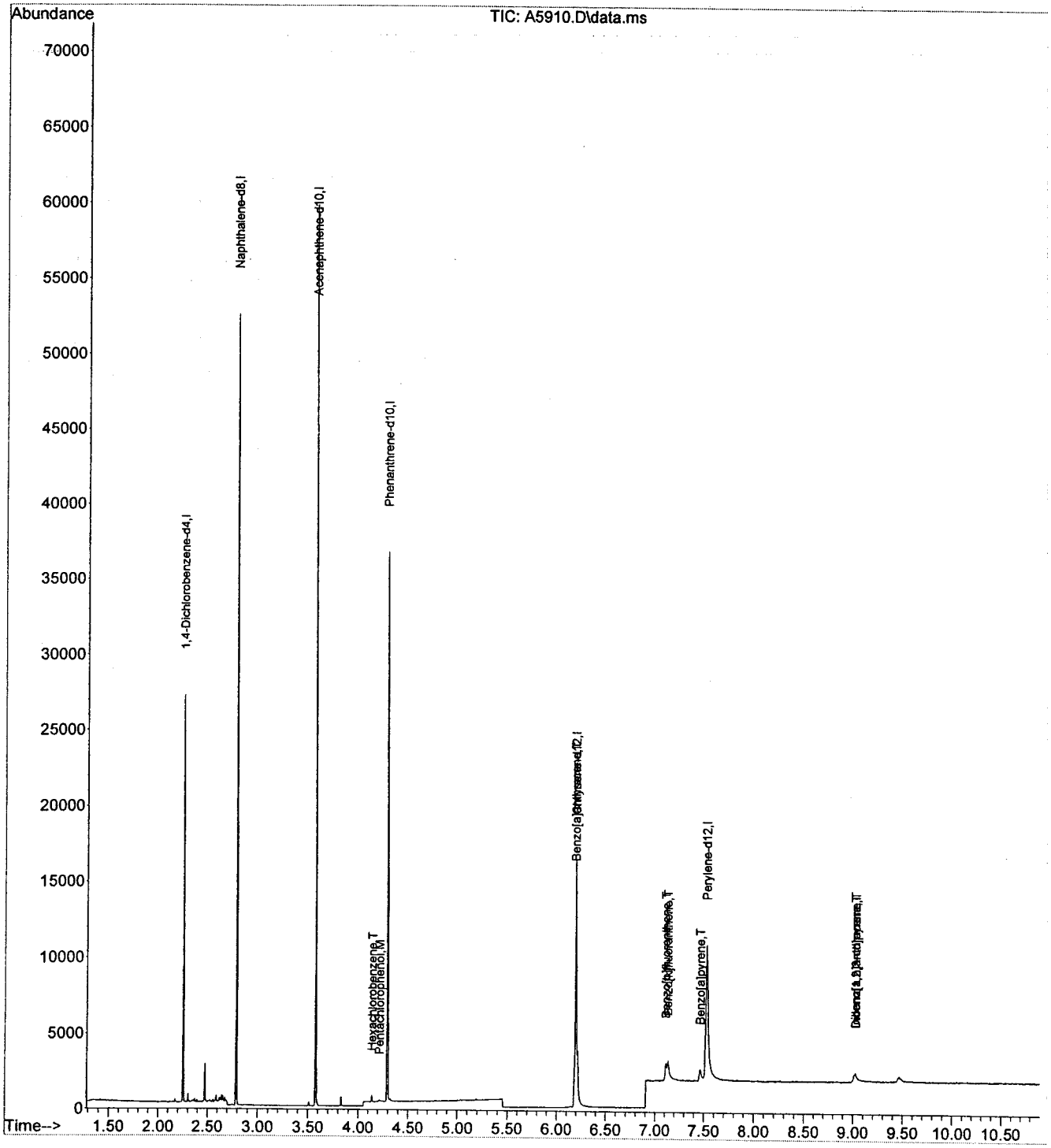
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	6586	1.00	UG	0.04
23) Naphthalene-d8	2.792	136	20164	1.00	UG	0.04
43) Acenaphthene-d10	3.578	164	10148	1.00	UG	0.03
66) Phenanthrene-d10	4.298	188	16550m	1.00	UG	0.02
82) Chrysene-d12	6.197	240	11541	1.00	UG	0.05
92) Perylene-d12	7.530	264	10955	1.00	UG	0.10
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.141	284	104	0.03	UG	94
74) Pentachlorophenol	4.218	266	52m	0.05	UG	
88) Benzo[a]anthracene	6.183	228	1281	0.09	UG	99
94) Benzo[b]fluoranthene	7.114	252	950m	0.08	UG	
95) Benzo[k]fluoranthene	7.135	252	1650	0.12	UG	93
96) Benzo[a]pyrene	7.466	252	1174m	0.10	UG	
97) Indeno[1,2,3-cd]pyrene	9.021	276	1064m	0.08	UG	
98) Dibenz[a,h]anthracene	9.024	278	902m	0.08	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5910.D
Acq On : 29 Oct 2015 16:01
Operator : JC
Sample : ABN056-15,ICC000.1SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 29 17:26:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5911.D
Acq On : 29 Oct 2015 16:15
Operator : JC
Sample : ABN057-15,ICC000.2SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 29 17:27:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration

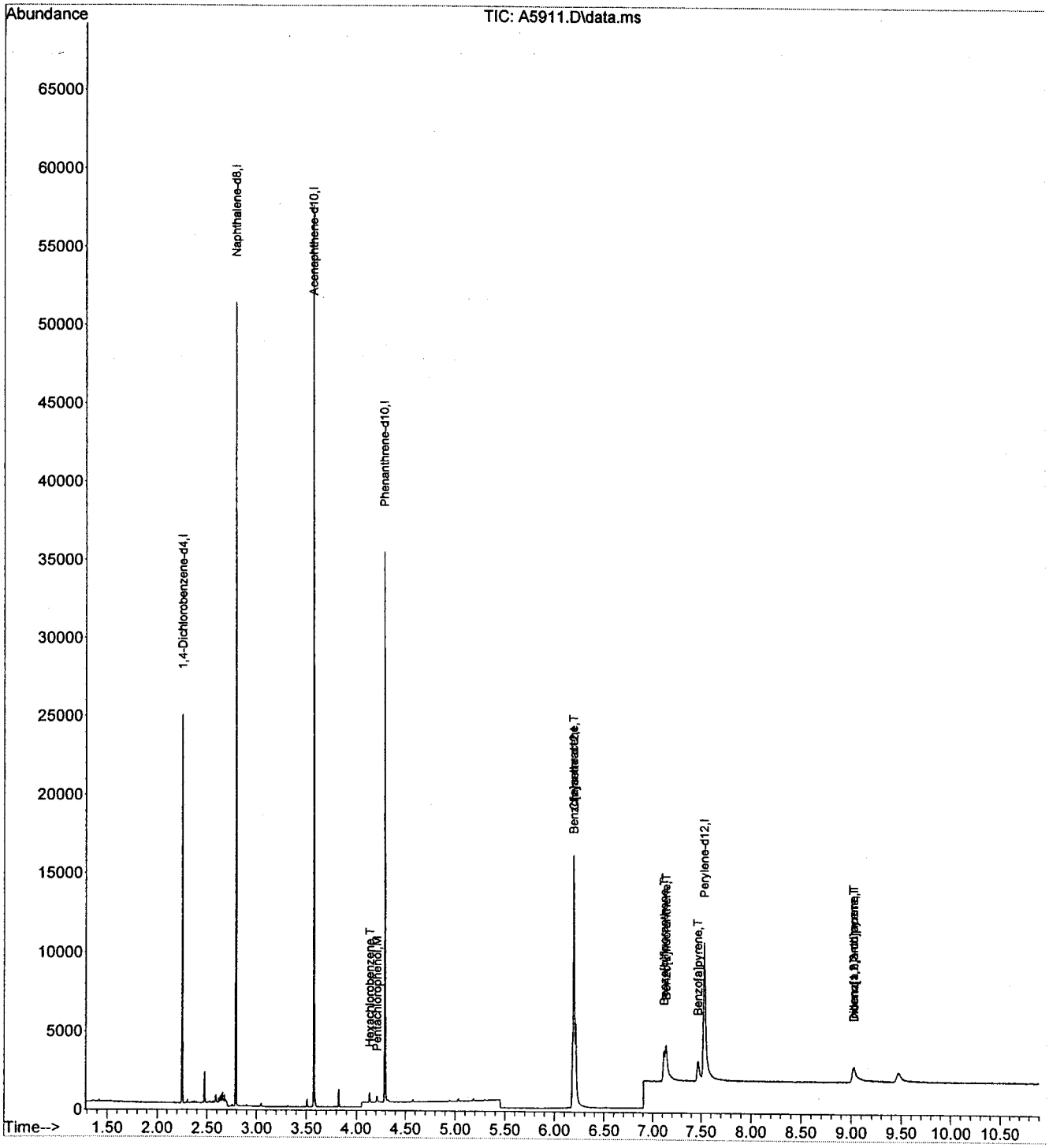
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.254	152	6130	1.00	UG	0.04
23) Naphthalene-d8	2.793	136	18863	1.00	UG	0.04
43) Acenaphthene-d10	3.576	164	9516	1.00	UG	0.03
66) Phenanthrene-d10	4.293	188	15342m	1.00	UG	0.02
82) Chrysene-d12	6.195	240	11028	1.00	UG	0.05
92) Perylene-d12	7.534	264	10404	1.00	UG	0.10
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.138	284	185	0.05	UG	96
74) Pentachlorophenol	4.213	266	109m	0.11	UG	
88) Benzo[a]anthracene	6.183	228	2305	0.18	UG	100
94) Benzo[b]fluoranthene	7.118	252	1781m	0.16	UG	
95) Benzo[k]fluoranthene	7.139	252	3056	0.23	UG	98
96) Benzo[a]pyrene	7.470	252	2169m	0.19	UG	
97) Indeno[1,2,3-cd]pyrene	9.025	276	1584m	0.12	UG	
98) Dibenz[a,h]anthracene	9.030	278	1364m	0.13	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5911.D
Acq On : 29 Oct 2015 16:15
Operator : JC
Sample : ABN057-15,ICC000.2SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 29 17:27:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5912.D
Acq On : 29 Oct 2015 16:30
Operator : JC
Sample : ABN058-15,ICC000.5SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 29 17:21:48 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration

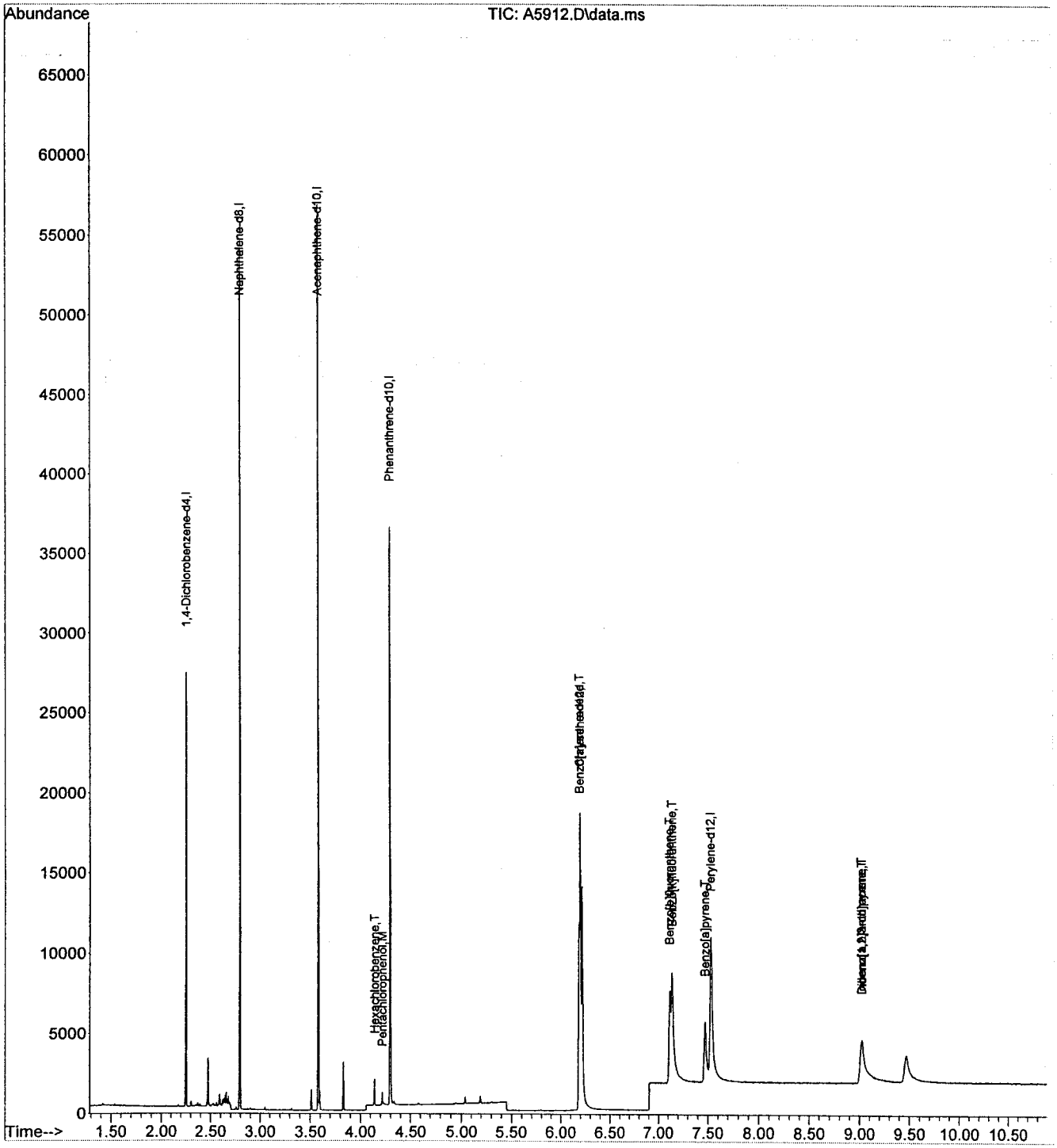
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	6508	1.00	UG	0.04
23) Naphthalene-d8	2.795	136	19975	1.00	UG	0.04
43) Acenaphthene-d10	3.580	164	10040	1.00	UG	0.03
66) Phenanthrene-d10	4.299	188	16410m	1.00	UG	0.02
82) Chrysene-d12	6.198	240	11839	1.00	UG	0.05
92) Perylene-d12	7.532	264	11116	1.00	UG	0.10
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery = 0.00%#			
Target Compounds						Qvalue
72) Hexachlorobenzene	4.142	284	451	0.12	UG	95
74) Pentachlorophenol	4.217	266	218	0.21	UG	97
88) Benzo[a]anthracene	6.185	228	6484	0.46	UG	99
94) Benzo[b]fluoranthene	7.116	252	5102m	0.43	UG	
95) Benzo[k]fluoranthene	7.140	252	8556	0.59	UG	97
96) Benzo[a]pyrene	7.470	252	5843m	0.49	UG	
97) Indeno[1,2,3-cd]pyrene	9.024	276	4891m	0.36	UG	
98) Dibenz[a,h]anthracene	9.028	278	3729m	0.34	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5912.D
Acq On : 29 Oct 2015 16:30
Operator : JC
Sample : ABN058-15,ICC000.5SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 29 17:21:48 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5913.D
Acq On : 29 Oct 2015 16:44
Operator : JC
Sample : ABN059-15,ICC001.0SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 29 17:22:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration

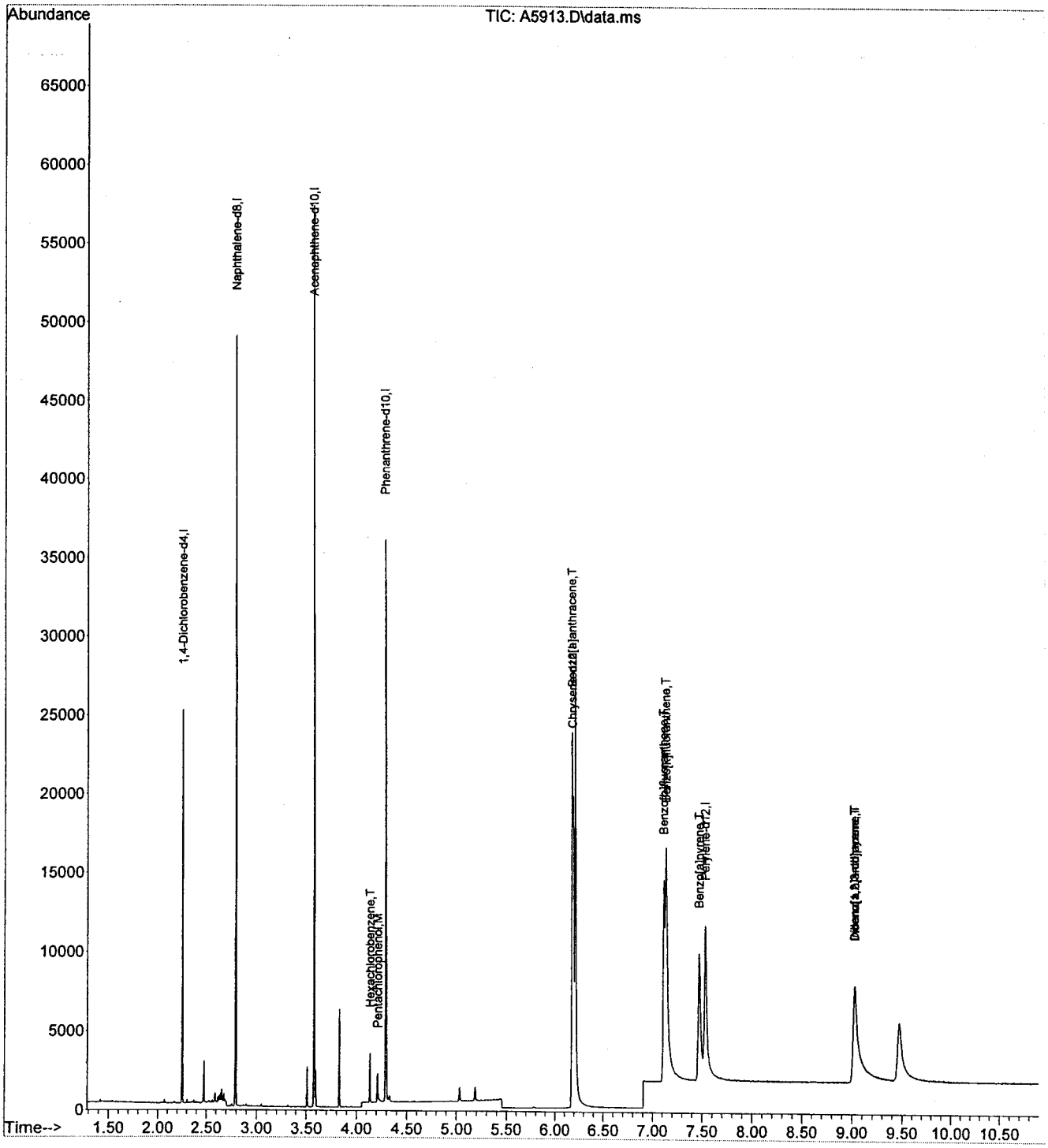
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	6020	1.00	UG		0.04
23) Naphthalene-d8	2.793	136	18596	1.00	UG		0.04
43) Acenaphthene-d10	3.577	164	9453	1.00	UG		0.03
66) Phenanthrene-d10	4.293	188	15597m	1.00	UG		0.02
82) Chrysene-d12	6.194	240	11544	1.00	UG		0.05
92) Perylene-d12	7.532	264	10930	1.00	UG		0.10
System Monitoring Compounds							
4) 2-Fluorophenol	0.000	112	0	0.00	UG		
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#			
6) Phenol-d5	0.000	99	0	0.00	UG		
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#			
24) Nitrobenzene-d5	0.000	82	0	0.00	UG		
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG		
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG		
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#			
84) Terphenyl-d14	0.000	244	0	0.00	UG		
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#			
Target Compounds							Qvalue
72) Hexachlorobenzene	4.139	284	885	0.25	UG		98
74) Pentachlorophenol	4.214	266	506	0.52	UG		97
88) Benzo[a]anthracene	6.182	228	13174	0.97	UG		100
94) Benzo[b]fluoranthene	7.116	252	11018m	0.93	UG		
95) Benzo[k]fluoranthene	7.140	252	17745	1.25	UG		96
96) Benzo[a]pyrene	7.472	252	11838	1.01	UG	#	91
97) Indeno[1,2,3-cd]pyrene	9.030	276	9922	0.74	UG		97
98) Dibenz[a,h]anthracene	9.032	278	8315m	0.76	UG		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5913.D
Acq On : 29 Oct 2015 16:44
Operator : JC
Sample : ABN059-15,ICC001.0SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 29 17:22:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5914.D
Acq On : 29 Oct 2015 16:59
Operator : JC
Sample : ABN060-15,ICC002.0SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 29 17:25:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration

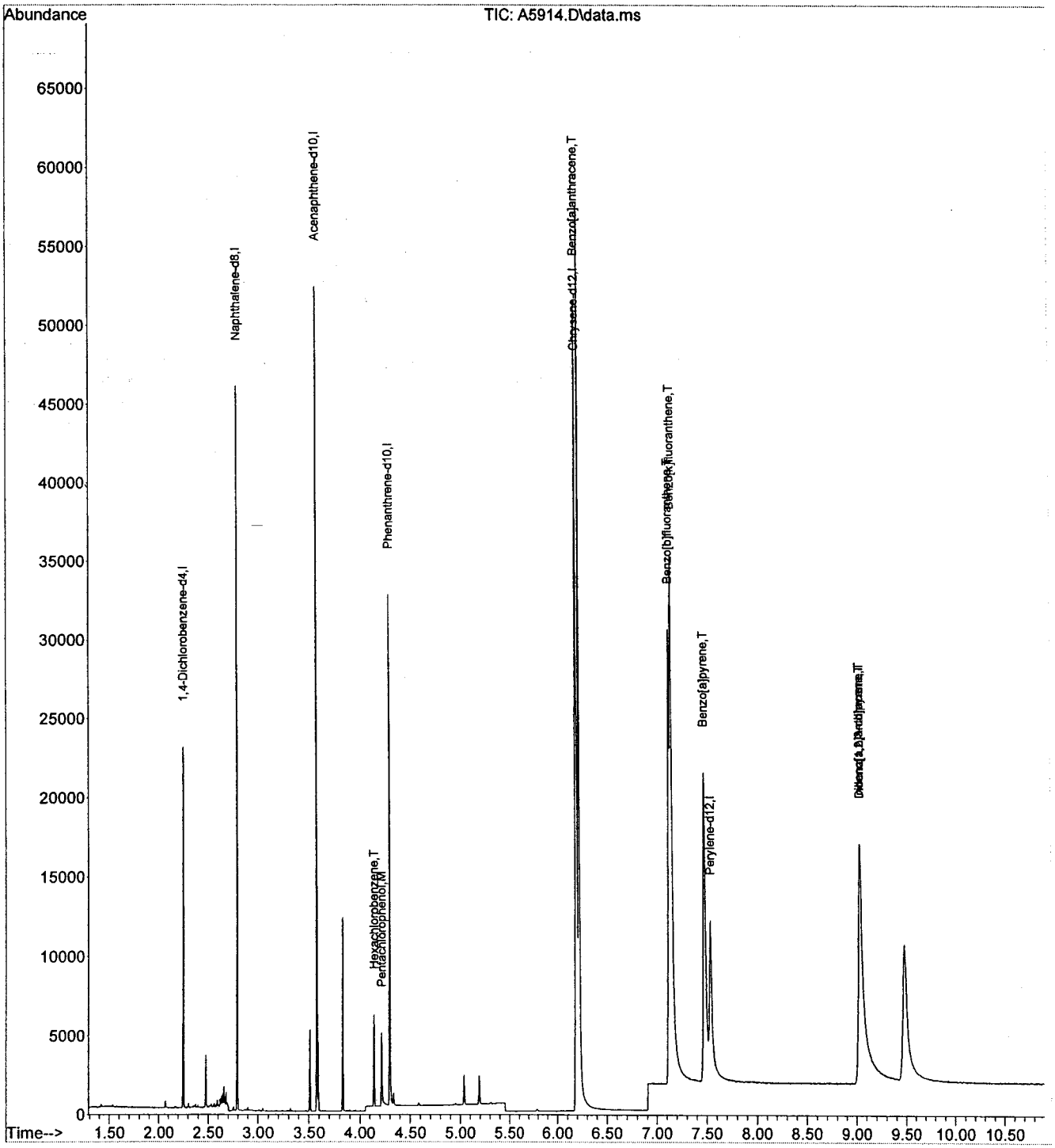
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	5472	1.00	UG		0.04
23) Naphthalene-d8	2.793	136	17089	1.00	UG		0.04
43) Acenaphthene-d10	3.580	164	8849	1.00	UG		0.03
66) Phenanthrene-d10	4.300	188	13800	1.00	UG		0.03
82) Chrysene-d12	6.199	240	11110	1.00	UG		0.05
92) Perylene-d12	7.536	264	10718	1.00	UG		0.10
System Monitoring Compounds							
4) 2-Fluorophenol	0.000	112	0	0.00	UG		
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#			
6) Phenol-d5	0.000	99	0	0.00	UG		
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#			
24) Nitrobenzene-d5	0.000	82	0	0.00	UG		
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG		
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG		
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#			
84) Terphenyl-d14	0.000	244	0	0.00	UG		
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#			
Target Compounds							Qvalue
72) Hexachlorobenzene	4.143	284	1599	0.50	UG		98
74) Pentachlorophenol	4.218	266	1045m	1.22	UG		
88) Benzo[a]anthracene	6.186	228	27583	2.11	UG		100
94) Benzo[b]fluoranthene	7.122	252	24626m	2.13	UG		
95) Benzo[k]fluoranthene	7.144	252	37430	2.70	UG		99
96) Benzo[a]pyrene	7.474	252	26100	2.26	UG	#	91
97) Indeno[1,2,3-cd]pyrene	9.036	276	24599	1.88	UG		93
98) Dibenz[a,h]anthracene	9.038	278	17369	1.62	UG	#	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5914.D
Acq On : 29 Oct 2015 16:59
Operator : JC
Sample : ABN060-15,ICC002.0SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 29 17:25:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Fri Oct 02 13:15:26 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5908.D
Acq On : 29 Oct 2015 15:30
Operator : JC
Sample : ABN075-15,ICV040BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 29 15:58:36 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	109	0.00
2	T	N-Nitrosodimethylamine	0.589	0.581	1.4	99	-0.01
3	T	Pyridine	0.742	0.763	-2.8	111	0.00
4	S	2-Fluorophenol	0.940	0.931	1.0	108	0.00
5	T	Benzaldehyde	0.818	0.729	10.9	82	0.00
6	S	Phenol-d5	1.139	1.132	0.6	109	0.00
7	MC	Phenol	1.287	1.199	6.8	106	0.00
8	T	Aniline	0.563	0.564	-0.2	106	0.00
9	T	Bis(2-chloroethyl) ether	0.733	0.685	6.5	103	0.00
10	M	2-Chlorophenol	1.009	0.964	4.5	106	0.00
11	T	1,3-Dichlorobenzene	1.155	1.102	4.6	105	0.00
12	MC	1,4-Dichlorobenzene	1.077	1.053	2.2	106	0.00
13	T	Benzyl alcohol	0.655	0.612	6.6	105	0.00
14	T	1,2-Dichlorobenzene	1.049	1.010	3.7	107	0.00
15	T	2-Methylphenol	0.854	0.816	4.4	106	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.587	1.513	4.7	105	0.00
17	T	4-Methylphenol	0.914	0.890	2.6	107	-0.01
18	MP	N-Nitrosodi-n-propylamine	0.753	0.725	3.7	107	0.00
19	T	Acetophenone	1.334	1.255	5.9	104	0.00
20	T	3-Methylphenol	0.914	0.890	2.6	107	-0.01
21	T	Hexachloroethane	0.389	0.373	4.1	104	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	104	0.00
24	S	Nitrobenzene-d5	0.252	0.229	9.1	97	0.00
25	T	Nitrobenzene	0.262	0.250	4.6	106	0.00
26	T	Isophorone	0.475	0.462	2.7	102	0.00
27	TC	2-Nitrophenol	0.124	0.116	6.5	96	0.00
28	T	2,4-Dimethylphenol	0.233	0.234	-0.4	108	0.00
29	T	Bis(2-chloroethoxy) methane	0.281	0.283	-0.7	107	0.00
30	T	Benzoic acid	0.106	0.106	0.0	92	-0.03
31	T	2,4-Dimethylaniline	0.290	0.305	-5.2	108	0.00
32	TC	2,4-Dichlorophenol	0.194	0.188	3.1	104	-0.01
33	M	1,2,4-Trichlorobenzene	0.217	0.218	-0.5	106	0.00
34	T	Naphthalene	0.701	0.695	0.9	107	0.00
35	T	4-Chloroaniline	0.369	0.375	-1.6	107	0.00
36	T	4-Aminotoluene	0.458	0.452	1.3	106	0.00
37	TC	Hexachlorobutadiene	0.123	0.120	2.4	105	0.00
38	T	Caprolactam	0.102	0.100	2.0	101	-0.03
39	T	2-Aminotoluene	0.458	0.452	1.3	106	0.00
40	MC	4-Chloro-3-methylphenol	0.201	0.194	3.5	105	0.00
41	T	2-Methylnaphthalene	0.456	0.459	-0.7	106	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00
44	TP	Hexachlorocyclopentadiene	0.226	0.202	10.6	94	0.00
45	TC	2,4,6-Trichlorophenol	0.240	0.233	2.9	103	0.00
46	T	2,4,5-Trichlorophenol	0.247	0.242	2.0	102	0.00

47	S	2-Fluorobiphenyl	0.915	0.858	6.2	97	0.00
48	T	1,1'-Biphenyl	1.037	1.007	2.9	108	0.00
49	T	2-Chloronaphthalene	0.769	0.761	1.0	105	0.00
50	T	2-Nitroaniline	0.197	0.187	5.1	99	0.00
51	T	Dimethyl phthalate	0.877	0.855	2.5	103	0.00
52	T	2,6-Dinitrotoluene	0.164	0.154	6.1	96	0.00
53	T	Acenaphthylene	1.194	1.193	0.1	105	0.00
54	T	3-Nitroaniline	0.223	0.214	4.0	100	0.00
55	MC	Acenaphthene	0.766	0.742	3.1	105	0.00
56	TP	2,4-Dinitrophenol	0.070	0.065	7.1	87	0.00
57	MP	4-Nitrophenol	0.172	0.164	4.7	99	0.00
58	M	2,4-Dinitrotoluene	0.203	0.214	-5.4	101	0.00
59	T	Dibenzofuran	1.039	1.003	3.5	104	0.00
60	T	Diethyl phthalate	0.850	0.824	3.1	101	0.00
61	T	Fluorene	0.828	0.816	1.4	105	0.00
62	T	4-Chlorophenyl phenyl ether	0.432	0.423	2.1	104	0.00
63	T	4-Nitroaniline	0.200	0.197	1.5	99	-0.01
64	T	1,2,4,5-Tetrachlorobenzene	0.370	0.352	4.9	103	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.181	0.183	-1.1	103	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00
67	T	4,6-Dinitro-2-methylphenol	0.066	0.060	9.1	86	-0.01
68	TC	N-Nitrosodiphenylamine	0.386	0.384	0.5	102	0.00
69	T	1,2-Diphenylhydrazine	0.537	0.543	-1.1	105	0.00
70	S	2,4,6-Tribromophenol	0.079	0.086	-8.9	113	0.00
71	T	4-Bromophenyl phenyl ether	0.151	0.148	2.0	102	0.00
72	T	Hexachlorobenzene	0.167	0.165	1.2	104	0.00
73	T	Atrazine	0.142	0.144	-1.4	106	0.00
74	MC	Pentachlorophenol	0.091	0.093	-2.2	96	0.00
75	T	Phenanthrene	0.725	0.703	3.0	103	0.00
76	T	Anthracene	0.712	0.712	0.0	104	0.00
77	T	Carbazole	0.679	0.691	-1.8	105	0.00
78	T	Di-n-butyl phthalate	0.867	0.837	3.5	101	0.00
79	TC	Fluoranthene	0.736	0.761	-3.4	107	0.00
80	T	Benzidine	0.430	0.372	13.5	83	-0.04
82	I	Chrysene-d12	1.000	1.000	0.0	105	-0.01
83	M	Pyrene	0.973	0.995	-2.3	107	0.00
84	S	Terphenyl-d14	0.805	0.791	1.7	104	0.00
85	T	3,3'-Dimethylbenzidine	0.677	0.557	17.7	95	-0.06
86	T	Butyl benzyl phthalate	0.454	0.448	1.3	102	0.00
87	T	3,3'-Dichlorobenzidine	0.276	0.285	-3.3	100	0.00
88	T	Benzo[a]anthracene	0.824	0.796	3.4	102	-0.01
89	T	Chrysene	0.833	0.807	3.1	104	0.00
90	T	Bis(2-ethylhexyl) phthalate	0.611	0.589	3.6	100	0.00
92	I	Perylene-d12	1.000	1.000	0.0	103	0.00
93	TC	Di-n-octyl phthalate	0.965	0.906	6.1	93	0.00
94	T	Benzo[b]fluoranthene	0.736	0.838	-13.9	118	-0.02
95	T	Benzo[k]fluoranthene	0.823	0.860	-4.5	111	-0.02
96	TC	Benzo[a]pyrene	0.733	0.746	-1.8	103	-0.02
97	T	Indeno[1,2,3-cd]pyrene	0.789	0.848	-7.5	104	-0.04
98	T	Dibenz[a,h]anthracene	0.633	0.667	-5.4	99	-0.04
99	T	Benzo[g,h,i]perylene	0.720	0.742	-3.1	101	-0.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0

AW1215.M Thu Oct 29 16:37:47 2015 MSD_A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5908.D
Acq On : 29 Oct 2015 15:30
Operator : JC
Sample : ABN075-15,ICV040BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 29 15:39:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	64569	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	253127	40.00	UG		0.00
43) Acenaphthene-d10	5.183	164	145439	40.00	UG		0.00
66) Phenanthrene-d10	6.023	188	233533	40.00	UG		0.00
82) Chrysene-d12	7.617	240	178714	40.00	UG		-0.01
92) Perylene-d12	8.858	264	160684	40.00	UG		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	2.632	112	150363	99.08	UG		0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 99.08%#				
6) Phenol-d5	3.183	99	182724	99.40	UG		0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 99.40%#				
24) Nitrobenzene-d5	3.745	82	72362	45.44	UG		0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 90.88%				
47) 2-Fluorobiphenyl	4.777	172	155924	46.89	UG		0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 93.78%				
70) 2,4,6-Tribromophenol	5.633	330	50246	108.49	UG		0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 108.49%				
84) Terphenyl-d14	6.932	244	176706	49.12	UG		0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 98.24%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.616	74	37543	39.48	UG		98
3) Pyridine	1.669	52	49251	41.10	UG		95
7) Phenol	3.194	94	77386	37.25	UG		90
8) Aniline	3.226	66	36411	40.05	UG		98
9) Bis(2-chloroethyl) ether	3.247	63	44222	37.39	UG		95
10) 2-Chlorophenol	3.306	128	62244	38.20	UG		98
11) 1,3-Dichlorobenzene	3.397	146	71161	38.16	UG		98
12) 1,4-Dichlorobenzene	3.429	146	67979	39.09	UG		99
13) Benzyl alcohol	3.483	108	39514	37.38	UG		99
14) 1,2-Dichlorobenzene	3.541	146	65227	38.52	UG		100
15) 2-Methylphenol	3.547	108	52704	38.22	UG		96
16) Bis(2-chloroisopropyl)...	3.579	45	97717	38.13	UG		95
17) 4-Methylphenol	3.627	108	57465	38.94	UG		98
18) N-Nitrosodi-n-propylamine	3.659	70	46831	38.54	UG		93
19) Acetophenone	3.648	105	81009	37.62	UG		79
20) 3-Methylphenol	3.627	108	57465	38.93	UG		98
21) Hexachloroethane	3.729	117	24074	38.31	UG		89
25) Nitrobenzene	3.755	77	63295	38.19	UG		99
26) Isophorone	3.889	82	116825	38.83	UG		98
27) 2-Nitrophenol	3.943	139	29241	37.21	UG		96
28) 2,4-Dimethylphenol	3.943	107	59158	40.16	UG		96
29) Bis(2-chloroethoxy) me...	3.996	93	71545	40.18	UG		99
30) Benzoic acid	3.980	122	26752m	39.95	UG		
31) 2,4-Dimethylaniline	4.060	121	77280	42.06	UG		99
32) 2,4-Dichlorophenol	4.076	162	47710	38.94	UG		95
33) 1,2,4-Trichlorobenzene	4.140	180	55134	40.19	UG		99
34) Naphthalene	4.178	128	176035	39.70	UG	#	7
35) 4-Chloroaniline	4.194	127	95033	40.74	UG		68
36) 4-Aminotoluene	3.670	106	114407	39.50	UG		96
37) Hexachlorobutadiene	4.280	225	30431	39.12	UG		99
38) Caprolactam	4.365	55	25288	39.18	UG		86
39) 2-Aminotoluene	3.670	106	114407	39.50	UG		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5908.D
Acq On : 29 Oct 2015 15:30
Operator : JC
Sample : ABN075-15,ICV040BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 29 15:39:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

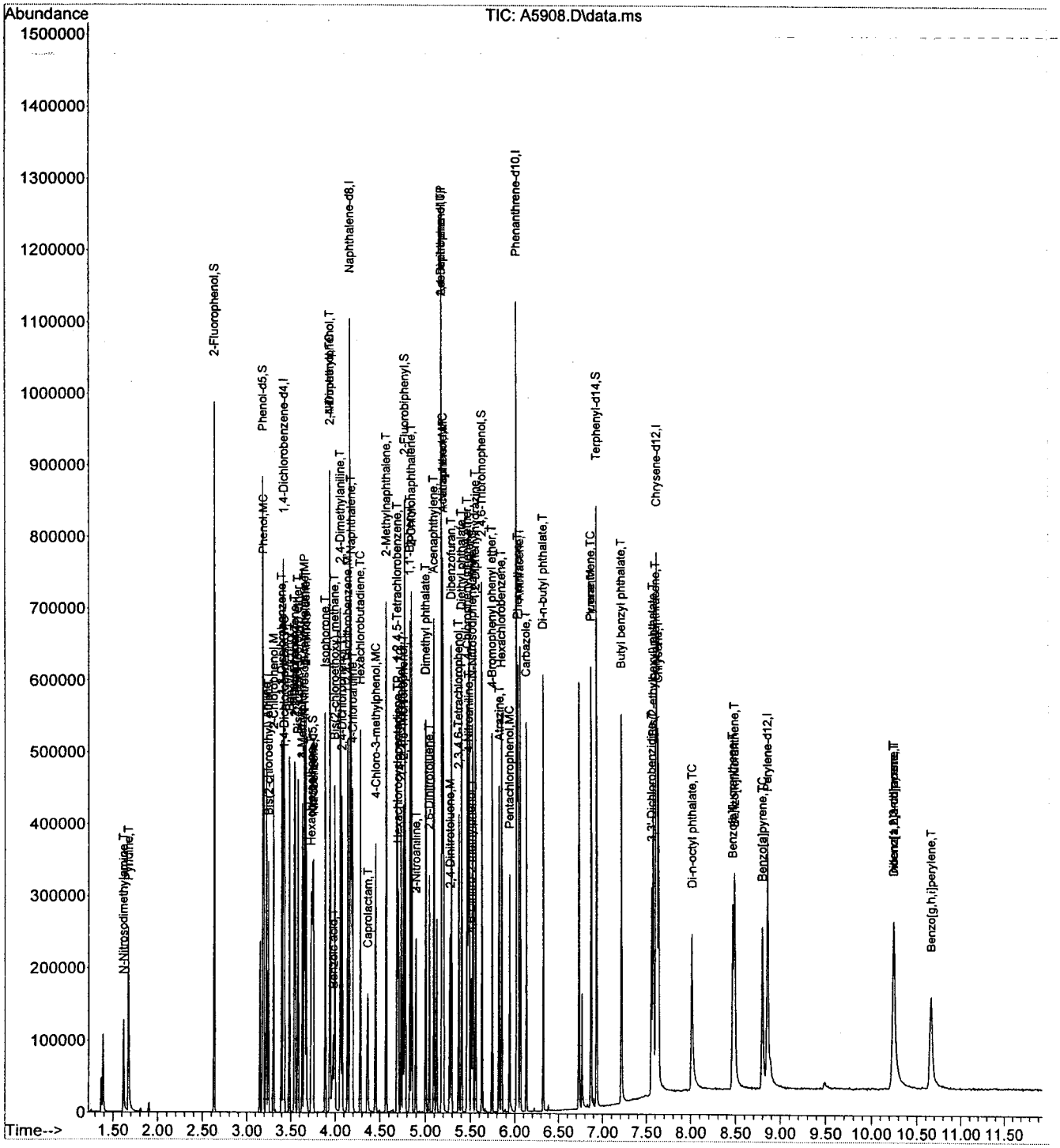
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
40) 4-Chloro-3-methylphenol	4.456	107	49145	38.63 UG	96
41) 2-Methylnaphthalene	4.574	142	116242	40.26 UG	99
44) Hexachlorocyclopentadiene	4.707	237	29330	35.73 UG	97
45) 2,4,6-Trichlorophenol	4.734	196	33903	38.89 UG	98
46) 2,4,5-Trichlorophenol	4.761	196	35260	39.33 UG	98
48) 1,1'-Biphenyl	4.836	154	146455	38.86 UG	99
49) 2-Chloronaphthalene	4.852	162	110682	39.57 UG	100
50) 2-Nitroaniline	4.895	65	27173	38.01 UG	95
51) Dimethyl phthalate	5.007	163	124278	38.97 UG	99
52) 2,6-Dinitrotoluene	5.044	165	22441	37.73 UG	97
53) Acenaphthylene	5.098	152	173555	39.96 UG	99
54) 3-Nitroaniline	4.900	138	31157	38.50 UG	99
55) Acenaphthene	5.200	153	107860	38.71 UG	98
56) 2,4-Dinitrophenol	5.189	184	9425	37.13 UG	94
57) 4-Nitrophenol	5.194	139	23830	38.19 UG	96
58) 2,4-Dinitrotoluene	5.274	165	31155	42.11 UG	73
59) Dibenzofuran	5.290	168	145914	38.62 UG	97
60) Diethyl phthalate	5.403	149	119821	38.77 UG	99
61) Fluorene	5.488	166	118699	39.44 UG	100
62) 4-Chlorophenyl phenyl ...	5.467	204	61549	39.17 UG	94
63) 4-Nitroaniline	5.478	138	28662	39.40 UG	100
64) 1,2,4,5-Tetrachloroben...	4.691	216	51209	38.02 UG	97
65) 2,3,4,6-Tetrachlorophenol	5.371	232	26599	40.51 UG	81
67) 4,6-Dinitro-2-methylph...	5.510	198	13918	36.33 UG	98
68) N-Nitrosodiphenylamine	5.526	169	89700	39.83 UG	97
69) 1,2-Diphenylhydrazine	5.558	77	126822	40.48 UG	97
71) 4-Bromophenyl phenyl e...	5.745	248	34582	39.19 UG	93
72) Hexachlorobenzene	5.852	284	38630	39.65 UG	91
73) Atrazine	5.825	200	33564	40.52 UG	98
74) Pentachlorophenol	5.938	266	21823	40.93 UG	99
75) Phenanthrene	6.039	178	164166	38.80 UG	99
76) Anthracene	6.061	178	166301	39.99 UG	99
77) Carbazole	6.136	167	161307	40.71 UG	99
78) Di-n-butyl phthalate	6.323	149	195366	38.58 UG	100
79) Fluoranthene	6.868	202	177818	41.37 UG	91
83) Pyrene	6.868	202	177818	40.92 UG	96
86) Butyl benzyl phthalate	7.216	149	80133	39.47 UG	97
87) 3,3'-Dichlorobenzidine	7.558	252	50845	41.17 UG	96
88) Benzo[a]anthracene	7.606	228	142209	38.64 UG	99
89) Chrysene	7.638	228	144271	38.76 UG	100
90) Bis(2-ethylhexyl) phth...	7.574	149	105329	38.57 UG	96
93) Di-n-octyl phthalate	8.013	149	145528	37.53 UG	99
94) Benzo[b]fluoranthene	8.468	252	134577m	45.50 UG	
95) Benzo[k]fluoranthene	8.489	252	138177	41.79 UG	97
96) Benzo[a]pyrene	8.799	252	119923	40.71 UG	98
97) Indeno[1,2,3-cd]pyrene	10.249	276	136205	42.98 UG	91
98) Dibenz[a,h]anthracene	10.249	278	107206	42.15 UG	96
99) Benzo[g,h,i]perylene	10.666	276	119242	41.22 UG	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5908.D
Acq On : 29 Oct 2015 15:30
Operator : JC
Sample : ABN075-15,ICV040BNA1
Misc : N/A,N/A/,N/A,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 29 15:39:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5909.D
Acq On : 29 Oct 2015 15:46
Operator : JC
Sample : ABN07615,ICV040BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 29 15:37:32 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

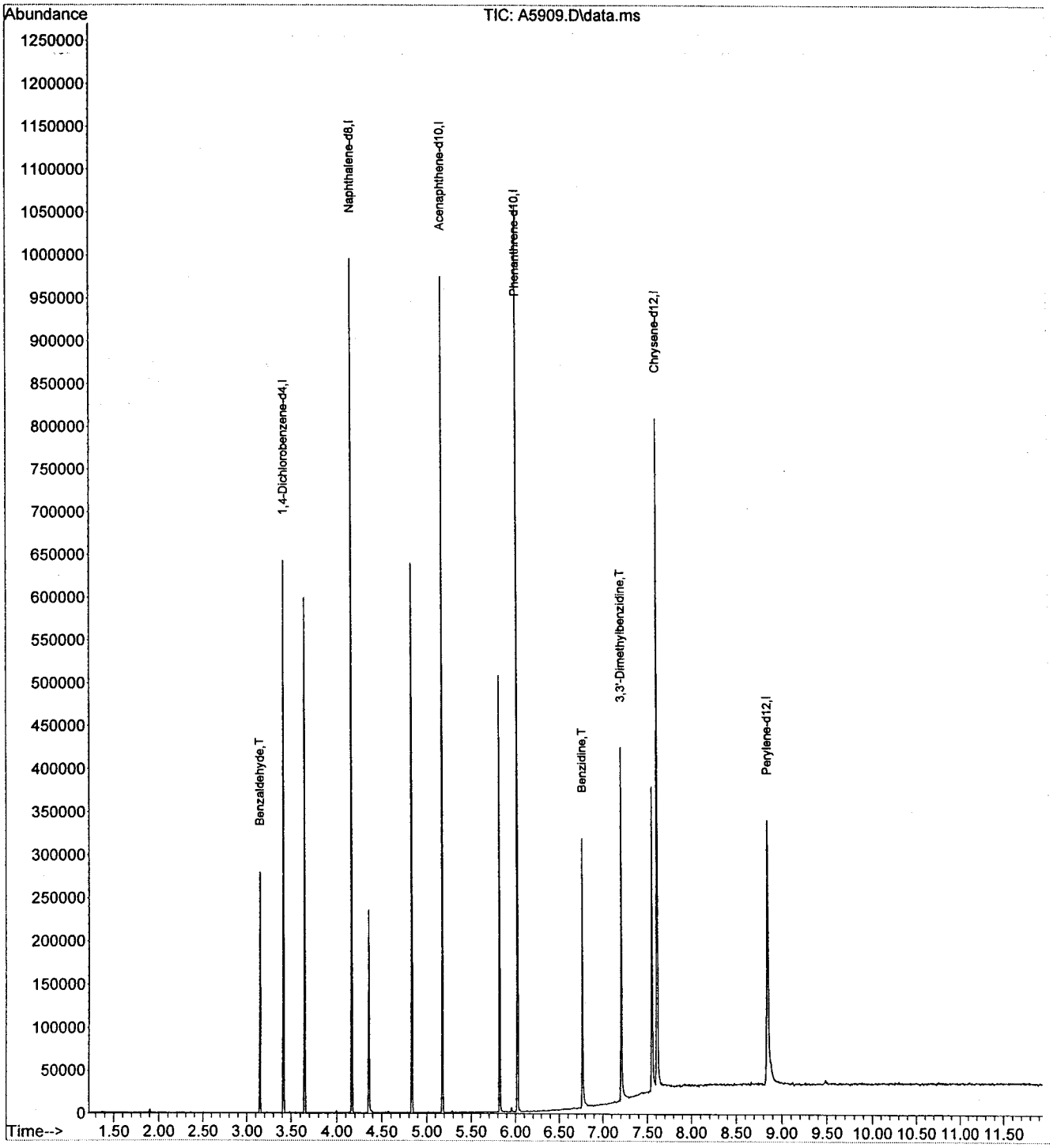
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	56143	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	231429	40.00	UG	0.00
43) Acenaphthene-d10	5.184	164	132555	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	222172	40.00	UG	0.00
82) Chrysene-d12	7.612	240	198702	40.00	UG	-0.02
92) Perylene-d12	8.847	264	143652	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0d	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0d	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.151	106	40902	35.61	UG	94
80) Benzidine	6.767	184	82737	34.61	UG	89
85) 3,3'-Dimethylbenzidine	7.205	212	110727m	32.92	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5909.D
Acq On : 29 Oct 2015 15:46
Operator : JC
Sample : ABN07615,ICV040BNA2
Misc : N/A,N/A/,N/A,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 29 15:37:32 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0500

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5915.D
Acq On : 29 Oct 2015 17:13
Operator : JC
Sample : ABN061-15,ICV000.5SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 29 18:31:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	96	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	96	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	92	0.00
72	T	Hexachlorobenzene	0.281	0.283	-0.7	95	0.00
74	M	Pentachlorophenol	0.033	0.038	-15.2	131	0.00
82	I	Chrysene-d12	1.000	1.000	0.0	98	0.00
88	T	Benzo[a]anthracene	1.127	1.071	5.0	96	0.00
92	I	Perylene-d12	1.000	1.000	0.0	95	0.00
94	T	Benzo[b]fluoranthene	0.960	0.910	5.2	94	0.00
95	T	Benzo[k]fluoranthene	1.577	1.525	3.3	94	0.00
96	T	Benzo[a]pyrene	1.093	1.024	6.3	92	0.00
97	T	Indeno[1,2,3-cd]pyrene	0.934	0.897	4.0	96	0.00
98	T	Dibenz[a,h]anthracene	0.744	0.666	10.5	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ASIM1215.M Thu Oct 29 18:31:09 2015 MSD_A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5915.D
Acq On : 29 Oct 2015 17:13
Operator : JC
Sample : ABN061-15,ICV000.5SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 29 17:31:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

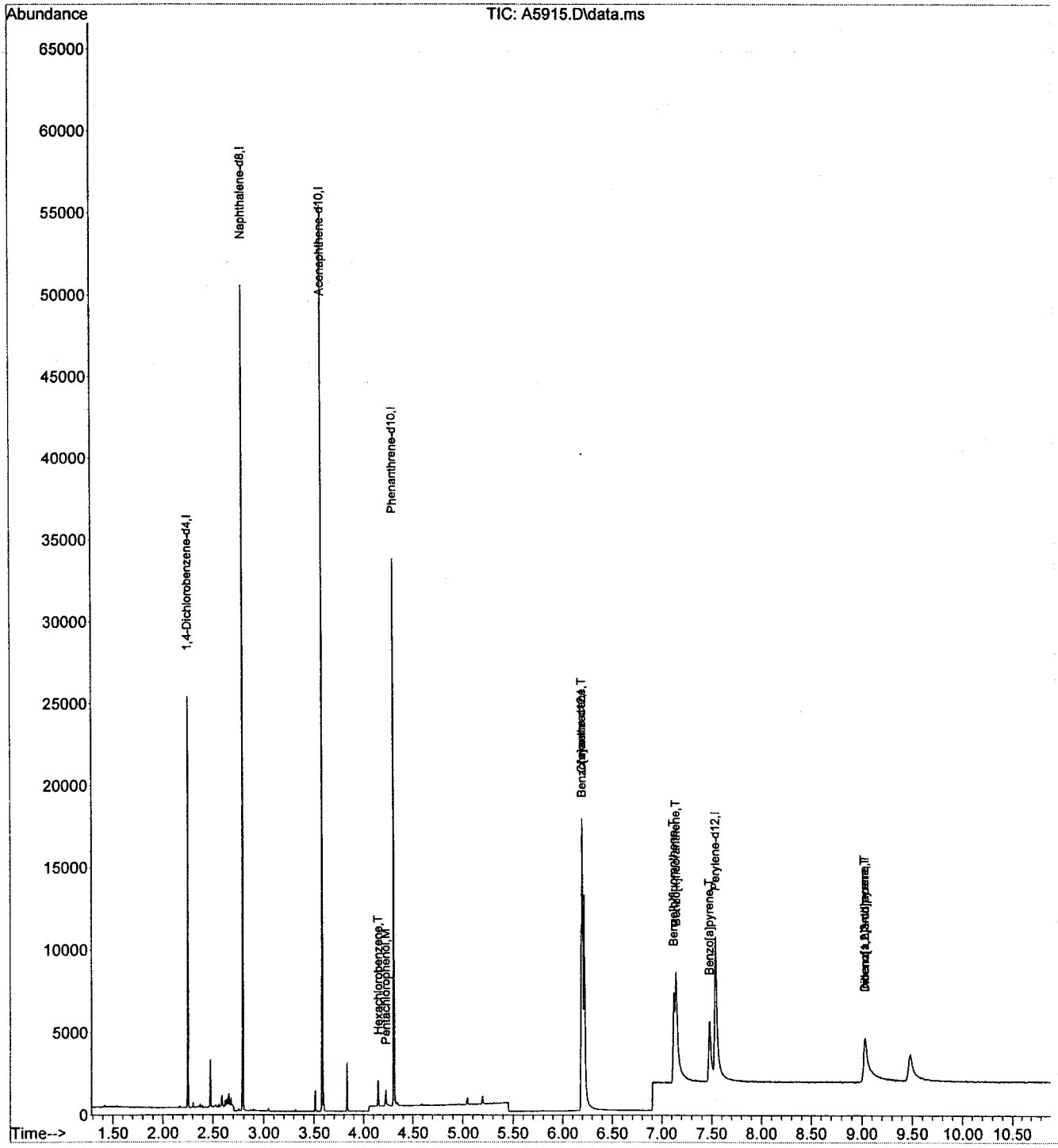
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.251	152	6178	1.00	UG	0.00
23) Naphthalene-d8	2.793	136	19126	1.00	UG	0.00
43) Acenaphthene-d10	3.581	164	9638	1.00	UG	0.00
66) Phenanthrene-d10	4.307	188	15145	1.00	UG	0.00
82) Chrysene-d12	6.202	240	11597	1.00	UG	0.00
92) Perylene-d12	7.543	264	10515	1.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#		
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#		
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.148	284	428	0.10	UG	98
74) Pentachlorophenol	4.225	266	286	0.58	UG	96
88) Benzo[a]anthracene	6.190	228	6212	0.48	UG	100
94) Benzo[b]fluoranthene	7.124	252	4782	0.47	UG	97
95) Benzo[k]fluoranthene	7.148	252	8016	0.48	UG	97
96) Benzo[a]pyrene	7.481	252	5386m	0.47	UG	
97) Indeno[1,2,3-cd]pyrene	9.036	276	4715m	0.48	UG	
98) Dibenz[a,h]anthracene	9.038	278	3499m	0.45	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5915.D
Acq On : 29 Oct 2015 17:13
Operator : JC
Sample : ABN061-15,ICV000.5SIM
Misc : N/A,N/A/,N/A,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 29 17:31:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5919.D
Acq On : 11 Nov 2015 14:31
Operator : JC
Sample : ABN049-15,CCV040BNA1
Misc : NA,NA,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Nov 12 08:11:26 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00
2	T	N-Nitrosodimethylamine	0.589	0.634	-7.6	97	-0.01
3	T	Pyridine	0.742	0.738	0.5	97	0.00
4	S	2-Fluorophenol	0.940	0.995	-5.9	104	0.00
5	T	Benzaldehyde	0.818	0.732	10.5	107	0.00
6	S	Phenol-d5	1.139	1.183	-3.9	103	0.00
7	MC	Phenol	1.287	1.219	5.3	98	0.00
8	T	Aniline	0.563	0.562	0.2	95	0.00
9	T	Bis(2-chloroethyl) ether	0.733	0.698	4.8	94	0.00
10	M	2-Chlorophenol	1.009	0.993	1.6	98	0.00
11	T	1,3-Dichlorobenzene	1.155	1.179	-2.1	101	0.00
12	MC	1,4-Dichlorobenzene	1.077	1.104	-2.5	100	0.00
13	T	Benzyl alcohol	0.655	0.643	1.8	99	0.00
14	T	1,2-Dichlorobenzene	1.049	1.085	-3.4	103	0.00
15	T	2-Methylphenol	0.854	0.849	0.6	100	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.587	1.448	8.8	90	0.00
17	T	4-Methylphenol	0.914	0.919	-0.5	99	-0.01
18	MP	N-Nitrosodi-n-propylamine	0.753	0.714	5.2	95	-0.01
19	T	Acetophenone	1.334	1.309	1.9	98	0.00
20	T	3-Methylphenol	0.914	0.919	-0.5	99	-0.01
21	T	Hexachloroethane	0.389	0.380	2.3	96	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	98	0.00
24	S	Nitrobenzene-d5	0.252	0.222	11.9	88	0.00
25	T	Nitrobenzene	0.262	0.236	9.9	94	-0.01
26	T	Isophorone	0.475	0.454	4.4	95	0.00
27	TC	2-Nitrophenol	0.124	0.114	8.1	90	0.00
28	T	2,4-Dimethylphenol	0.233	0.231	0.9	100	0.00
29	T	Bis(2-chloroethoxy) methane	0.281	0.282	-0.4	100	0.00
30	T	Benzoic acid	0.106	0.110	-3.8	90	-0.03
31	T	2,4-Dimethylaniline	0.290	0.295	-1.7	98	0.00
32	TC	2,4-Dichlorophenol	0.194	0.189	2.6	98	-0.01
33	M	1,2,4-Trichlorobenzene	0.217	0.224	-3.2	103	0.00
34	T	Naphthalene	0.701	0.690	1.6	100	0.00
35	T	4-Chloroaniline	0.369	0.361	2.2	97	0.00
36	T	4-Aminotoluene	0.458	0.474	-3.5	105	0.00
37	TC	Hexachlorobutadiene	0.123	0.125	-1.6	102	0.00
38	T	Caprolactam	0.102	0.092	9.8	87	-0.03
39	T	2-Aminotoluene	0.458	0.474	-3.5	105	0.00
40	MC	4-Chloro-3-methylphenol	0.201	0.190	5.5	96	-0.01
41	T	2-Methylnaphthalene	0.456	0.455	0.2	99	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	102	0.00
44	TP	Hexachlorocyclopentadiene	0.226	0.193	14.6	87	0.00
45	TC	2,4,6-Trichlorophenol	0.240	0.229	4.6	98	0.00
46	T	2,4,5-Trichlorophenol	0.247	0.245	0.8	99	0.00

47	S	2-Fluorobiphenyl	0.915	0.876	4.3	96	0.00
48	T	1,1'-Biphenyl	1.037	0.971	6.4	101	0.00
49	T	2-Chloronaphthalene	0.769	0.738	4.0	98	0.00
50	T	2-Nitroaniline	0.197	0.178	9.6	91	0.00
51	T	Dimethyl phthalate	0.877	0.856	2.4	100	0.00
52	T	2,6-Dinitrotoluene	0.164	0.153	6.7	92	0.00
53	T	Acenaphthylene	1.194	1.148	3.9	98	0.00
54	T	3-Nitroaniline	0.223	0.213	4.5	97	0.00
55	MC	Acenaphthene	0.766	0.722	5.7	99	0.00
56	TP	2,4-Dinitrophenol	0.070	0.068	2.9	88	0.00
57	MP	4-Nitrophenol	0.172	0.157	8.7	92	0.00
58	M	2,4-Dinitrotoluene	0.203	0.203	0.0	93	-0.01
59	T	Dibenzofuran	1.039	0.976	6.1	98	0.00
60	T	Diethyl phthalate	0.850	0.841	1.1	100	0.00
61	T	Fluorene	0.828	0.802	3.1	100	0.00
62	T	4-Chlorophenyl phenyl ether	0.432	0.434	-0.5	103	0.00
63	T	4-Nitroaniline	0.200	0.186	7.0	91	-0.01
64	T	1,2,4,5-Tetrachlorobenzene	0.370	0.363	1.9	103	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.181	0.178	1.7	97	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	101	0.00
67	T	4,6-Dinitro-2-methylphenol	0.066	0.062	6.1	89	-0.01
68	TC	N-Nitrosodiphenylamine	0.386	0.370	4.1	97	0.00
69	T	1,2-Diphenylhydrazine	0.537	0.497	7.4	95	-0.01
70	S	2,4,6-Tribromophenol	0.079	0.077	2.5	100	0.00
71	T	4-Bromophenyl phenyl ether	0.151	0.148	2.0	101	0.00
72	T	Hexachlorobenzene	0.167	0.162	3.0	100	0.00
73	T	Atrazine	0.142	0.134	5.6	98	-0.01
74	MC	Pentachlorophenol	0.091	0.091	0.0	92	0.00
75	T	Phenanthrene	0.725	0.679	6.3	99	0.00
76	T	Anthracene	0.712	0.689	3.2	100	0.00
77	T	Carbazole	0.679	0.635	6.5	96	0.00
78	T	Di-n-butyl phthalate	0.867	0.816	5.9	97	0.00
79	TC	Fluoranthene	0.736	0.711	3.4	99	-0.01
80	T	Benzidine	0.430	0.354	17.7	105	-0.05
82	I	Chrysene-d12	1.000	1.000	0.0	95	-0.02
83	M	Pyrene	0.973	1.016	-4.4	99	-0.01
84	S	Terphenyl-d14	0.805	0.783	2.7	93	0.00
85	T	3,3'-Dimethylbenzidine	0.677	0.571	15.7	122	-0.08
86	T	Butyl benzyl phthalate	0.454	0.452	0.4	93	-0.01
87	T	3,3'-Dichlorobenzidine	0.276	0.268	2.9	86	-0.02
88	T	Benzo[a]anthracene	0.824	0.796	3.4	93	-0.02
89	T	Chrysene	0.833	0.803	3.6	94	-0.02
90	T	Bis(2-ethylhexyl) phthalate	0.611	0.585	4.3	90	-0.02
92	I	Perylene-d12	1.000	1.000	0.0	91	-0.02
93	TC	Di-n-octyl phthalate	0.965	0.888	8.0	81	-0.02
94	T	Benzo[b]fluoranthene	0.736	0.740	-0.5	93	-0.03
95	T	Benzo[k]fluoranthene	0.823	0.837	-1.7	96	-0.03
96	TC	Benzo[a]pyrene	0.733	0.741	-1.1	91	-0.03
97	T	Indeno[1,2,3-cd]pyrene	0.789	0.862	-9.3	94	-0.05
98	T	Dibenz[a,h]anthracene	0.633	0.674	-6.5	89	-0.05
99	T	Benzo[g,h,i]perylene	0.720	0.755	-4.9	92	-0.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0

AW1215.M Thu Nov 12 08:11:57 2015 MSD_A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5919.D
Acq On : 11 Nov 2015 14:31
Operator : JC
Sample : ABN075-15,CCV040BNA1
Misc : NA,NA,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Nov 12 08:11:26 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	58173	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	237624	40.00	UG	0.00
43) Acenaphthene-d10	5.183	164	140919	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	231261	40.00	UG	0.00
82) Chrysene-d12	7.612	240	161875	40.00	UG	-0.02
92) Perylene-d12	8.842	264	142725	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	2.632	112	144688	105.83	UG	0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 105.83%#			
6) Phenol-d5	3.183	99	172086	103.91	UG	0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 103.91%#			
24) Nitrobenzene-d5	3.739	82	65870	44.06	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 88.12%			
47) 2-Fluorobiphenyl	4.777	172	154305	47.89	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 95.78%			
70) 2,4,6-Tribromophenol	5.627	330	44723	97.51	UG	0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 97.51%			
84) Terphenyl-d14	6.927	244	158477	48.63	UG	0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 97.26%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.616	74	36903	43.08	UG	95
3) Pyridine	1.669	52	42948	39.78	UG	96
7) Phenol	3.188	94	70938	37.90	UG	89
8) Aniline	3.226	66	32702	39.92	UG	98
9) Bis(2-chloroethyl) ether	3.247	63	40584	38.08	UG	95
10) 2-Chlorophenol	3.306	128	57785	39.37	UG	98
11) 1,3-Dichlorobenzene	3.397	146	68561	40.81	UG	99
12) 1,4-Dichlorobenzene	3.424	146	64197	40.97	UG	98
13) Benzyl alcohol	3.483	108	37407	39.28	UG	97
14) 1,2-Dichlorobenzene	3.536	146	63123	41.37	UG	99
15) 2-Methylphenol	3.547	108	49397	39.76	UG	100
16) Bis(2-chloroisopropyl)...	3.579	45	84209	36.48	UG	97
17) 4-Methylphenol	3.627	108	53484	40.22	UG	99
18) N-Nitrosodi-n-propylamine	3.654	70	41540	37.94	UG	97
19) Acetophenone	3.648	105	76156	39.26	UG	77
20) 3-Methylphenol	3.627	108	53484	40.22	UG	99
21) Hexachloroethane	3.729	117	22082	39.01	UG	94
25) Nitrobenzene	3.750	77	56050	36.03	UG	99
26) Isophorone	3.889	82	107779	38.16	UG	99
27) 2-Nitrophenol	3.943	139	27192	36.86	UG	98
28) 2,4-Dimethylphenol	3.943	107	54979	39.76	UG	97
29) Bis(2-chloroethoxy) me...	3.996	93	66929	40.04	UG	99
30) Benzoic acid	3.980	122	26121m	41.56	UG	
31) 2,4-Dimethylaniline	4.060	121	70212	40.71	UG	99
32) 2,4-Dichlorophenol	4.076	162	44944	39.08	UG	98
33) 1,2,4-Trichlorobenzene	4.140	180	53237	41.34	UG	98
34) Naphthalene	4.178	128	164062	39.41	UG #	73
35) 4-Chloroaniline	4.194	127	85795	39.17	UG	93
36) 4-Aminotoluene	3.670	106	112693	41.45	UG	93
37) Hexachlorobutadiene	4.280	225	29703	40.67	UG	98
38) Caprolactam	4.365	55	21793	35.97	UG	89
39) 2-Aminotoluene	3.670	106	112693	41.45	UG	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5919.D
Acq On : 11 Nov 2015 14:31
Operator : JC
Sample : ABN075-15,CCV040BNA1
Misc : NA,NA,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Nov 12 08:11:26 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

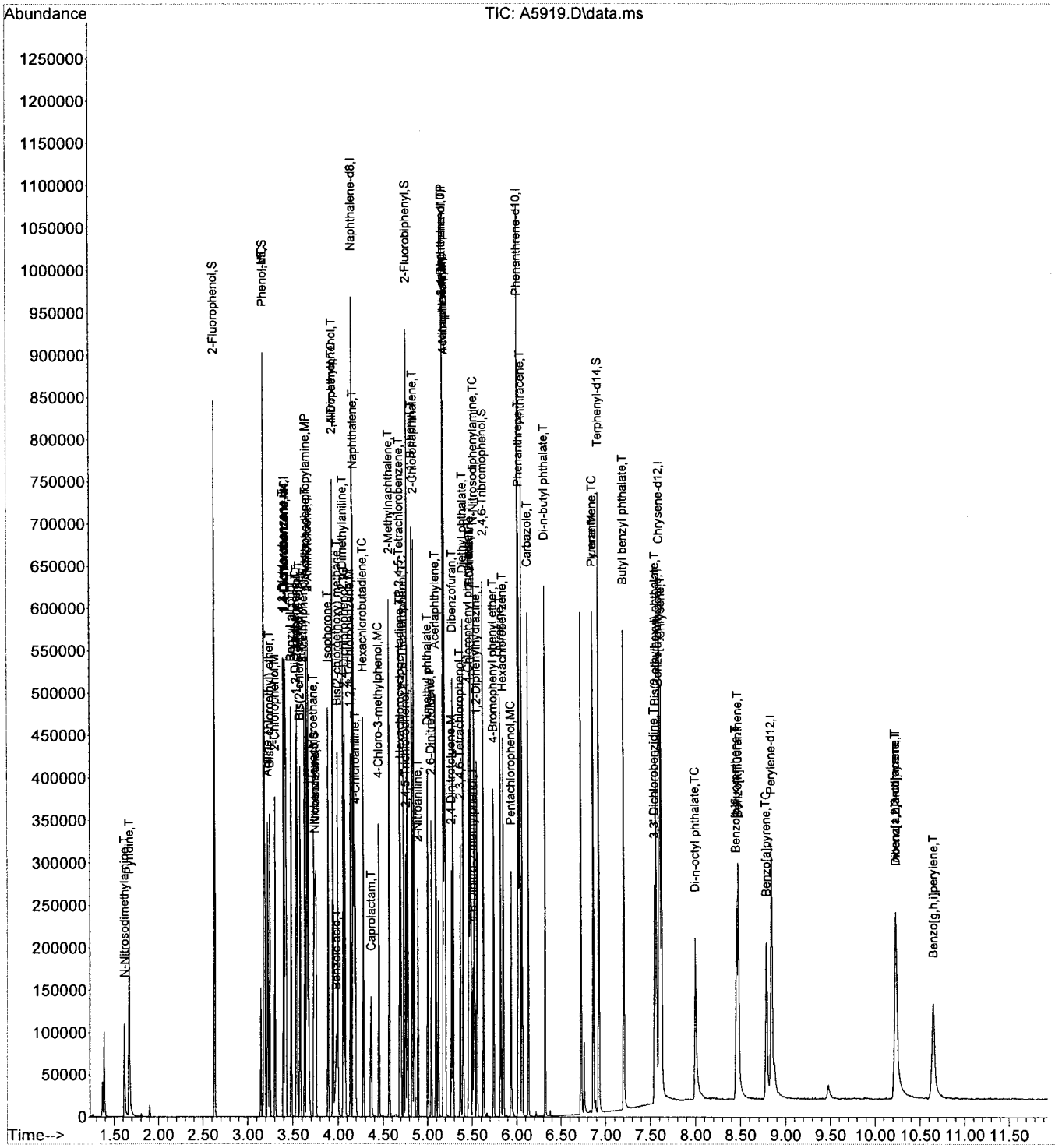
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) 4-Chloro-3-methylphenol	4.451	107	45059	37.73	UG	96
41) 2-Methylnaphthalene	4.574	142	108111	39.88	UG	99
44) Hexachlorocyclopentadiene	4.702	237	27235	34.24	UG	98
45) 2,4,6-Trichlorophenol	4.734	196	32206	38.13	UG	98
46) 2,4,5-Trichlorophenol	4.761	196	34490	39.70	UG	100
48) 1,1'-Biphenyl	4.830	154	136799	37.46	UG	100
49) 2-Chloronaphthalene	4.852	162	104018	38.38	UG	99
50) 2-Nitroaniline	4.895	65	25092	36.22	UG	99
51) Dimethyl phthalate	5.007	163	120560	39.02	UG	99
52) 2,6-Dinitrotoluene	5.044	165	21564	37.42	UG	96
53) Acenaphthylene	5.098	152	161809	38.46	UG	99
54) 3-Nitroaniline	4.895	138	30084	38.37	UG	99
55) Acenaphthene	5.199	153	101762	37.69	UG	97
56) 2,4-Dinitrophenol	5.189	184	9599	39.03	UG	94
57) 4-Nitrophenol	5.194	139	22162	36.66	UG	100
58) 2,4-Dinitrotoluene	5.269	165	28628	39.94	UG	74
59) Dibenzofuran	5.285	168	137570	37.58	UG	97
60) Diethyl phthalate	5.403	149	118562	39.59	UG	99
61) Fluorene	5.488	166	113057	38.77	UG	100
62) 4-Chlorophenyl phenyl ...	5.467	204	61093	40.13	UG	96
63) 4-Nitroaniline	5.478	138	26243	37.23	UG	96
64) 1,2,4,5-Tetrachloroben...	4.691	216	51155	39.20	UG	98
65) 2,3,4,6-Tetrachlorophenol	5.371	232	25069	39.40	UG	82
67) 4,6-Dinitro-2-methylph...	5.510	198	14306	37.71	UG	94
68) N-Nitrosodiphenylamine	5.526	169	85464	38.32	UG	98
69) 1,2-Diphenylhydrazine	5.553	77	114977	37.06	UG	97
71) 4-Bromophenyl phenyl e...	5.745	248	34145	39.07	UG	94
72) Hexachlorobenzene	5.852	284	37399	38.76	UG	94
73) Atrazine	5.820	200	31057	37.86	UG	97
74) Pentachlorophenol	5.938	266	21005	39.78	UG	100
75) Phenanthrene	6.034	178	157100	37.49	UG	99
76) Anthracene	6.061	178	159357	38.70	UG	99
77) Carbazole	6.130	167	146891	37.44	UG	99
78) Di-n-butyl phthalate	6.323	149	188816	37.65	UG	100
79) Fluoranthene	6.863	202	164477	38.64	UG	91
83) Pyrene	6.863	202	164477	41.79	UG	96
86) Butyl benzyl phthalate	7.205	149	73103	39.75	UG	96
87) 3,3'-Dichlorobenzidine	7.548	252	43419	38.81	UG	97
88) Benzo[a]anthracene	7.596	228	128857	38.66	UG	99
89) Chrysene	7.628	228	129960	38.55	UG	98
90) Bis(2-ethylhexyl) phth...	7.564	149	94752	38.31	UG	95
93) Di-n-octyl phthalate	7.997	149	126682	36.78	UG	99
94) Benzo[b]fluoranthene	8.457	252	105546	40.18	UG	97
95) Benzo[k]fluoranthene	8.478	252	119427	40.66	UG	98
96) Benzo[a]pyrene	8.788	252	105704	40.40	UG	96
97) Indeno[1,2,3-cd]pyrene	10.233	276	123083	43.73	UG	92
98) Dibenz[a,h]anthracene	10.233	278	96183	42.58	UG	96
99) Benzo[g,h,i]perylene	10.650	276	107800	41.96	UG	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5919.D
Acq On : 11 Nov 2015 14:31
Operator : JC
Sample : ABN075-15,CCV040BNA1
Misc : NA,NA,NA,1
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Nov 12 08:11:26 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5920.D
Acq On : 11 Nov 2015 14:46
Operator : JC
Sample : ABN076-15,CCV040BNA2
Misc : NA,NA,NA,1
ALS Vial : 98 Sample Multiplier: 1

Quant Time: Nov 12 08:05:38 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

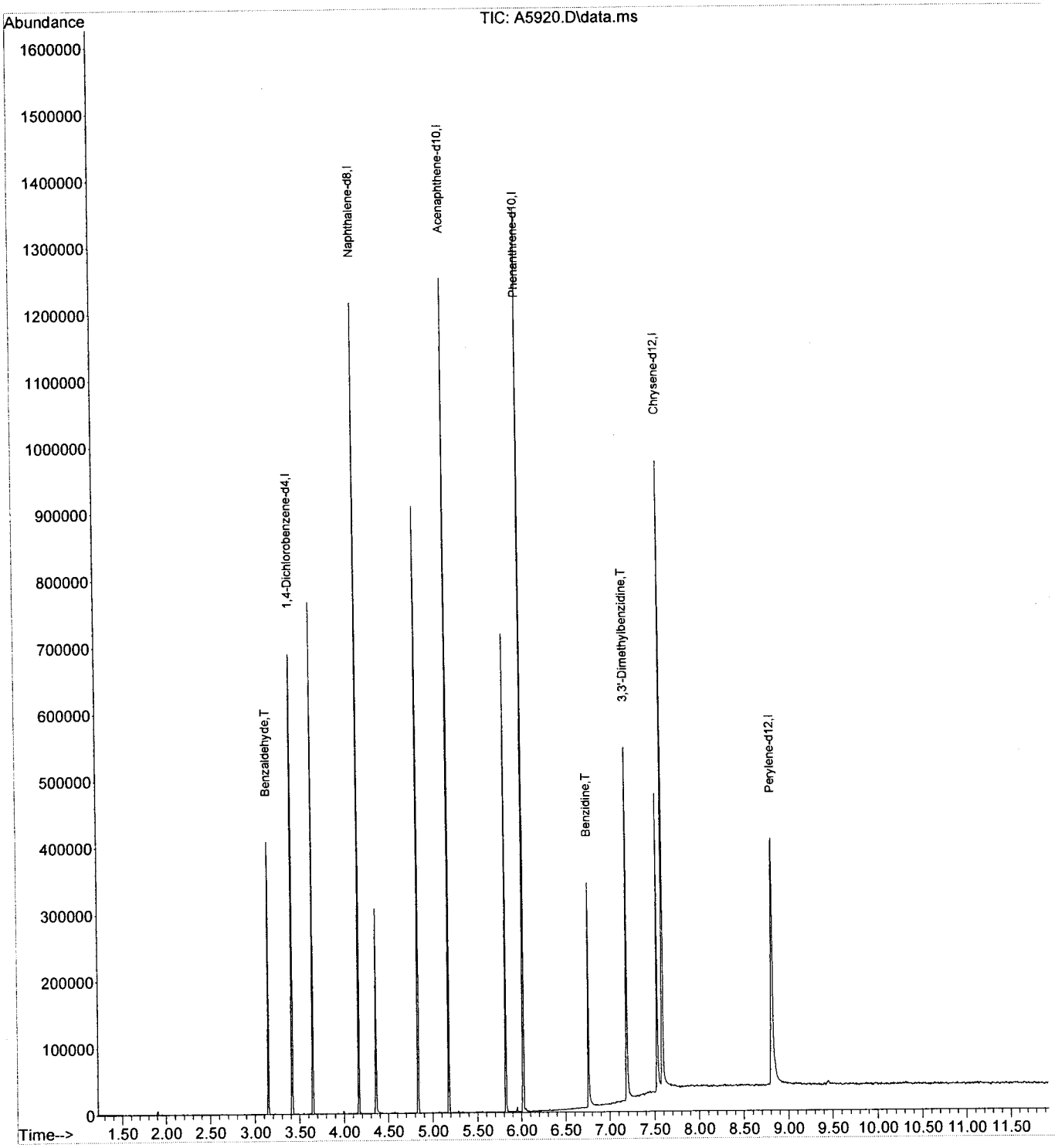
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.419	152	72696	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	297842	40.00	UG	0.00
43) Acenaphthene-d10	5.184	164	174474	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	294912	40.00	UG	0.00
82) Chrysene-d12	7.585	240	250364	40.00	UG	-0.04
92) Perylene-d12	8.821	264	169446m	40.00	UG	-0.04
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.000	82	0d	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	0.000	244	0d	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery = 0.00%#			
Target Compounds						Qvalue
5) Benzaldehyde	3.146	106	53184	35.76	UG	97
80) Benzidine	6.756	184	104374	32.89	UG	89
85) 3,3'-Dimethylbenzidine	7.189	212	143051m	33.75	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5920.D
Acq On : 11 Nov 2015 14:46
Operator : JC
Sample : ABN076-15,CCV040BNA2
Misc : NA,NA,NA,1
ALS Vial : 98 Sample Multiplier: 1

Quant Time: Nov 12 08:05:38 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5921.D
Acq On : 11 Nov 2015 15:01
Operator : JC
Sample : ABN061-15,CCV000.5SIM
Misc : NA,NA,NA,1
ALS Vial : 99 Sample Multiplier: 1

Quant Time: Nov 11 15:41:15 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	89	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	92	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	94	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	90	0.00
72	T	Hexachlorobenzene	0.281	0.290	-3.2	95	0.00
74	M	Pentachlorophenol	0.033	0.031	6.1	107	0.00
82	I	Chrysene-d12	1.000	1.000	0.0	99	0.00
88	T	Benzo[a]anthracene	1.127	1.194	-5.9	108	0.00
92	I	Perylene-d12	1.000	1.000	0.0	100	0.00
94	T	Benzo[b]fluoranthene	0.960	1.059	-10.3	115	0.00
95	T	Benzo[k]fluoranthene	1.577	1.613	-2.3	104	0.00
96	T	Benzo[a]pyrene	1.093	1.161	-6.2	110	0.00
97	T	Indeno[1,2,3-cd]pyrene	0.934	0.927	0.7	105	0.00
98	T	Dibenz[a,h]anthracene	0.744	0.804	-8.1	120	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ASIM1215.M Wed Nov 11 15:41:21 2015 MSD_A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5921.D
Acq On : 11 Nov 2015 15:01
Operator : JC
Sample : ABN061-15,CCV000.5SIM
Misc : NA,NA,NA,1
ALS Vial : 99 Sample Multiplier: 1

Quant Time: Nov 11 15:41:15 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

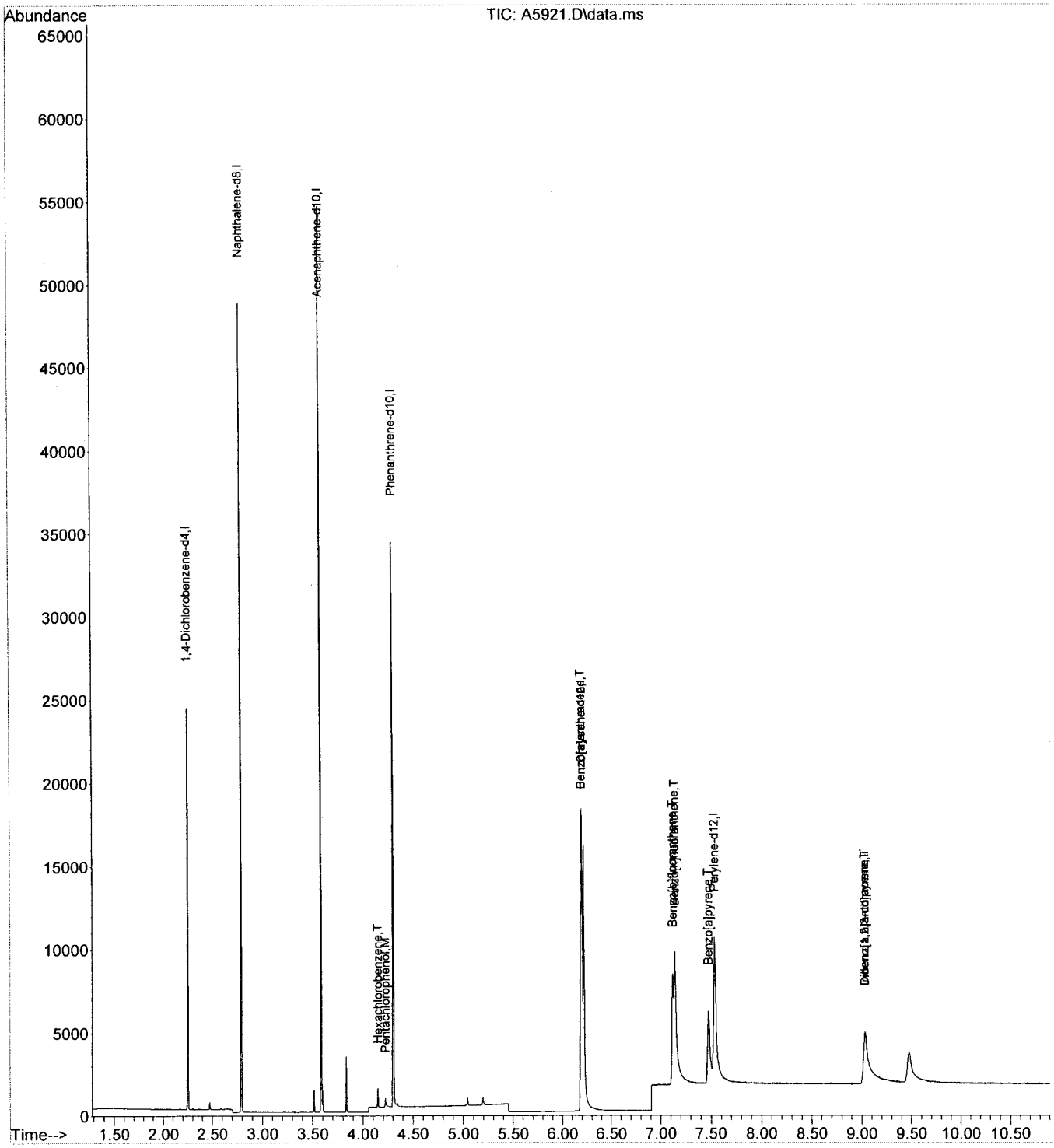
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.251	152	5795	1.00	UG		0.00
23) Naphthalene-d8	2.795	136	18357	1.00	UG		0.00
43) Acenaphthene-d10	3.585	164	9486	1.00	UG		0.00
66) Phenanthrene-d10	4.304	188	14815	1.00	UG		0.00
82) Chrysene-d12	6.201	240	11684	1.00	UG		0.00
92) Perylene-d12	7.534	264	11081m	1.00	UG		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	0.000	112	0	0.00	UG		
Spiked Amount 100.000	Range 10 - 83		Recovery =	0.00%#			
6) Phenol-d5	0.000	99	0	0.00	UG		
Spiked Amount 100.000	Range 10 - 91		Recovery =	0.00%#			
24) Nitrobenzene-d5	0.000	82	0	0.00	UG		
Spiked Amount 50.000	Range 25 - 94		Recovery =	0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG		
Spiked Amount 50.000	Range 23 - 102		Recovery =	0.00%#			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG		
Spiked Amount 100.000	Range 27 - 110		Recovery =	0.00%#			
84) Terphenyl-d14	0.000	244	0	0.00	UG		
Spiked Amount 50.000	Range 33 - 113		Recovery =	0.00%#			
Target Compounds							Qvalue
72) Hexachlorobenzene	4.148	284	430m	0.10	UG		
74) Pentachlorophenol	4.223	266	233m	0.48	UG		
88) Benzo[a]anthracene	6.189	228	6975	0.53	UG		100
94) Benzo[b]fluoranthene	7.120	252	5866	0.55	UG		99
95) Benzo[k]fluoranthene	7.142	252	8939	0.51	UG		97
96) Benzo[a]pyrene	7.474	252	6432	0.53	UG	#	91
97) Indeno[1,2,3-cd]pyrene	9.030	276	5134	0.50	UG		100
98) Dibenz[a,h]anthracene	9.034	278	4457m	0.54	UG		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5921.D
Acq On : 11 Nov 2015 15:01
Operator : JC
Sample : ABN061-15,CCV000.5SIM
Misc : NA,NA,NA,1
ALS Vial : 99 Sample Multiplier: 1

Quant Time: Nov 11 15:41:15 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



E15-10258 0513

Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BW1115.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Oct 22 12:25:22 2015
Response Via : Initial Calibration

Calibration Files
1 =B3560.D 10 =B3561.D 20 =B3562.D
40 =B3559.D 80 =B3563.D 160 =B3564.D =

		Compound	1	10	20	40	80	160	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD							
2)	T	N-Nitrosodimethyl	0.416	0.591	0.657	0.658	0.673	0.647	0.607	16.09
3)	T	Pyridine	0.525	0.751	0.826	0.801	0.784	0.770	0.743	14.77
4)	S	2-Fluorophenol	1.023	0.949	0.966	0.956	1.015	0.986	0.982	3.16
5)	T	Benzaldehyde	0.418	0.663	0.731	0.677	0.761	0.749	0.667	19.18
6)	S	Phenol-d5	1.207	1.216	1.219	1.228	1.293	1.244	1.234	2.56
7)	MC	Phenol	1.291	1.251	1.262	1.262	1.307	1.310	1.281	2.00
8)	T	Aniline	0.556	0.536	0.560	0.552	0.557	0.512	0.546	3.41
9)	T	Bis(2-chloroethyl	0.623	0.680	0.692	0.705	0.697	0.682	0.680	4.32
10)	M	2-Chlorophenol	1.082	1.047	1.086	1.065	1.112	1.115	1.085	2.42
11)	T	1,3-Dichlorobenze	1.350	1.194	1.224	1.213	1.225	1.241	1.241	4.45
12)	MC	1,4-Dichlorobenze	1.247	1.258	1.300	1.275	1.280	1.274	1.272	1.42
13)	T	Benzyl alcohol	0.479	0.581	0.665	0.659	0.708	0.698	0.632	13.79
14)	T	1,2-Dichlorobenze	1.114	1.145	1.195	1.177	1.221	1.200	1.175	3.36
15)	T	2-Methylphenol	0.976	0.949	0.995	0.985	1.019	0.969	0.982	2.45
16)	T	Bis(2-chloroisopr	1.214	1.223	1.258	1.253	1.257	1.192	1.233	2.23
17)	T	4-Methylphenol	0.731	0.940	1.034	1.008	1.056	1.015	0.964	12.49
18)	MP	N-Nitrosodi-n-pro	0.661	0.673	0.712	0.705	0.717	0.690	0.693	3.27
19)	T	Acetophenone	1.319	1.245	1.369	1.330	1.394	1.363	1.337	3.93
20)	T	3-Methylphenol	0.731	0.940	1.034	1.008	1.056	1.015	0.964	12.49
21)	T	Hexachloroethane	0.409	0.417	0.440	0.431	0.429	0.435	0.427	2.74
23)	I	Naphthalene-d8	ISTD							
24)	S	Nitrobenzene-d5	0.237	0.242	0.241	0.242	0.258	0.237	0.243	3.17
25)	T	Nitrobenzene	0.271	0.253	0.244	0.238	0.230	0.242	0.247	5.74
26)	T	Isophorone	0.563	0.463	0.468	0.473	0.479	0.476	0.487	7.76
27)	TC	2-Nitrophenol	0.094	0.121	0.134	0.134	0.144	0.152	0.130	15.86
28)	T	2,4-Dimethylpheno	0.190	0.217	0.236	0.240	0.242	0.235	0.227	8.91
29)	T	Bis(2-chloroethox	0.236	0.290	0.306	0.305	0.305	0.310	0.292	9.75
30)	T	Benzoic acid		0.094	0.117	0.096	0.124	0.114	0.109	12.21
31)	T	2,4-Dimethylanili	0.303	0.309	0.327	0.335	0.346	0.338	0.326	5.20
32)	TC	2,4-Dichloropheno	0.164	0.208	0.220	0.223	0.237	0.236	0.215	12.61
33)	M	1,2,4-Trichlorobe	0.271	0.259	0.258	0.257	0.264	0.269	0.263	2.26
34)	T	Naphthalene	0.776	0.776	0.786	0.777	0.816	0.761	0.782	2.38
35)	T	4-Chloroaniline	0.263	0.312	0.334	0.336	0.449	0.344	0.340	17.97
36)	T	4-Aminotoluene	0.431	0.436	0.457	0.454	0.463	0.439	0.447	2.88
37)	TC	Hexachlorobutadie	0.130	0.140	0.144	0.144	0.143	0.153	0.142	5.22
38)	T	Caprolactam	0.081	0.087	0.100	0.102	0.105	0.100	0.096	9.70
39)	T	2-Aminotoluene	0.431	0.436	0.457	0.454	0.463	0.439	0.447	2.88
40)	MC	4-Chloro-3-methyl	0.171	0.185	0.201	0.204	0.214	0.207	0.197	8.13
41)	T	2-Methylnaphthale	0.487	0.483	0.507	0.510	0.511	0.510	0.501	2.54
43)	I	Acenaphthene-d10	ISTD							
44)	TP	Hexachlorocyclope		0.186	0.131	0.175	0.158	0.213	0.173	17.75
45)	TC	2,4,6-Trichloroph	0.228	0.243	0.272	0.273	0.287	0.289	0.265	9.31
46)	T	2,4,5-Trichloroph	0.276	0.285	0.292	0.294	0.308	0.317	0.295	5.02
47)	S	2-Fluorobiphenyl	1.020	1.031	1.011	0.996	0.970	1.009	1.006	2.10
48)	T	1,1'-Biphenyl	1.158	1.065	1.093	1.086	1.073	1.072	1.091	3.14
49)	T	2-Chloronaphthale	0.784	0.819	0.871	0.837	0.855	0.845	0.835	3.63
50)	T	2-Nitroaniline	0.127	0.175	0.192	0.199	0.202	0.206	0.183	16.22
51)	T	Dimethyl phthalat	0.929	0.900	0.937	0.943	0.936	0.942	0.931	1.74
52)	T	2,6-Dinitrotoluen	0.131	0.171	0.193	0.199	0.204	0.207	0.184	16.24
53)	T	Acenaphthylene	1.222	1.267	1.347	1.336	1.372	1.331	1.312	4.31

54)	T	3-Nitroaniline	0.149	0.207	0.233	0.235	0.243	0.241	0.218	16.57
55)	MC	Acenaphthene	0.868	0.825	0.841	0.827	0.826	0.816	0.834	2.21
56)	TP	2,4-Dinitrophenol		0.066	0.060	0.082	0.089	0.089	0.077	17.18
57)	MP	4-Nitrophenol		0.159	0.111	0.123	0.129	0.115	0.127	14.98
58)	M	2,4-Dinitrotoluen	0.152	0.228	0.262	0.273	0.220	0.275	0.235	19.87
59)	T	Dibenzofuran	1.276	1.261	1.314	1.295	1.277	1.309	1.289	1.61
60)	T	Diethyl phthalate	0.830	0.873	0.914	0.917	0.916	0.913	0.894	3.97
61)	T	Fluorene	0.934	0.962	1.031	1.016	1.023	1.015	0.997	3.93
62)	T	4-Chlorophenyl ph	0.462	0.491	0.509	0.521	0.511	0.531	0.504	4.88
63)	T	4-Nitroaniline	0.150	0.208	0.259	0.262	0.254	0.269	0.234	19.83
64)		1,2,4,5-Tetrachlo	0.435	0.437	0.445	0.448	0.439	0.469	0.445	2.77
65)	T	2,3,4,6-Tetrachlo	0.215	0.235	0.256	0.304	0.269	0.273	0.258	12.06
66)	I	Phenanthrene-d10	----------ISTD----------							
67)	T	4,6-Dinitro-2-met		0.075	0.071	0.085	0.079	0.097	0.081	12.78
68)	TC	N-Nitrosodiphenyl	0.387	0.417	0.420	0.424	0.421	0.434	0.417	3.79
69)	T	1,2-Diphenylhydra	0.509	0.547	0.559	0.571	0.555	0.562	0.551	3.96
70)	S	2,4,6-Tribromophe	0.131	0.138	0.142	0.141	0.143	0.141	0.139	3.30
71)	T	4-Bromophenyl phe	0.187	0.182	0.193	0.191	0.198	0.205	0.193	4.20
72)	T	Hexachlorobenzene	0.232	0.234	0.230	0.239	0.241	0.245	0.237	2.33
73)	T	Atrazine	0.134	0.143	0.160	0.158	0.166	0.160	0.154	7.93
74)	MC	Pentachlorophenol		0.082	0.104	0.116	0.124	0.134	0.112	17.68
75)	T	Phenanthrene	0.814	0.789	0.824	0.809	0.794	0.810	0.807	1.61
76)	T	Anthracene	0.745	0.761	0.808	0.809	0.814	0.823	0.793	4.06
77)	T	Carbazole	0.655	0.703	0.750	0.755	0.733	0.727	0.721	5.14
78)	T	Di-n-butyl phthal	0.714	0.780	0.858	0.876	0.878	0.895	0.834	8.56
79)	TC	Fluoranthene	0.791	0.796	0.861	0.863	0.847	0.848	0.834	3.89
80)	T	Benzidine		0.434	0.482	0.471	0.558	0.536	0.496	10.15
82)	I	Chrysene-d12	----------ISTD----------							
83)	M	Pyrene	0.946	0.932	1.001	0.956	1.061	1.064	0.993	5.86
84)	S	Terphenyl-d14	0.888	0.868	0.869	0.870	0.891	0.900	0.881	1.58
85)	T	3,3'-Dimethylbenz	0.389	0.584	0.633	0.568	0.723	0.683	0.597	19.65
86)	T	Butyl benzyl phth	0.274	0.343	0.370	0.387	0.427	0.432	0.372	15.77
87)	T	3,3'-Dichlorobenz	0.301	0.301	0.338	0.335	0.314	0.287	0.313	6.53
88)	T	Benzo[a]anthracen	1.056	0.856	0.915	0.871	0.921	0.921	0.923	7.63
89)	T	Chrysene	0.836	0.856	0.867	0.840	0.869	0.855	0.854	1.56
90)	T	Bis(2-ethylhexyl)	0.364	0.459	0.496	0.540	0.570	0.592	0.504	16.64
92)	I	Perylene-d12	----------ISTD----------							
93)	TC	Di-n-octyl phthal	0.562	0.677	0.788	0.887	0.891	0.971	0.796	19.21
94)	T	Benzo[b]fluoranth	0.749	0.742	0.841	0.953	1.017	1.103	0.901	16.39
95)	T	Benzo[k]fluoranth	0.963	0.898	0.947	0.849	0.780	0.954	0.899	8.04
96)	TC	Benzo[a]pyrene	0.769	0.761	0.828	0.821	0.839	0.867	0.814	5.10
97)	T	Indeno[1,2,3-cd]p	0.841	0.770	0.946	0.936	1.111	1.143	0.958	15.30
98)	T	Dibenz[a,h]anthra	0.642	0.648	0.789	0.777	0.917	0.947	0.787	16.38
99)	T	Benzo[g,h,i]peryl	0.693	0.674	0.784	0.776	0.924	0.945	0.799	14.23

(#) = Out of Range

BW1115.M Thu Oct 22 12:25:29 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3559.D
Acq On : 21 Oct 2015 10:32
Operator : KIM
Sample : ABN066-15,ICC040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 22 08:37:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	55703	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	226029	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	138639	40.00	UG	-0.03
66) Phenanthrene-d10	6.32	188	239863	40.00	UG	0.00
82) Chrysene-d12	8.01	240	228508	40.00	UG	0.12
92) Perylene-d12	9.26	264	203995	40.00	UG	0.14
System Monitoring Compounds						
4) 2-Fluorophenol	2.74	112	133062	76.62	UG	-0.04
Spiked Amount 100.000	Range 10 - 100		Recovery = 76.62%			
6) Phenol-d5	3.34	99	171030	82.90	UG	-0.04
Spiked Amount 100.000	Range 10 - 102		Recovery = 82.90%			
24) Nitrobenzene-d5	3.91	82	68278	40.68	UG	-0.04
Spiked Amount 50.000	Range 27 - 102		Recovery = 81.36%			
47) 2-Fluorobiphenyl	4.97	172	172629	39.65	UG	-0.03
Spiked Amount 50.000	Range 26 - 101		Recovery = 79.30%			
70) 2,4,6-Tribromophenol	5.91	330	84299	70.39	UG	-0.02
Spiked Amount 100.000	Range 22 - 115		Recovery = 70.39%			
84) Terphenyl-d14	7.26	244	248544	43.66	UG	0.07
Spiked Amount 50.000	Range 23 - 124		Recovery = 87.32%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.57	74	36661	34.56	UG	68
3) Pyridine	1.62	52	44598	38.35	UG	91
7) Phenol	3.35	94	70305	29.52	UG	76
8) Aniline	3.37	66	30769	38.63	UG	85
9) Bis(2-chloroethyl) ether	3.40	63	39263	34.82	UG	96
10) 2-Chlorophenol	3.45	128	59334	29.21	UG	98
11) 1,3-Dichlorobenzene	3.55	146	67589	29.94	UG	96
12) 1,4-Dichlorobenzene	3.58	146	71020	30.11	UG	98
13) Benzyl alcohol	3.65	108	36720	33.94	UG	88
14) 1,2-Dichlorobenzene	3.69	146	65561	30.56	UG	92
15) 2-Methylphenol	3.72	108	54849	31.42	UG	99
16) Bis(2-chloroisopropyl) eth	3.74	45	69815	36.49	UG	97
17) 4-Methylphenol	3.80	108	56139	33.08	UG	100
18) N-Nitrosodi-n-propylamine	3.82	70	39284	34.29	UG	94
19) Acetophenone	3.82	105	74061m	28.81	UG	
20) 3-Methylphenol	3.80	108	56139	33.10	UG	99
21) Hexachloroethane	3.89	117	23986	31.11	UG	94
25) Nitrobenzene	3.92	77	53842	30.73	UG	95
26) Isophorone	4.06	82	106800	31.36	UG	100
27) 2-Nitrophenol	4.12	139	30315	28.81	UG	86
28) 2,4-Dimethylphenol	4.12	107	54245	31.14	UG	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3559.D
Acq On : 21 Oct 2015 10:32
Operator : KIM
Sample : ABN066-15,ICC040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 22 08:37:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.18	93	69045	31.96	UG		99
30) Benzoic acid	4.18	105	21722m	23.00	UG		
31) 2,4-Dimethylaniline	4.23	121	75751	38.80	UG	#	100
32) 2,4-Dichlorophenol	4.26	162	50342	28.34	UG		99
33) 1,2,4-Trichlorobenzene	4.31	180	58000	28.14	UG		98
34) Naphthalene	4.35	128	175641	28.82	UG	#	99
35) 4-Chloroaniline	4.37	127	76052	31.50	UG		97
36) 4-Aminotoluene	3.84	106	102715	35.11	UG		99
37) Hexachlorobutadiene	4.45	225	32465	27.40	UG		99
38) Caprolactam	4.56	55	23056	32.19	UG		97
39) 2-Aminotoluene	3.84	106	102715	35.11	UG		99
40) 4-Chloro-3-methylphenol	4.65	107	46067	30.82	UG		99
41) 2-Methylnaphthalene	4.75	142	115255	29.08	UG		100
44) Hexachlorocyclopentadiene	4.89	237	24301	28.02	UG		99
45) 2,4,6-Trichlorophenol	4.93	196	37900	28.79	UG		99
46) 2,4,5-Trichlorophenol	4.96	196	40748	30.72	UG		99
48) 1,1'-Biphenyl	5.02	154	150530	28.40	UG		99
49) 2-Chloronaphthalene	5.04	162	115991	29.61	UG		99
50) 2-Nitroaniline	5.09	65	27627	38.43	UG		88
51) Dimethyl phthalate	5.20	163	130755	30.93	UG		100
52) 2,6-Dinitrotoluene	5.24	165	27614	32.39	UG		91
53) Acenaphthylene	5.29	152	185178	30.28	UG		100
54) 3-Nitroaniline	5.33	138	32581	33.77	UG		97
55) Acenaphthene	5.39	153	114674	30.46	UG		99
56) 2,4-Dinitrophenol	5.39	184	11420	39.15	UG		10
57) 4-Nitrophenol	5.41	65	17019	34.88	UG		81
58) 2,4-Dinitrotoluene	5.48	165	37845	34.47	UG		93
59) Dibenzofuran	5.48	168	179522	32.23	UG		94
60) Diethyl phthalate	5.63	149	127112	31.83	UG		99
61) Fluorene	5.73	166	140846	30.60	UG		100
62) 4-Chlorophenyl phenyl ethe	5.71	204	72193	30.69	UG		98
63) 4-Nitroaniline	5.74	138	36297	35.25	UG		78
64) 1,2,4,5-Tetrachlorobenzene	4.88	216	124150	28.84	UG		99
65) 2,3,4,6-Tetrachlorophenol	5.59	232	42123	40.27	UG		100
67) 4,6-Dinitro-2-methylphenol	5.78	198	20413	31.35	UG		71
68) N-Nitrosodiphenylamine	5.79	169	101705	29.06	UG		100
69) 1,2-Diphenylhydrazine	5.82	77	137045	32.82	UG		89
71) 4-Bromophenyl phenyl ether	6.04	248	45885	27.92	UG		99
72) Hexachlorobenzene	6.15	284	57256	28.30	UG		99
73) Atrazine	6.13	200	37914	32.51	UG		96
74) Pentachlorophenol	6.24	266	27889	26.68	UG		97
75) Phenanthrene	6.33	178	194046	28.82	UG		100
76) Anthracene	6.36	178	194088	29.18	UG		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3559.D
Acq On : 21 Oct 2015 10:32
Operator : KIM
Sample : ABN066-15,ICC040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 22 08:37:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

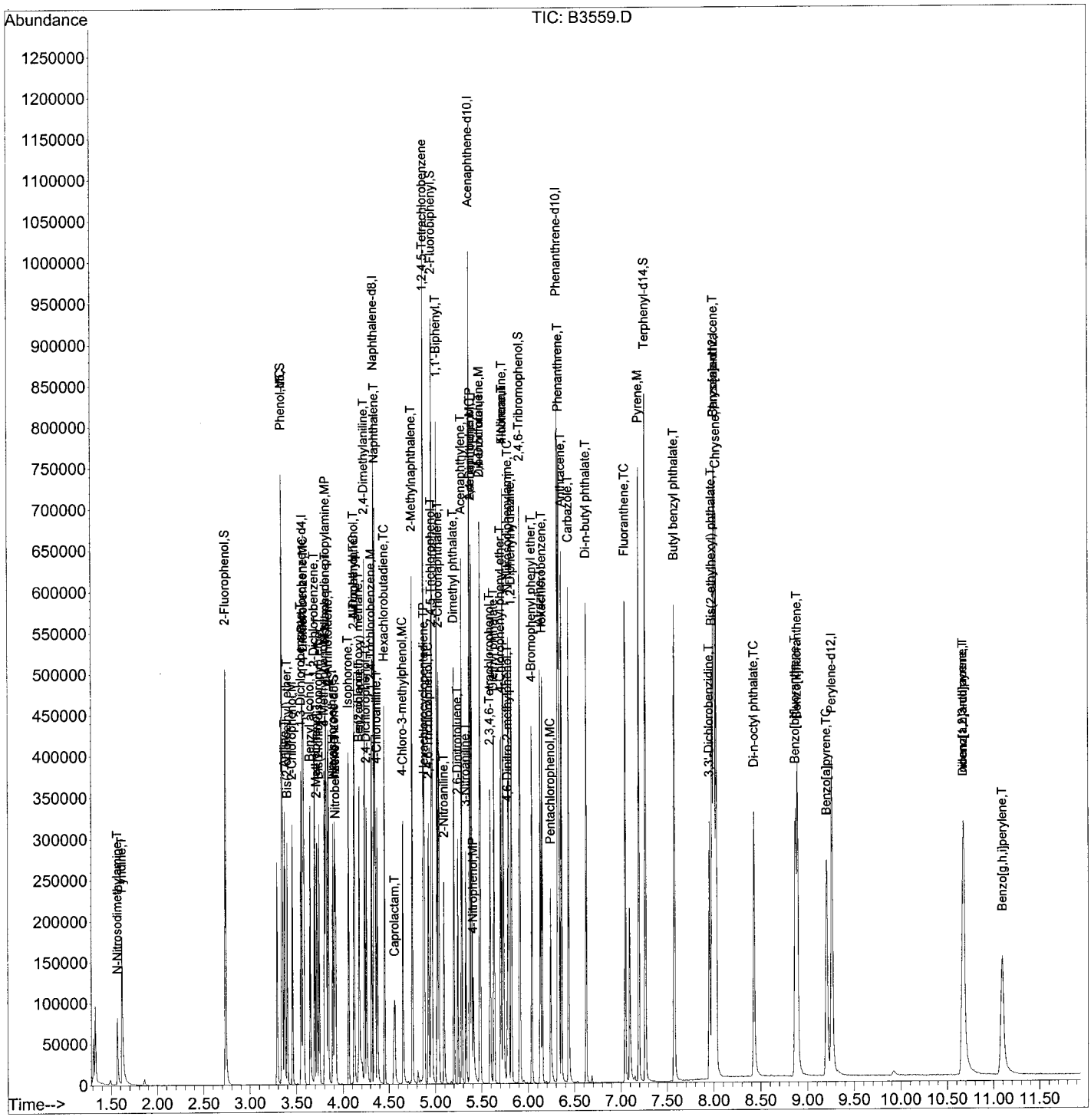
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
77) Carbazole	6.44	167	181114	31.11 UG	99
78) Di-n-butyl phthalate	6.63	149	210209	30.44 UG	99
79) Fluoranthene	7.05	202	207001	29.87 UG	92
83) Pyrene	7.19	202	218344	31.38 UG	92
86) Butyl benzyl phthalate	7.58	149	88469	33.30 UG	98
87) 3,3'-Dichlorobenzidine	7.95	252	76624	32.75 UG	99
88) Benzo[a]anthracene	8.00	228	198926	31.31 UG	99
89) Chrysene	8.03	228	192051	32.75 UG	99
90) Bis(2-ethylhexyl) phthalat	7.98	149	123285	32.80 UG	97
93) Di-n-octyl phthalate	8.43	149	180962	23.83 UG	99
94) Benzo[b]fluoranthene	8.87	252	194462m	23.15 UG	
95) Benzo[k]fluoranthene	8.89	252	173277	24.36 UG	98
96) Benzo[a]pyrene	9.20	252	167378	22.79 UG	97
97) Indeno[1,2,3-cd]pyrene	10.68	276	190975m	21.31 UG	
98) Dibenz[a,h]anthracene	10.67	278	158535	21.28 UG	96
99) Benzo[g,h,i]perylene	11.09	276	158354	20.82 UG	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3559.D
Acq On : 21 Oct 2015 10:32
Operator : KIM
Sample : ABN066-15,ICC040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 22 08:37:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3560.D
Acq On : 21 Oct 2015 10:49
Operator : KIM
Sample : ABN063-15,ICC001BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 22 10:39:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	64967	40.00	UG		-0.04
23) Naphthalene-d8	4.34	136	264837	40.00	UG		-0.04
43) Acenaphthene-d10	5.37	164	162484	40.00	UG		-0.03
66) Phenanthrene-d10	6.30	188	282723	40.00	UG		-0.02
82) Chrysene-d12	7.90	240	253345	40.00	UG		0.01
92) Perylene-d12	9.14	264	242603	40.00	UG		0.02
System Monitoring Compounds							
4) 2-Fluorophenol	2.74	112	166140m	82.02	UG		-0.04
Spiked Amount 100.000	Range 10 - 100		Recovery = 82.02%				
6) Phenol-d5	3.34	99	195962	81.44	UG		-0.05
Spiked Amount 100.000	Range 10 - 102		Recovery = 81.44%				
24) Nitrobenzene-d5	3.91	82	78392	39.87	UG		-0.04
Spiked Amount 50.000	Range 27 - 102		Recovery = 79.74%				
47) 2-Fluorobiphenyl	4.96	172	207222	40.61	UG		-0.03
Spiked Amount 50.000	Range 26 - 101		Recovery = 81.22%				
70) 2,4,6-Tribromophenol	5.90	330	92258	65.36	UG		-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 65.36%				
84) Terphenyl-d14	7.19	244	281178	44.55	UG		0.00
Spiked Amount 50.000	Range 23 - 124		Recovery = 89.10%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.61	74	676m	0.55	UG		
3) Pyridine	1.68	52	853	0.63	UG		74
7) Phenol	3.35	94	2097	0.75	UG	#	1
8) Aniline	3.37	66	903	0.97	UG		97
9) Bis(2-chloroethyl) ether	3.40	63	1012	0.77	UG		89
10) 2-Chlorophenol	3.45	128	1757	0.74	UG		99
11) 1,3-Dichlorobenzene	3.55	146	2192	0.83	UG	#	80
12) 1,4-Dichlorobenzene	3.58	146	2026	0.74	UG	#	43
13) Benzyl alcohol	3.66	108	778	0.62	UG		84
14) 1,2-Dichlorobenzene	3.69	146	1810	0.72	UG		94
15) 2-Methylphenol	3.72	108	1586	0.78	UG		95
16) Bis(2-chloroisopropyl) eth	3.74	45	1972	0.88	UG		97
17) 4-Methylphenol	3.81	108	1188	0.60	UG		96
18) N-Nitrosodi-n-propylamine	3.82	70	1073	0.80	UG		86
19) Acetophenone	3.81	105	2143	0.71	UG		88
20) 3-Methylphenol	3.81	108	1188	0.60	UG		96
21) Hexachloroethane	3.89	117	664	0.74	UG		97
25) Nitrobenzene	3.92	77	1795	0.87	UG		93
26) Isophorone	4.06	82	3729	0.93	UG		90
27) 2-Nitrophenol	4.12	139	620	0.50	UG	#	82
28) 2,4-Dimethylphenol	4.12	107	1256	0.62	UG		90

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3560.D
Acq On : 21 Oct 2015 10:49
Operator : KIM
Sample : ABN063-15,ICC001BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 22 10:39:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.17	93	1560	0.62	UG		80
30) Benzoic acid	4.22	105	65	0.06	UG	#	7
31) 2,4-Dimethylaniline	4.23	121	2007	0.88	UG	#	100
32) 2,4-Dichlorophenol	4.28	162	1087	0.52	UG		89
33) 1,2,4-Trichlorobenzene	4.31	180	1792	0.74	UG		94
34) Naphthalene	4.35	128	5135	0.72	UG	#	100
35) 4-Chloroaniline	4.39	127	1744	0.62	UG		86
36) 4-Aminotoluene	3.84	106	2856	0.83	UG		88
37) Hexachlorobutadiene	4.45	225	860	0.62	UG		89
38) Caprolactam	4.54	55	538	0.64	UG		69
39) 2-Aminotoluene	3.84	106	2856	0.83	UG		88
40) 4-Chloro-3-methylphenol	4.65	107	1130	0.65	UG		82
41) 2-Methylnaphthalene	4.75	142	3226	0.69	UG		92
44) Hexachlorocyclopentadiene	4.88	237	74	0.07	UG	#	81
45) 2,4,6-Trichlorophenol	4.93	196	925	0.60	UG		93
46) 2,4,5-Trichlorophenol	4.97	196	1121	0.72	UG		84
48) 1,1'-Biphenyl	5.01	154	4703	0.76	UG		99
49) 2-Chloronaphthalene	5.04	162	3186	0.69	UG		98
50) 2-Nitroaniline	5.10	65	515	0.61	UG		90
51) Dimethyl phthalate	5.20	163	3772	0.76	UG		96
52) 2,6-Dinitrotoluene	5.24	165	534	0.53	UG		81
53) Acenaphthylene	5.28	152	4963	0.69	UG		95
54) 3-Nitroaniline	5.35	138	607	0.54	UG	#	1
55) Acenaphthene	5.38	153	3524	0.80	UG		95
57) 4-Nitrophenol	5.37	65	527	0.92	UG	#	18
58) 2,4-Dinitrotoluene	5.48	165	618m	0.48	UG		
59) Dibenzofuran	5.48	168	5185	0.79	UG		99
60) Diethyl phthalate	5.62	149	3371	0.72	UG		97
61) Fluorene	5.72	166	3794	0.70	UG		98
62) 4-Chlorophenyl phenyl ethe	5.70	204	1877	0.68	UG		94
63) 4-Nitroaniline	5.75	138	611m	0.51	UG		
64) 1,2,4,5-Tetrachlorobenzene	4.87	216	3535	0.70	UG		99
65) 2,3,4,6-Tetrachlorophenol	5.59	232	872	0.71	UG		98
67) 4,6-Dinitro-2-methylphenol	5.90	198	53	0.07	UG	#	1
68) N-Nitrosodiphenylamine	5.78	169	2736	0.66	UG		94
69) 1,2-Diphenylhydrazine	5.81	77	3599	0.73	UG		93
71) 4-Bromophenyl phenyl ether	6.02	248	1320	0.68	UG		91
72) Hexachlorobenzene	6.13	284	1642	0.69	UG		92
73) Atrazine	6.11	200	950	0.69	UG		94
74) Pentachlorophenol	6.24	266	285	0.23	UG		70
75) Phenanthrene	6.31	178	5753	0.72	UG		95
76) Anthracene	6.33	178	5264	0.67	UG		98
77) Carbazole	6.41	167	4630	0.67	UG		96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3560.D
Acq On : 21 Oct 2015 10:49
Operator : KIM
Sample : ABN063-15,ICC001BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 22 10:39:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

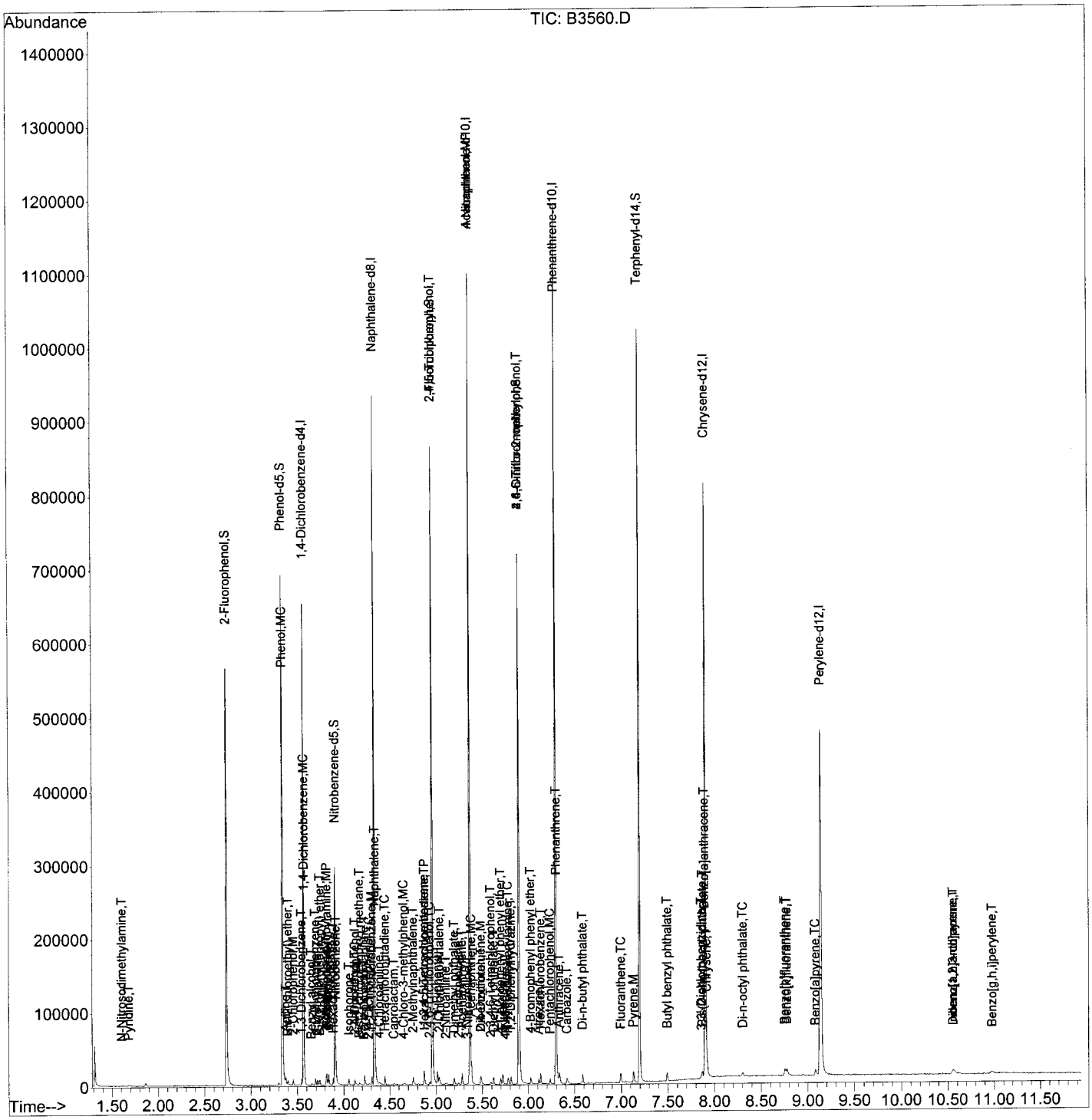
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
78) Di-n-butyl phthalate	6.58	149	5046	0.62	UG		96
79) Fluoranthene	7.00	202	5588	0.68	UG		95
83) Pyrene	7.13	202	5994	0.78	UG		94
86) Butyl benzyl phthalate	7.49	149	1738	0.59	UG		97
87) 3,3'-Dichlorobenzidine	7.86	252	1909	0.74	UG	#	96
88) Benzo[a]anthracene	7.89	228	6686	0.95	UG		95
89) Chrysene	7.92	228	5295	0.81	UG		98
90) Bis(2-ethylhexyl) phthalat	7.87	149	2306	0.55	UG		94
93) Di-n-octyl phthalate	8.30	149	3411	0.38	UG		93
94) Benzo[b]fluoranthene	8.75	252	4541	0.45	UG		93
95) Benzo[k]fluoranthene	8.77	252	5843	0.69	UG		98
96) Benzo[a]pyrene	9.08	252	4662	0.53	UG		94
97) Indeno[1,2,3-cd]pyrene	10.56	276	5099	0.48	UG		99
98) Dibenz[a,h]anthracene	10.55	278	3896	0.44	UG		75
99) Benzo[g,h,i]perylene	10.98	276	4202	0.46	UG		88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3560.D
Acq On : 21 Oct 2015 10:49
Operator : KIM
Sample : ABN063-15,ICC001BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 22 10:39:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3561.D
Acq On : 21 Oct 2015 11:06
Operator : KIM
Sample : ABN064-15,ICC010BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 22 11:19:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 10:42:06 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	55772	40.00	UG	0.00
23) Naphthalene-d8	4.34	136	221752	40.00	UG	0.00
43) Acenaphthene-d10	5.37	164	134613	40.00	UG	0.00
66) Phenanthrene-d10	6.31	188	231334	40.00	UG	0.02
82) Chrysene-d12	7.98	240	209358	40.00	UG	0.07
92) Perylene-d12	9.22	264	193224	40.00	UG	0.09
System Monitoring Compounds						
4) 2-Fluorophenol	2.74	112	132345	96.38	UG	0.00
Spiked Amount 100.000	Range 10 - 100		Recovery = 96.38%			
6) Phenol-d5	3.34	99	169551	98.91	UG	0.00
Spiked Amount 100.000	Range 10 - 102		Recovery = 98.91%			
24) Nitrobenzene-d5	3.91	82	67099	49.79	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 99.58%			
47) 2-Fluorobiphenyl	4.97	172	173534	51.51	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 103.02%#			
70) 2,4,6-Tribromophenol	5.91	330	80086	99.54	UG	0.01
Spiked Amount 100.000	Range 22 - 115		Recovery = 99.54%			
84) Terphenyl-d14	7.24	244	227207	49.58	UG	0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 99.16%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.57	74	8235	9.66	UG	68
3) Pyridine	1.63	52	10475	10.17	UG	91
7) Phenol	3.35	94	17438	9.77	UG	98
8) Aniline	3.37	66	7478	9.83	UG	88
9) Bis(2-chloroethyl) ether	3.40	63	9487	10.05	UG	97
10) 2-Chlorophenol	3.45	128	14602	9.66	UG	96
11) 1,3-Dichlorobenzene	3.55	146	16652	9.63	UG	96
12) 1,4-Dichlorobenzene	3.58	146	17544	9.82	UG	95
13) Benzyl alcohol	3.65	108	8103	9.11	UG	88
14) 1,2-Dichlorobenzene	3.69	146	15958	9.72	UG	92
15) 2-Methylphenol	3.72	108	13226	9.67	UG	97
16) Bis(2-chloroisopropyl) eth	3.74	45	17055	9.92	UG	94
17) 4-Methylphenol	3.81	108	13104	9.76	UG	96
18) N-Nitrosodi-n-propylamine	3.82	70	9388	9.80	UG	93
19) Acetophenone	3.81	105	17361	9.26	UG	80
20) 3-Methylphenol	3.81	108	13104	9.76	UG	96
21) Hexachloroethane	3.89	117	5821	9.83	UG	93
25) Nitrobenzene	3.92	77	14033	10.35	UG	98
26) Isophorone	4.06	82	25695	9.52	UG	99
27) 2-Nitrophenol	4.12	139	6715	9.22	UG	87
28) 2,4-Dimethylphenol	4.12	107	12019	9.49	UG	93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3561.D
Acq On : 21 Oct 2015 11:06
Operator : KIM
Sample : ABN064-15,ICC010BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 22 11:19:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 10:42:06 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.18	93	16077	9.93	UG		99
30) Benzoic acid	4.18	105	5192	8.75	UG		93
31) 2,4-Dimethylaniline	4.23	121	17120	9.44	UG	#	100
32) 2,4-Dichlorophenol	4.26	162	11538	9.67	UG		98
33) 1,2,4-Trichlorobenzene	4.31	180	14357	9.90	UG		98
34) Naphthalene	4.35	128	43045	9.95	UG	#	99
35) 4-Chloroaniline	4.38	127	17299	9.14	UG		95
36) 4-Aminotoluene	3.84	106	24195	9.78	UG		96
37) Hexachlorobutadiene	4.45	225	7752	9.83	UG		99
38) Caprolactam	4.55	55	4838	9.01	UG		94
39) 2-Aminotoluene	3.84	106	24195	9.78	UG		96
40) 4-Chloro-3-methylphenol	4.65	107	10239	9.34	UG		95
41) 2-Methylnaphthalene	4.75	142	26760	9.63	UG		98
44) Hexachlorocyclopentadiene	4.89	237	6272m	10.58	UG		
45) 2,4,6-Trichlorophenol	4.93	196	8185	9.16	UG		97
46) 2,4,5-Trichlorophenol	4.96	196	9605	9.69	UG		98
48) 1,1'-Biphenyl	5.02	154	35824	9.78	UG		100
49) 2-Chloronaphthalene	5.04	162	27573	9.80	UG		97
50) 2-Nitroaniline	5.09	65	5887	9.56	UG		87
51) Dimethyl phthalate	5.20	163	30282	9.68	UG		99
52) 2,6-Dinitrotoluene	5.24	165	5767	9.37	UG		91
53) Acenaphthylene	5.29	152	42631	9.63	UG		100
54) 3-Nitroaniline	5.33	138	6963	9.41	UG		92
55) Acenaphthene	5.39	153	27766	9.94	UG		100
56) 2,4-Dinitrophenol	5.40	184	2224m	7.98	UG		
57) 4-Nitrophenol	5.33	65	5342m	13.51	UG		
58) 2,4-Dinitrotoluene	5.48	165	7669	9.26	UG		90
59) Dibenzofuran	5.48	168	42436	9.83	UG		97
60) Diethyl phthalate	5.63	149	29379	9.79	UG		100
61) Fluorene	5.73	166	32391	9.67	UG		99
62) 4-Chlorophenyl phenyl ethe	5.70	204	16534	9.77	UG		98
63) 4-Nitroaniline	5.74	138	6993	8.75	UG		76
64) 1,2,4,5-Tetrachlorobenzene	4.88	216	29395	9.82	UG		98
65) 2,3,4,6-Tetrachlorophenol	5.59	232	7903	9.09	UG		98
67) 4,6-Dinitro-2-methylphenol	5.78	198	4349m	8.50	UG		
68) N-Nitrosodiphenylamine	5.78	169	24103	10.05	UG		99
69) 1,2-Diphenylhydrazine	5.82	77	31642	10.01	UG		89
71) 4-Bromophenyl phenyl ether	6.04	248	10544	9.43	UG		99
72) Hexachlorobenzene	6.15	284	13558	10.00	UG		99
73) Atrazine	6.13	200	8274	9.28	UG		98
74) Pentachlorophenol	6.24	266	4763	7.29	UG		98
75) Phenanthrene	6.32	178	45632	9.81	UG		99
76) Anthracene	6.35	178	43990	9.55	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3561.D
Acq On : 21 Oct 2015 11:06
Operator : KIM
Sample : ABN064-15,ICC010BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 22 11:19:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 10:42:06 2015
Response via : Initial Calibration

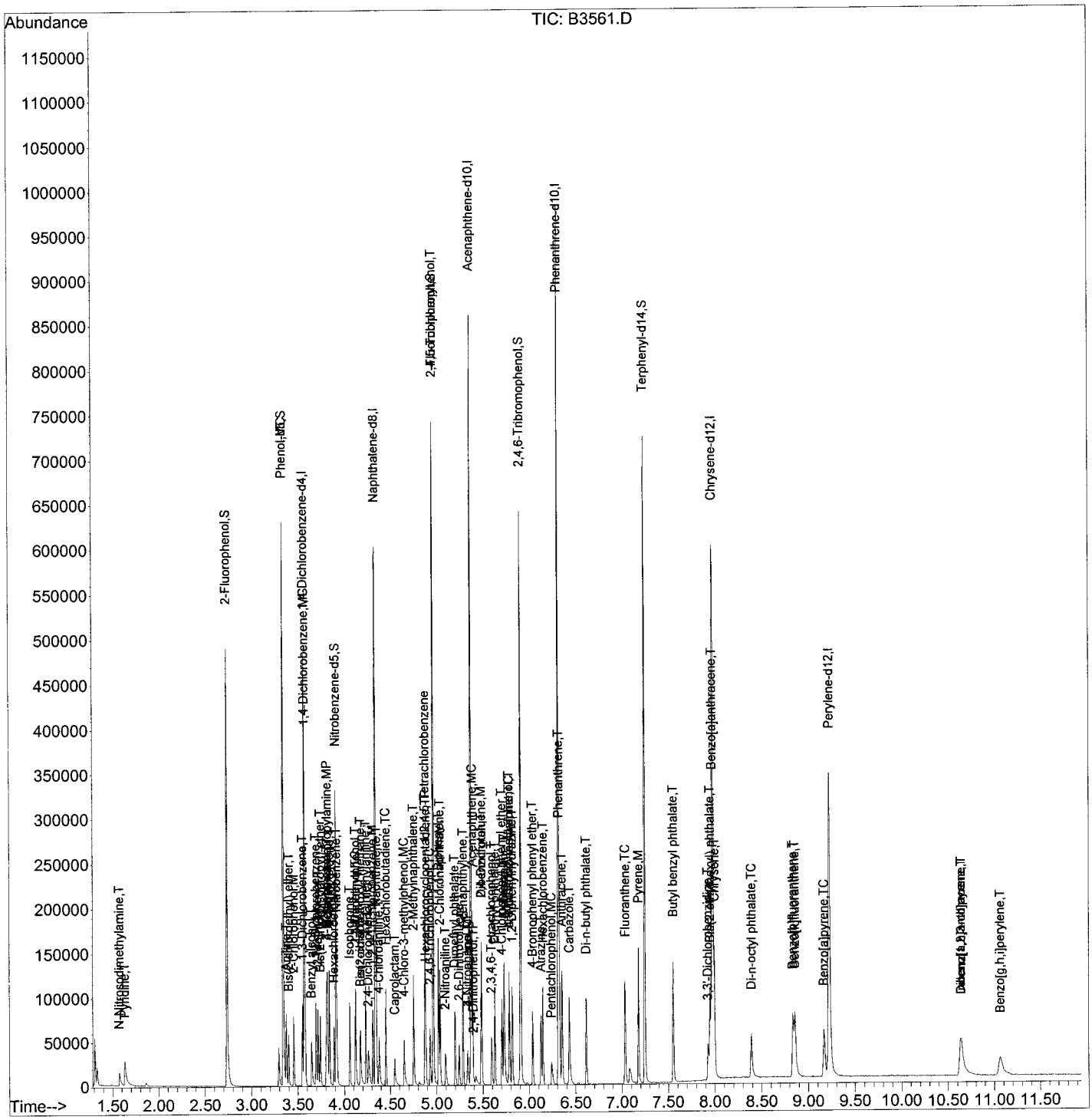
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
77) Carbazole	6.43	167	40659	9.74 UG	99
78) Di-n-butyl phthalate	6.62	149	45100	9.31 UG	98
79) Fluoranthene	7.03	202	46042	9.48 UG	93
83) Pyrene	7.18	202	48791	9.40 UG	91
86) Butyl benzyl phthalate	7.55	149	17970	9.23 UG	99
87) 3,3'-Dichlorobenzidine	7.93	252	15779	9.49 UG	98
88) Benzo[a]anthracene	7.96	228	44824	9.23 UG	100
89) Chrysene	8.00	228	44791	10.06 UG	99
90) Bis(2-ethylhexyl) phthalat	7.95	149	24048	9.18 UG	97
93) Di-n-octyl phthalate	8.39	149	32683	8.50 UG	100
94) Benzo[b]fluoranthene	8.83	252	35866	8.22 UG	94
95) Benzo[k]fluoranthene	8.86	252	43365	9.95 UG	96
96) Benzo[a]pyrene	9.16	252	36739	9.36 UG	96
97) Indeno[1,2,3-cd]pyrene	10.63	276	37199	7.89 UG	88
98) Dibenz[a,h]anthracene	10.63	278	31305	8.10 UG	96
99) Benzo[g,h,i]perylene	11.06	276	32536	8.36 UG	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3561.D
Acq On : 21 Oct 2015 11:06
Operator : KIM
Sample : ABN064-15,ICC010BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 22 11:19:43 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 10:42:06 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3562.D
Acq On : 21 Oct 2015 11:23
Operator : KIM
Sample : ABN065-15,ICC020BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 22 08:40:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	52514	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	213093	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	130974	40.00	UG	-0.03
66) Phenanthrene-d10	6.30	188	231989	40.00	UG	-0.02
82) Chrysene-d12	7.89	240	207490	40.00	UG	0.00
92) Perylene-d12	9.12	264	188341	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	2.73	112	126806	77.45	UG	-0.05
Spiked Amount 100.000	Range 10 - 100		Recovery = 77.45%			
6) Phenol-d5	3.34	99	159977	82.25	UG	-0.05
Spiked Amount 100.000	Range 10 - 102		Recovery = 82.25%			
24) Nitrobenzene-d5	3.91	82	64161	40.55	UG	-0.04
Spiked Amount 50.000	Range 27 - 102		Recovery = 81.10%			
47) 2-Fluorobiphenyl	4.96	172	165444	40.22	UG	-0.03
Spiked Amount 50.000	Range 26 - 101		Recovery = 80.44%			
70) 2,4,6-Tribromophenol	5.90	330	82258	71.02	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 71.02%			
84) Terphenyl-d14	7.19	244	225279	43.58	UG	0.00
Spiked Amount 50.000	Range 23 - 124		Recovery = 87.16%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.57	74	17242	17.24	UG	70
3) Pyridine	1.62	52	21692	19.78	UG	92
7) Phenol	3.35	94	33141	14.76	UG	84
8) Aniline	3.37	66	14711	19.59	UG	89
9) Bis(2-chloroethyl) ether	3.40	63	18169	17.09	UG	97
10) 2-Chlorophenol	3.45	128	28525	14.90	UG	97
11) 1,3-Dichlorobenzene	3.54	146	32146	15.11	UG	95
12) 1,4-Dichlorobenzene	3.58	146	34130	15.35	UG	96
13) Benzyl alcohol	3.65	108	17459	17.12	UG	87
14) 1,2-Dichlorobenzene	3.69	146	31390	15.52	UG	93
15) 2-Methylphenol	3.72	108	26122	15.87	UG	100
16) Bis(2-chloroisopropyl) eth	3.74	45	33034	18.31	UG	95
17) 4-Methylphenol	3.80	108	27137	16.96	UG	98
18) N-Nitrosodi-n-propylamine	3.82	70	18703	17.32	UG	93
19) Acetophenone	3.81	105	35951	14.83	UG	81
20) 3-Methylphenol	3.80	108	27137	16.97	UG	98
21) Hexachloroethane	3.89	117	11564	15.91	UG	92
25) Nitrobenzene	3.92	77	25971	15.72	UG	94
26) Isophorone	4.05	82	49817	15.51	UG	100
27) 2-Nitrophenol	4.11	139	14229	14.34	UG	83
28) 2,4-Dimethylphenol	4.12	107	25176	15.33	UG	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3562.D
Acq On : 21 Oct 2015 11:23
Operator : KIM
Sample : ABN065-15,ICC020BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 22 08:40:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.17	93	32630	16.02 UG		98
30) Benzoic acid	4.16	105	12425	13.96 UG		93
31) 2,4-Dimethylaniline	4.23	121	34889	18.96 UG	#	100
32) 2,4-Dichlorophenol	4.25	162	23470	14.01 UG		99
33) 1,2,4-Trichlorobenzene	4.31	180	27480	14.14 UG		100
34) Naphthalene	4.35	128	83737	14.57 UG	#	100
35) 4-Chloroaniline	4.37	127	35611	15.64 UG		96
36) 4-Aminotoluene	3.84	106	48656	17.64 UG		99
37) Hexachlorobutadiene	4.45	225	15300	13.70 UG		100
38) Caprolactam	4.54	55	10618	15.72 UG		94
39) 2-Aminotoluene	3.84	106	48656	17.64 UG		99
40) 4-Chloro-3-methylphenol	4.64	107	21426	15.21 UG		97
41) 2-Methylnaphthalene	4.75	142	54050	14.47 UG		99
44) Hexachlorocyclopentadiene	4.88	237	8565	10.45 UG		99
45) 2,4,6-Trichlorophenol	4.92	196	17782	14.30 UG		98
46) 2,4,5-Trichlorophenol	4.95	196	19124	15.26 UG		99
48) 1,1'-Biphenyl	5.01	154	71576	14.29 UG		100
49) 2-Chloronaphthalene	5.03	162	57015	15.41 UG		99
50) 2-Nitroaniline	5.09	65	12566	18.50 UG		85
51) Dimethyl phthalate	5.19	163	61348	15.36 UG		100
52) 2,6-Dinitrotoluene	5.24	165	12639	15.69 UG		92
53) Acenaphthylene	5.28	152	88230	15.27 UG		100
54) 3-Nitroaniline	5.32	138	15290	16.77 UG		93
55) Acenaphthene	5.38	153	55057	15.48 UG		99
56) 2,4-Dinitrophenol	5.39	184	3960	14.37 UG		20
57) 4-Nitrophenol	5.40	65	7246	15.72 UG		82
58) 2,4-Dinitrotoluene	5.47	165	17129	16.51 UG		93
59) Dibenzofuran	5.48	168	86064	16.36 UG		94
60) Diethyl phthalate	5.62	149	59831	15.86 UG		99
61) Fluorene	5.72	166	67525	15.53 UG		99
62) 4-Chlorophenyl phenyl ethe	5.70	204	33319	14.99 UG		98
63) 4-Nitroaniline	5.72	138	16980	17.46 UG		78
64) 1,2,4,5-Tetrachlorobenzene	4.87	216	58278	14.33 UG		99
65) 2,3,4,6-Tetrachlorophenol	5.58	232	16737	16.94 UG		98
67) 4,6-Dinitro-2-methylphenol	5.76	198	8180	12.99 UG		79
68) N-Nitrosodiphenylamine	5.77	169	48685	14.38 UG		99
69) 1,2-Diphenylhydrazine	5.80	77	64826	16.05 UG		90
71) 4-Bromophenyl phenyl ether	6.02	248	22421	14.11 UG		96
72) Hexachlorobenzene	6.13	284	26702	13.65 UG		99
73) Atrazine	6.11	200	18584	16.48 UG		99
74) Pentachlorophenol	6.22	266	12089	11.96 UG		95
75) Phenanthrene	6.31	178	95631	14.68 UG		100
76) Anthracene	6.33	178	93701	14.57 UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3562.D
Acq On : 21 Oct 2015 11:23
Operator : KIM
Sample : ABN065-15,ICC020BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 22 08:40:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

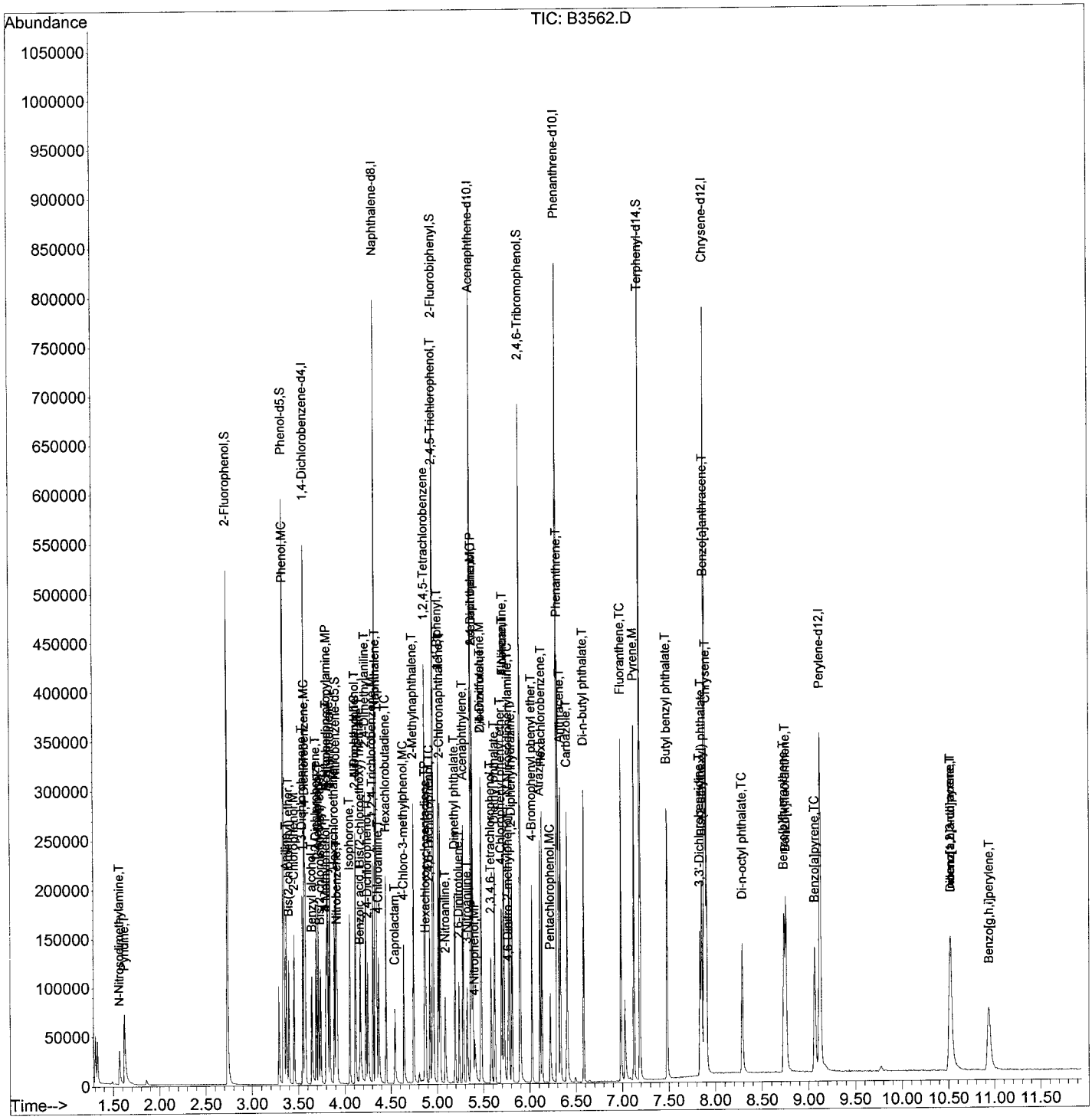
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
77) Carbazole	6.40	167	87006	15.45 UG	99
78) Di-n-butyl phthalate	6.58	149	99580	14.91 UG	98
79) Fluoranthene	6.99	202	99909	14.91 UG	94
83) Pyrene	7.12	202	103871	16.44 UG	91
86) Butyl benzyl phthalate	7.48	149	38377	15.91 UG	98
87) 3,3'-Dichlorobenzidine	7.83	252	35080	16.51 UG	96
88) Benzo[a]anthracene	7.88	228	94973	16.46 UG	100
89) Chrysene	7.90	228	89901	16.89 UG	100
90) Bis(2-ethylhexyl) phthalat	7.86	149	51428	15.07 UG	97
93) Di-n-octyl phthalate	8.29	149	74213	10.58 UG	99
94) Benzo[b]fluoranthene	8.74	252	79219m	10.22 UG	
95) Benzo[k]fluoranthene	8.75	252	89170	13.58 UG	97
96) Benzo[a]pyrene	9.06	252	78003	11.50 UG	97
97) Indeno[1,2,3-cd]pyrene	10.52	276	89050	10.76 UG	85
98) Dibenz[a,h]anthracene	10.52	278	74345	10.81 UG	96
99) Benzo[g,h,i]perylene	10.94	276	73791	10.51 UG	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3562.D
Acq On : 21 Oct 2015 11:23
Operator : KIM
Sample : ABN065-15,ICC020BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 22 08:40:13 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3563.D
Acq On : 21 Oct 2015 11:41
Operator : KIM
Sample : ABN067-15,ICC080BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 22 10:37:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	54471	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	226428	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	143684	40.00	UG	-0.03
66) Phenanthrene-d10	6.30	188	248656	40.00	UG	-0.02
82) Chrysene-d12	7.91	240	201725	40.00	UG	0.02
92) Perylene-d12	9.15	264	190272	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	2.73	112	138247	81.40	UG	-0.05
Spiked Amount 100.000	Range 10 - 100		Recovery = 81.40%			
6) Phenol-d5	3.34	99	176139	87.31	UG	-0.04
Spiked Amount 100.000	Range 10 - 102		Recovery = 87.31%			
24) Nitrobenzene-d5	3.91	82	72957	43.40	UG	-0.04
Spiked Amount 50.000	Range 27 - 102		Recovery = 86.80%			
47) 2-Fluorobiphenyl	4.96	172	174275	38.62	UG	-0.03
Spiked Amount 50.000	Range 26 - 101		Recovery = 77.24%			
70) 2,4,6-Tribromophenol	5.90	330	89196	71.85	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 71.85%			
84) Terphenyl-d14	7.20	244	224783	44.73	UG	0.00
Spiked Amount 50.000	Range 23 - 124		Recovery = 89.46%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.57	74	73295	70.65	UG	68
3) Pyridine	1.61	52	85446	75.13	UG	88
7) Phenol	3.35	94	142400	61.14	UG	71
8) Aniline	3.37	66	60627m	77.84	UG	
9) Bis(2-chloroethyl) ether	3.40	63	75975	68.90	UG	99
10) 2-Chlorophenol	3.45	128	121142	60.99	UG	97
11) 1,3-Dichlorobenzene	3.55	146	133456	60.46	UG	96
12) 1,4-Dichlorobenzene	3.58	146	139405	60.44	UG	97
13) Benzyl alcohol	3.65	108	77107	72.88	UG	88
14) 1,2-Dichlorobenzene	3.69	146	133049	63.42	UG	91
15) 2-Methylphenol	3.72	108	111043	65.04	UG	98
16) Bis(2-chloroisopropyl) eth	3.74	45	136991	73.21	UG	98
17) 4-Methylphenol	3.80	108	115052	69.32	UG	99
18) N-Nitrosodi-n-propylamine	3.82	70	78152	69.76	UG	94
19) Acetophenone	3.82	105	151908m	60.42	UG	
20) 3-Methylphenol	3.80	108	115052	69.38	UG	99
21) Hexachloroethane	3.89	117	46711	61.95	UG	96
25) Nitrobenzene	3.92	77	104339	59.44	UG	91
26) Isophorone	4.06	82	216899	63.57	UG	99
27) 2-Nitrophenol	4.11	139	65148	61.81	UG	83
28) 2,4-Dimethylphenol	4.12	107	109510	62.76	UG	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3563.D
Acq On : 21 Oct 2015 11:41
Operator : KIM
Sample : ABN067-15,ICC080BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 22 10:37:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.17	93	138248	63.87 UG		99
30) Benzoic acid	4.19	105	56131	59.34 UG		92
31) 2,4-Dimethylaniline	4.23	121	156712	80.13 UG	#	100
32) 2,4-Dichlorophenol	4.26	162	107405	60.35 UG		99
33) 1,2,4-Trichlorobenzene	4.31	180	119626	57.93 UG		100
34) Naphthalene	4.35	128	369676	60.55 UG	#	98
35) 4-Chloroaniline	4.37	127	203450	84.11 UG		85
36) 4-Aminotoluene	3.84	106	209624	71.53 UG		100
37) Hexachlorobutadiene	4.45	225	64624	54.45 UG		98
38) Caprolactam	4.57	55	47373	66.02 UG		92
39) 2-Aminotoluene	3.84	106	209624	71.53 UG		100
40) 4-Chloro-3-methylphenol	4.65	107	96757	64.63 UG		98
41) 2-Methylnaphthalene	4.75	142	231218	58.24 UG		98
44) Hexachlorocyclopentadiene	4.88	237	45500m	50.62 UG		
45) 2,4,6-Trichlorophenol	4.92	196	82509	60.48 UG		99
46) 2,4,5-Trichlorophenol	4.95	196	88394	64.30 UG		99
48) 1,1'-Biphenyl	5.01	154	308398	56.14 UG		100
49) 2-Chloronaphthalene	5.04	162	245794	60.55 UG		98
50) 2-Nitroaniline	5.09	65	57941	77.76 UG		85
51) Dimethyl phthalate	5.20	163	268956	61.39 UG		100
52) 2,6-Dinitrotoluene	5.24	165	58523	66.24 UG		89
53) Acenaphthylene	5.28	152	394291	62.21 UG		100
54) 3-Nitroaniline	5.32	138	69968	69.97 UG		93
55) Acenaphthene	5.39	153	237376	60.84 UG		98
56) 2,4-Dinitrophenol	5.39	184	25497m	84.33 UG		
57) 4-Nitrophenol	5.40	65	37115	73.40 UG		78
58) 2,4-Dinitrotoluene	5.47	165	63155m	55.50 UG		
59) Dibenzofuran	5.48	168	367037	63.59 UG		94
60) Diethyl phthalate	5.63	149	263210	63.59 UG		99
61) Fluorene	5.72	166	293937	61.62 UG		100
62) 4-Chlorophenyl phenyl ethe	5.70	204	146929	60.27 UG		98
63) 4-Nitroaniline	5.73	138	73125m	68.52 UG		
64) 1,2,4,5-Tetrachlorobenzene	4.87	216	252378	56.57 UG		99
65) 2,3,4,6-Tetrachlorophenol	5.59	232	77359	71.36 UG		99
67) 4,6-Dinitro-2-methylphenol	5.77	198	39117m	57.95 UG		
68) N-Nitrosodiphenylamine	5.78	169	209210	57.66 UG		99
69) 1,2-Diphenylhydrazine	5.81	77	275902	63.74 UG		88
71) 4-Bromophenyl phenyl ether	6.02	248	98677	57.92 UG		98
72) Hexachlorobenzene	6.13	284	119852	57.15 UG		100
73) Atrazine	6.11	200	82627	68.34 UG		98
74) Pentachlorophenol	6.22	266	61641	56.88 UG		98
75) Phenanthrene	6.31	178	395075	56.60 UG		100
76) Anthracene	6.33	178	404766	58.71 UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3563.D
Acq On : 21 Oct 2015 11:41
Operator : KIM
Sample : ABN067-15,ICC080BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 22 10:37:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

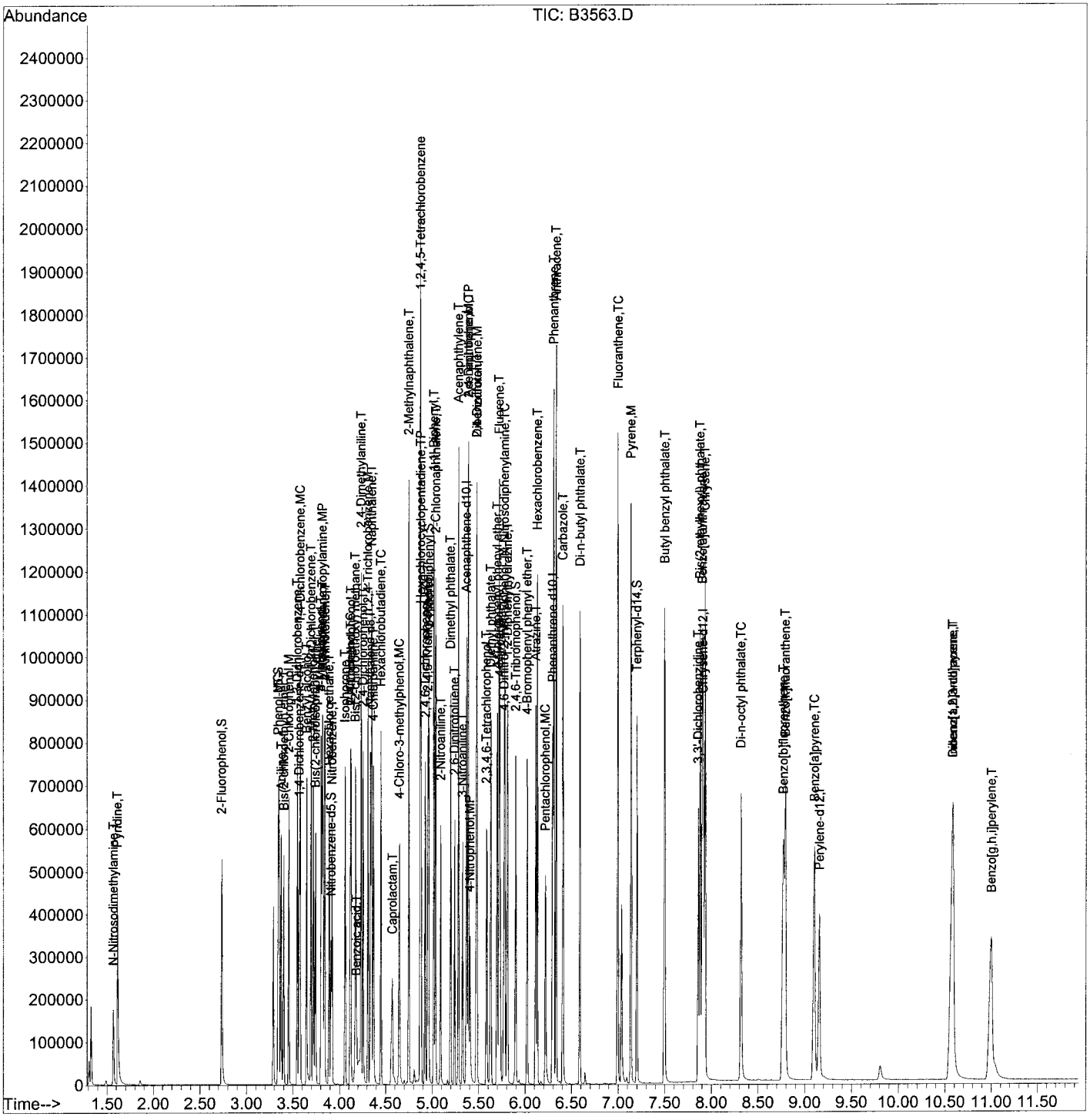
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
77) Carbazole	6.40	167	364441	60.38	UG	100
78) Di-n-butyl phthalate	6.59	149	436785	61.02	UG	98
79) Fluoranthene	7.00	202	421087	58.61	UG	93
83) Pyrene	7.13	202	428023	69.67	UG	92
86) Butyl benzyl phthalate	7.50	149	172252	73.44	UG	95
87) 3,3'-Dichlorobenzidine	7.86	252	126730	61.36	UG	99
88) Benzo[a]anthracene	7.90	228	371555	66.25	UG	100
89) Chrysene	7.93	228	350475	67.71	UG	100
90) Bis(2-ethylhexyl) phthalat	7.88	149	230128	69.35	UG	98
93) Di-n-octyl phthalate	8.32	149	339063	47.87	UG	100
94) Benzo[b]fluoranthene	8.77	252	386973	49.39	UG	97
95) Benzo[k]fluoranthene	8.79	252	296832	44.74	UG	97
96) Benzo[a]pyrene	9.10	252	319169	46.59	UG	98
97) Indeno[1,2,3-cd]pyrene	10.58	276	422925	50.60	UG	86
98) Dibenz[a,h]anthracene	10.58	278	349081	50.23	UG	96
99) Benzo[g,h,i]perylene	11.00	276	351679	49.57	UG	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3563.D
Acq On : 21 Oct 2015 11:41
Operator : KIM
Sample : ABN067-15,ICC080BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 22 10:37:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3564.D
Acq On : 21 Oct 2015 11:58
Operator : KIM
Sample : ABN068-15,ICC160BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 22 10:36:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	49103	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	197678	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	122059	40.00	UG	-0.03
66) Phenanthrene-d10	6.30	188	209818	40.00	UG	-0.02
82) Chrysene-d12	7.90	240	171992	40.00	UG	0.01
92) Perylene-d12	9.13	264	159382	40.00	UG	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	2.74	112	121069	79.08	UG	-0.04
Spiked Amount 100.000	Range 10 - 100		Recovery = 79.08%			
6) Phenol-d5	3.34	99	152691	83.96	UG	-0.04
Spiked Amount 100.000	Range 10 - 102		Recovery = 83.96%			
24) Nitrobenzene-d5	3.91	82	58650	39.96	UG	-0.04
Spiked Amount 50.000	Range 27 - 102		Recovery = 79.92%			
47) 2-Fluorobiphenyl	4.96	172	153914	40.15	UG	-0.03
Spiked Amount 50.000	Range 26 - 101		Recovery = 80.30%			
70) 2,4,6-Tribromophenol	5.90	330	73911	70.56	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 70.56%			
84) Terphenyl-d14	7.19	244	193594	45.18	UG	0.00
Spiked Amount 50.000	Range 23 - 124		Recovery = 90.36%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.58	74	127071	135.87	UG	69
3) Pyridine	1.62	52	151263	147.54	UG	88
7) Phenol	3.35	94	257383	122.58	UG	71
8) Aniline	3.37	66	100495	143.13	UG	78
9) Bis(2-chloroethyl) ether	3.40	63	134031	134.84	UG	99
10) 2-Chlorophenol	3.46	128	218934	122.28	UG	96
11) 1,3-Dichlorobenzene	3.55	146	243738	122.50	UG	95
12) 1,4-Dichlorobenzene	3.58	146	250227	120.34	UG	98
13) Benzyl alcohol	3.65	108	137184	143.85	UG	87
14) 1,2-Dichlorobenzene	3.69	146	235672	124.62	UG	92
15) 2-Methylphenol	3.72	108	190250	123.62	UG	100
16) Bis(2-chloroisopropyl) eth	3.74	45	234099m	138.79	UG	
17) 4-Methylphenol	3.81	108	199279	133.20	UG	100
18) N-Nitrosodi-n-propylamine	3.83	70	135427	134.11	UG	94
19) Acetophenone	3.82	105	267692	118.12	UG	82
20) 3-Methylphenol	3.81	108	199279	133.30	UG	100
21) Hexachloroethane	3.89	117	85454	125.73	UG	95
25) Nitrobenzene	3.92	77	191731	125.11	UG	93
26) Isophorone	4.06	82	376446	126.37	UG	98
27) 2-Nitrophenol	4.12	139	120405	130.85	UG	82
28) 2,4-Dimethylphenol	4.12	107	186096	122.15	UG	94

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3564.D
Acq On : 21 Oct 2015 11:58
Operator : KIM
Sample : ABN068-15,ICC160BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 22 10:36:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.18	93	244737	129.52 UG		99
30) Benzoic acid	4.20	105	89948m	108.92 UG		
31) 2,4-Dimethylaniline	4.24	121	267016	156.38 UG	#	100
32) 2,4-Dichlorophenol	4.26	162	186985	120.35 UG		98
33) 1,2,4-Trichlorobenzene	4.31	180	212497	117.87 UG		99
34) Naphthalene	4.35	128	601609	112.86 UG	#	100
35) 4-Chloroaniline	4.37	127	272002	128.80 UG		97
36) 4-Aminotoluene	3.84	106	346891	135.59 UG		99
37) Hexachlorobutadiene	4.45	225	120865	116.66 UG		99
38) Caprolactam	4.59	55	78950	126.03 UG		93
39) 2-Aminotoluene	3.84	106	346891	135.59 UG		99
40) 4-Chloro-3-methylphenol	4.65	107	163481	125.07 UG		99
41) 2-Methylnaphthalene	4.75	142	402961	116.27 UG		100
44) Hexachlorocyclopentadiene	4.88	237	103854m	136.02 UG		
45) 2,4,6-Trichlorophenol	4.92	196	141190	121.82 UG		99
46) 2,4,5-Trichlorophenol	4.96	196	154698	132.47 UG		98
48) 1,1'-Biphenyl	5.02	154	523555	112.19 UG		99
49) 2-Chloronaphthalene	5.04	162	412587	119.65 UG		99
50) 2-Nitroaniline	5.09	65	100360	158.56 UG		82
51) Dimethyl phthalate	5.20	163	460138	123.63 UG		99
52) 2,6-Dinitrotoluene	5.24	165	101174	134.81 UG		89
53) Acenaphthylene	5.28	152	649869	120.70 UG		100
54) 3-Nitroaniline	5.33	138	117737	138.59 UG		94
55) Acenaphthene	5.39	153	398290	120.17 UG		97
56) 2,4-Dinitrophenol	5.39	184	43553m	169.57 UG		
57) 4-Nitrophenol	5.41	65	55943m	130.23 UG		
58) 2,4-Dinitrotoluene	5.48	165	134203m	138.84 UG		
59) Dibenzofuran	5.48	168	639076	130.33 UG		94
60) Diethyl phthalate	5.63	149	445724	126.76 UG		99
61) Fluorene	5.72	166	495384	122.24 UG		99
62) 4-Chlorophenyl phenyl ethe	5.70	204	259429	125.28 UG		97
63) 4-Nitroaniline	5.74	138	131465	145.02 UG		77
64) 1,2,4,5-Tetrachlorobenzene	4.87	216	457535	120.73 UG		99
65) 2,3,4,6-Tetrachlorophenol	5.59	232	133135	144.56 UG		99
67) 4,6-Dinitro-2-methylphenol	5.78	198	81711m	143.46 UG		
68) N-Nitrosodiphenylamine	5.79	169	364053	118.91 UG		99
69) 1,2-Diphenylhydrazine	5.82	77	471585	129.11 UG		87
71) 4-Bromophenyl phenyl ether	6.03	248	171984	119.63 UG		97
72) Hexachlorobenzene	6.14	284	205372	116.05 UG		99
73) Atrazine	6.12	200	134377	131.72 UG		95
74) Pentachlorophenol	6.22	266	112230	122.74 UG		99
75) Phenanthrene	6.31	178	679403	115.35 UG		100
76) Anthracene	6.34	178	690500	118.69 UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3564.D
Acq On : 21 Oct 2015 11:58
Operator : KIM
Sample : ABN068-15,ICC160BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 22 10:36:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

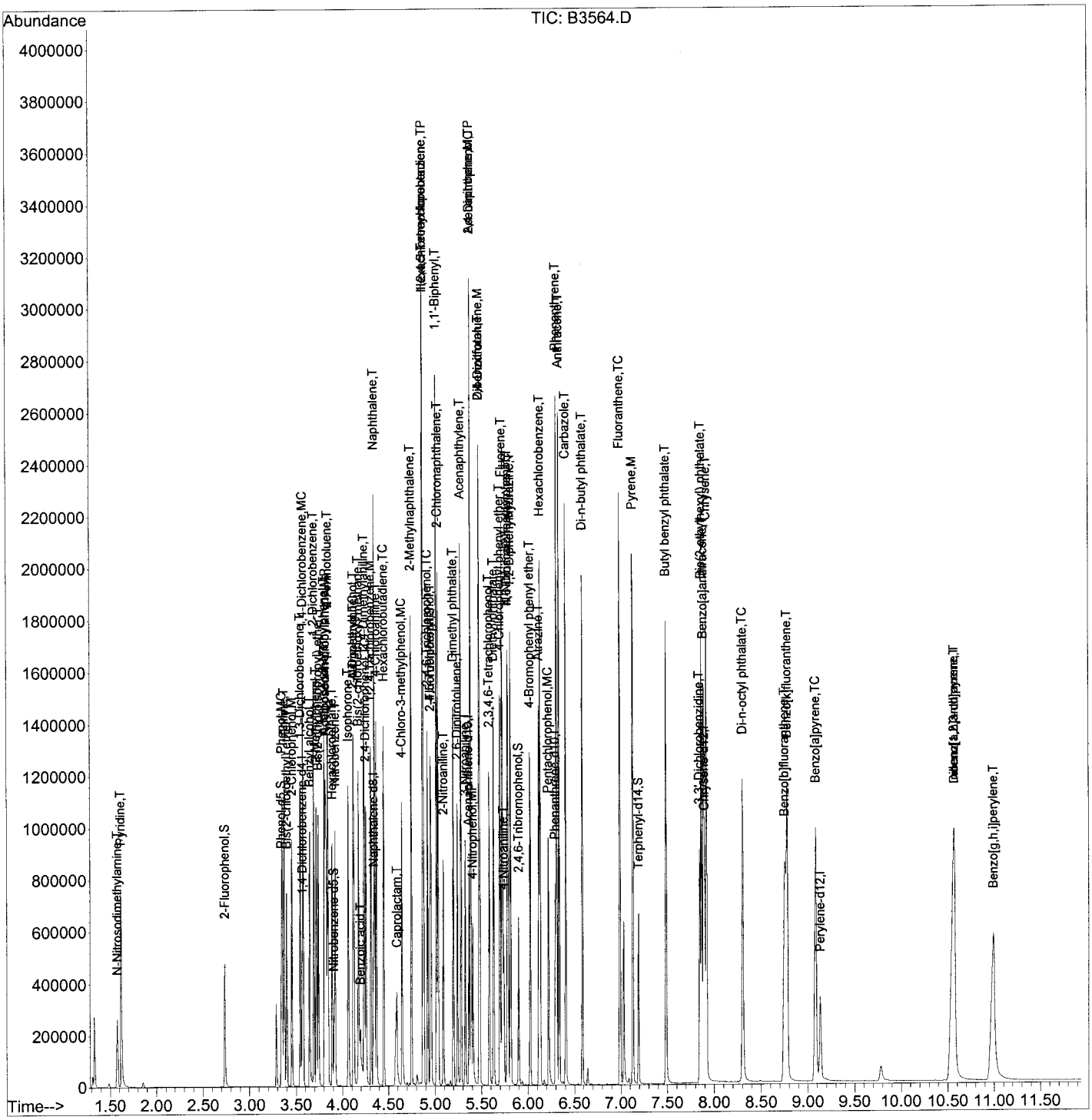
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
77) Carbazole	6.41	167	610355	119.84 UG	99
78) Di-n-butyl phthalate	6.59	149	751213	124.37 UG	99
79) Fluoranthene	6.99	202	711817	117.42 UG	93
83) Pyrene	7.13	202	731745	139.70 UG	92
86) Butyl benzyl phthalate	7.49	149	297380	148.70 UG	95
87) 3,3'-Dichlorobenzidine	7.85	252	197302	112.04 UG	100
88) Benzo[a]anthracene	7.89	228	633738	132.54 UG	100
89) Chrysene	7.92	228	587881	133.21 UG	99
90) Bis(2-ethylhexyl) phthalat	7.87	149	407537	144.05 UG	98
93) Di-n-octyl phthalate	8.30	149	619176	104.36 UG	99
94) Benzo[b]fluoranthene	8.75	252	703412m	107.19 UG	
95) Benzo[k]fluoranthene	8.78	252	608201m	109.43 UG	
96) Benzo[a]pyrene	9.08	252	552953	96.36 UG	98
97) Indeno[1,2,3-cd]pyrene	10.57	276	728608	104.07 UG	86
98) Dibenz[a,h]anthracene	10.56	278	603994	103.74 UG	96
99) Benzo[g,h,i]perylene	10.99	276	602214	101.33 UG	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3564.D
Acq On : 21 Oct 2015 11:58
Operator : KIM
Sample : ABN068-15,ICC160BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 22 10:36:22 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3565.D
Acq On : 21 Oct 2015 12:15
Operator : KIM
Sample : ABN074-15,ICC160BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 22 10:25:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

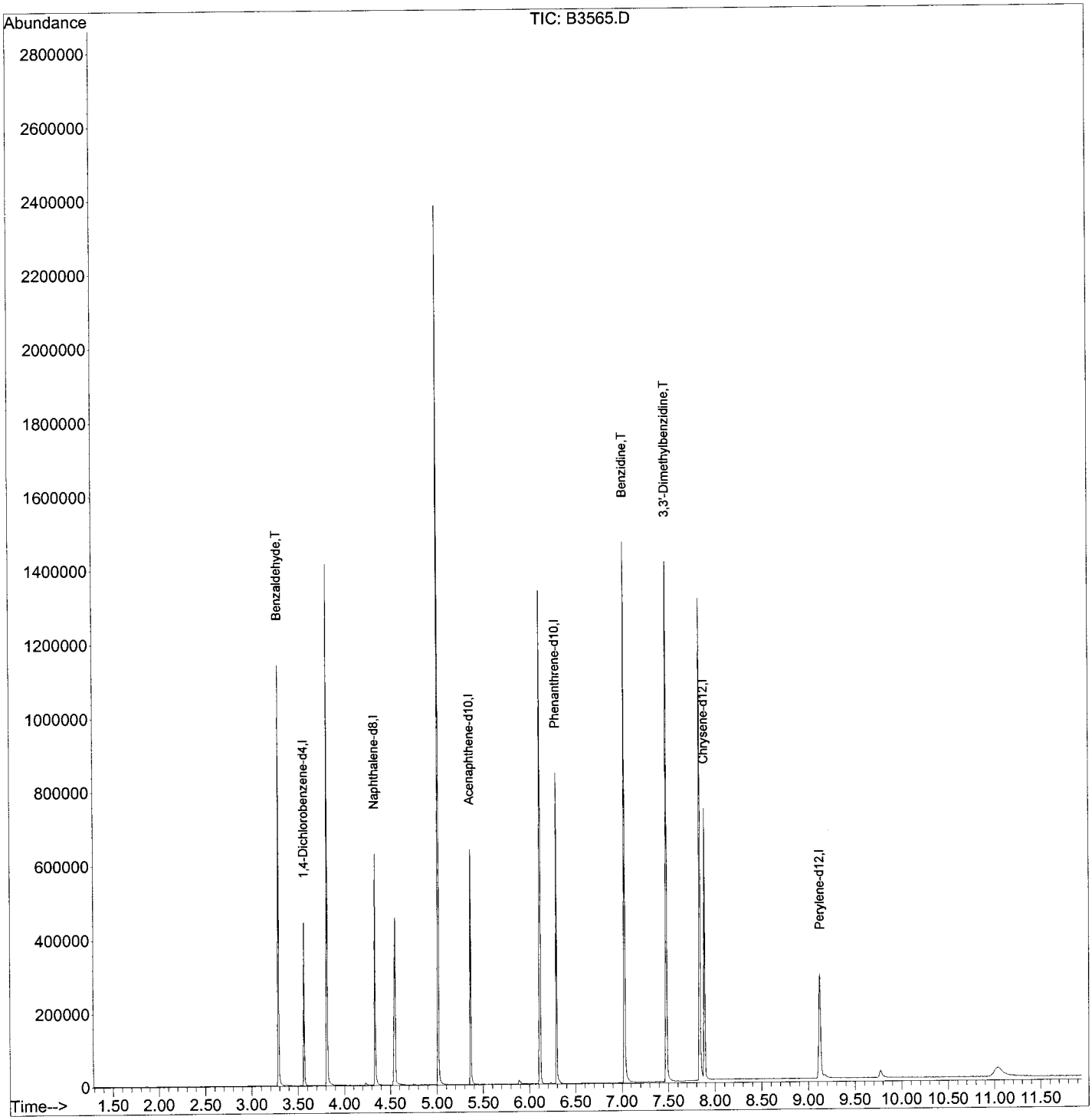
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	48759	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	196414	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	119741	40.00	UG	-0.03
66) Phenanthrene-d10	6.29	188	213539	40.00	UG	-0.03
82) Chrysene-d12	7.89	240	202652	40.00	UG	0.00
92) Perylene-d12	9.12	264	163792	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0d	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery = 0.00%#			
Target Compounds						Qvalue
5) Benzaldehyde	3.29	106	147103m	154.65	UG	
80) Benzidine	7.03	184	450223	153.28	UG	# 100
85) 3,3'-Dimethylbenzidine	7.48	212	469742m	145.78	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3565.D
Acq On : 21 Oct 2015 12:15
Operator : KIM
Sample : ABN074-15,ICC160BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 22 10:25:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3566.D
Acq On : 21 Oct 2015 12:32
Operator : KIM
Sample : ABN073-15,ICC080BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 22 11:09:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	57523	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	227504	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	141350	40.00	UG	-0.03
66) Phenanthrene-d10	6.29	188	251449	40.00	UG	-0.03
82) Chrysene-d12	7.94	240	258856	40.00	UG	0.05
92) Perylene-d12	9.20	264	215926	40.00	UG	0.08

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0d	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery = 0.00%#			

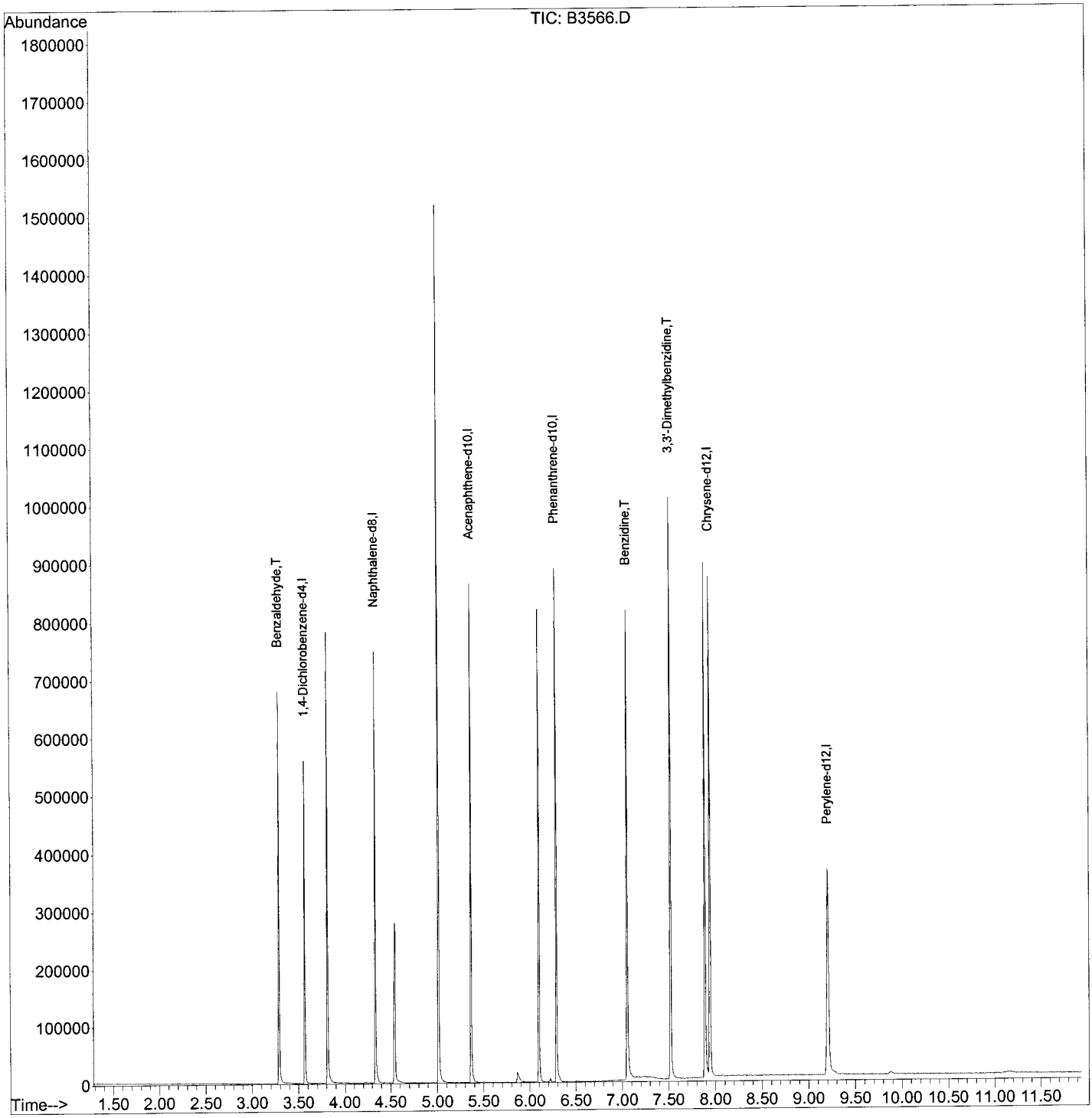
Target Compounds						Qvalue
5) Benzaldehyde	3.29	106	82921m	73.89	UG	
80) Benzidine	7.05	184	277534	80.24	UG	# 100
85) 3,3'-Dimethylbenzidine	7.52	212	291806m	70.90	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3566.D
Acq On : 21 Oct 2015 12:32
Operator : KIM
Sample : ABN073-15,ICC080BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 22 11:09:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3567.D
Acq On : 21 Oct 2015 12:50
Operator : KIM
Sample : ABN072-15,ICC040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 22 10:20:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

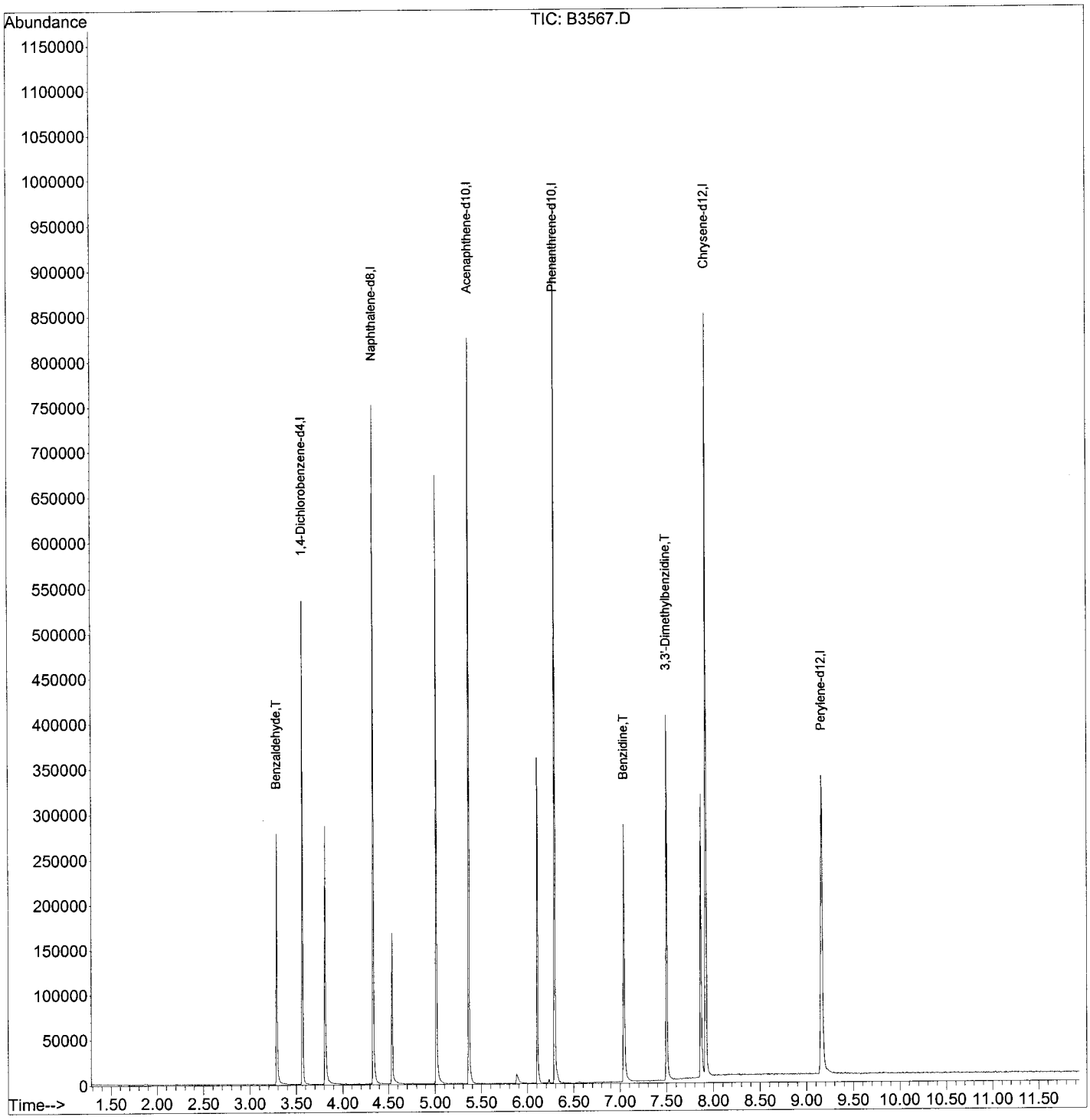
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	58061	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	229382	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	139279	40.00	UG	-0.03
66) Phenanthrene-d10	6.29	188	240793	40.00	UG	-0.03
82) Chrysene-d12	7.92	240	234429	40.00	UG	0.03
92) Perylene-d12	9.16	264	190484	40.00	UG	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0d	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery = 0.00%#			
Target Compounds						Qvalue
5) Benzaldehyde	3.29	106	37728m	33.31	UG	
80) Benzidine	7.04	184	112903	34.09	UG	# 100
85) 3,3'-Dimethylbenzidine	7.50	212	129746	34.81	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3567.D
Acq On : 21 Oct 2015 12:50
Operator : KIM
Sample : ABN072-15,ICC040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 22 10:20:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3568.D
Acq On : 21 Oct 2015 13:07
Operator : KIM
Sample : ABN071-15,ICC020BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 22 10:27:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

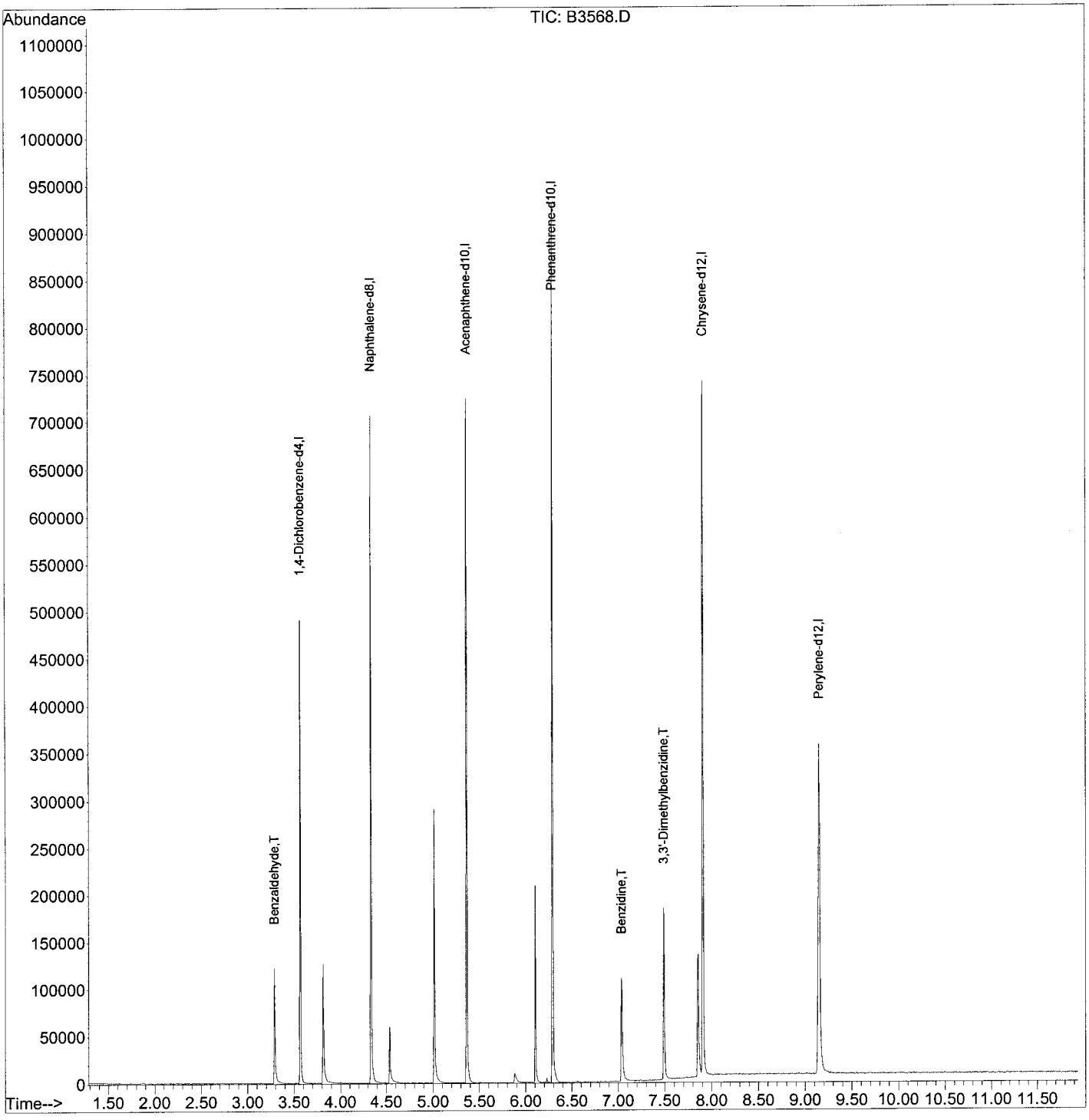
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	54544	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	221574	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	131461	40.00	UG	-0.03
66) Phenanthrene-d10	6.29	188	235962	40.00	UG	-0.03
82) Chrysene-d12	7.91	240	240861	40.00	UG	0.02
92) Perylene-d12	9.15	264	195722	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.29	106	19190m	18.03	UG	
80) Benzidine	7.03	184	55892	17.22	UG	# 100
85) 3,3'-Dimethylbenzidine	7.49	212	65673	17.15	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3568.D
Acq On : 21 Oct 2015 13:07
Operator : KIM
Sample : ABN071-15,ICC020BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 22 10:27:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3569.D
Acq On : 21 Oct 2015 13:24
Operator : KIM
Sample : ABN070-15,ICC010BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 22 10:18:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	59928	40.00	UG	-0.04
23) Naphthalene-d8	4.34	136	234862	40.00	UG	-0.04
43) Acenaphthene-d10	5.37	164	141791	40.00	UG	-0.03
66) Phenanthrene-d10	6.29	188	248663	40.00	UG	-0.03
82) Chrysene-d12	7.90	240	236999	40.00	UG	0.01
92) Perylene-d12	9.15	264	188617	40.00	UG	0.03

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery = 0.00%#			

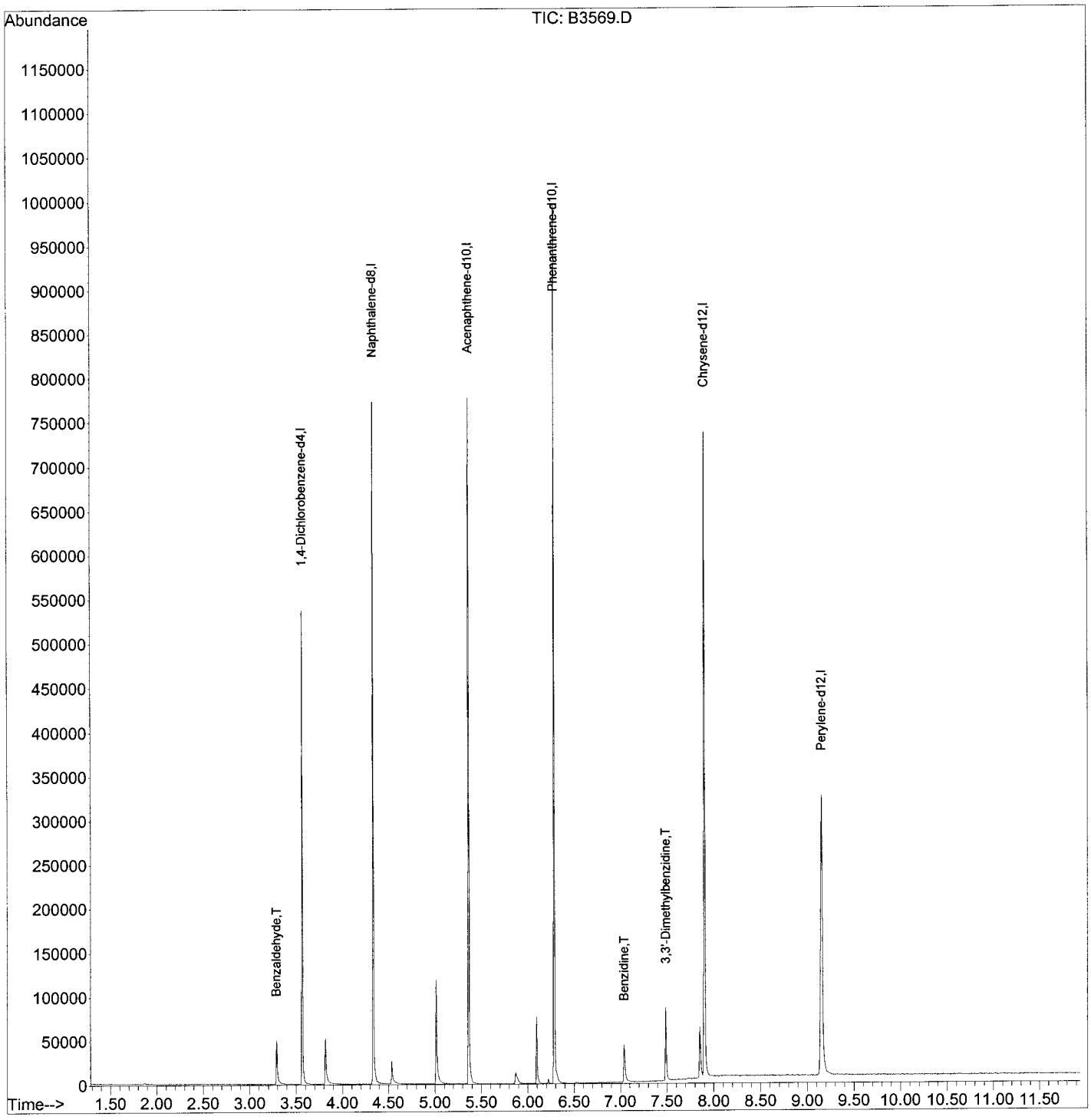
Target Compounds						Qvalue
5) Benzaldehyde	3.29	106	9241m	7.90	UG	
80) Benzidine	7.04	184	25107	7.34	UG	# 100
85) 3,3'-Dimethylbenzidine	7.49	212	30589	8.12	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3569.D
Acq On : 21 Oct 2015 13:24
Operator : KIM
Sample : ABN070-15,ICC010BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 22 10:18:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Wed Oct 21 14:32:29 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3570.D
Acq On : 21 Oct 2015 13:41
Operator : KIM
Sample : ABN069-15,ICC001BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 22 10:25:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 10:42:06 2015
Response via : Initial Calibration

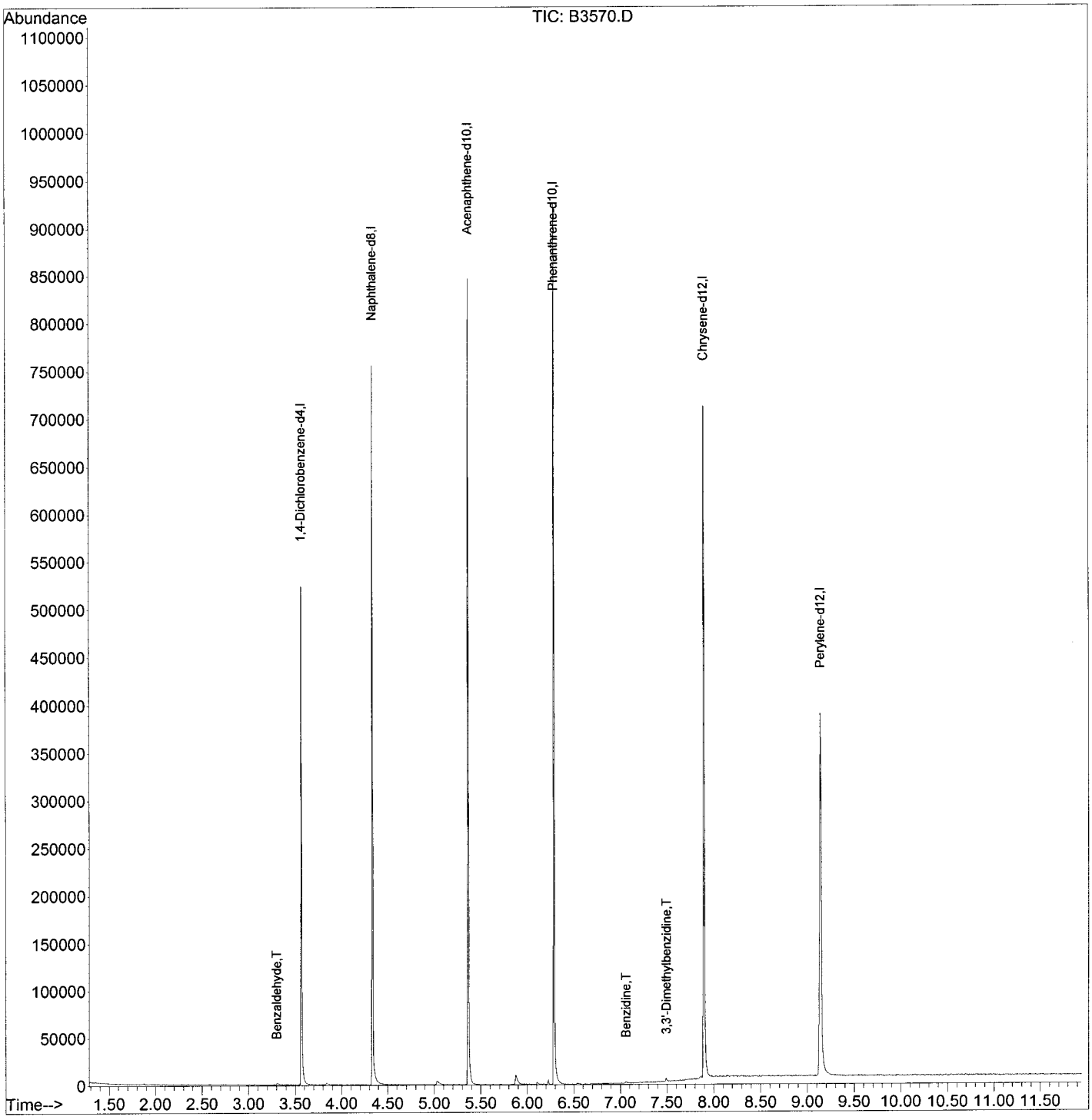
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	52376m	40.00	UG	0.00
23) Naphthalene-d8	4.34	136	244873	40.00	UG	0.00
43) Acenaphthene-d10	5.37	164	148157	40.00	UG	0.00
66) Phenanthrene-d10	6.29	188	260290	40.00	UG	-0.01
82) Chrysene-d12	7.90	240	257961	40.00	UG	0.00
92) Perylene-d12	9.14	264	210364	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.30	106	679m	0.69	UG	
80) Benzidine	7.05	184	1870	0.57	UG	# 100
85) 3,3'-Dimethylbenzidine	7.49	212	2466m	0.63	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3570.D
Acq On : 21 Oct 2015 13:41
Operator : KIM
Sample : ABN069-15,ICC001BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 22 10:25:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 10:42:06 2015
Response via : Initial Calibration



Response Factor Report MSD_B

Method Path : C:\MSDCHEM\1\METHODS\
Method File : BSIM1115.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Oct 22 13:10:33 2015
Response Via : Initial Calibration

Calibration Files
0.1 =B3572.D 0.2 =B3573.D 0.5 =B3571.D
1.0 =B3574.D 2.0 =B3575.D

		Compound	0.1	0.2	0.5	1.0	2.0	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	ISTD						
23)	I	Naphthalene-d8	ISTD						
43)	I	Acenaphthene-d10	ISTD						
66)	I	Phenanthrene-d10	ISTD						
72)	T	Hexachlorobenzene	0.357	0.380	0.318	0.373	0.279	0.341	12.42
74)	MC	Pentachlorophenol	0.034	0.037	0.040	0.040	0.039	0.038	6.45
82)	I	Chrysene-d12	ISTD						
88)	T	Benzo[a]anthracene	0.903	0.944	1.061	1.230	1.356	1.099	17.44
92)	I	Perylene-d12	ISTD						
94)	T	Benzo[b]fluoranthen	1.084	0.866	0.961	1.121	1.315	1.069	15.97
95)	T	Benzo[k]fluoranthen	1.845	1.608	1.610	1.522	1.511	1.619	8.31
96)	TC	Benzo[a]pyrene	1.149	1.129	1.070	1.193	1.260	1.160	6.13
97)	T	Indeno[1,2,3-cd]pyr	0.813	0.947	0.990	1.052	1.214	1.003	14.66
98)	T	Dibenz[a,h]anthrace	0.703	0.746	0.853	0.866	1.014	0.836	14.47

(#) = Out of Range

BSIM1115.M Tue Oct 27 12:48:33 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3571.D
Acq On : 21 Oct 2015 16:46
Operator : KIM
Sample : ABN058-15,ICC000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 22 11:38:19 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration

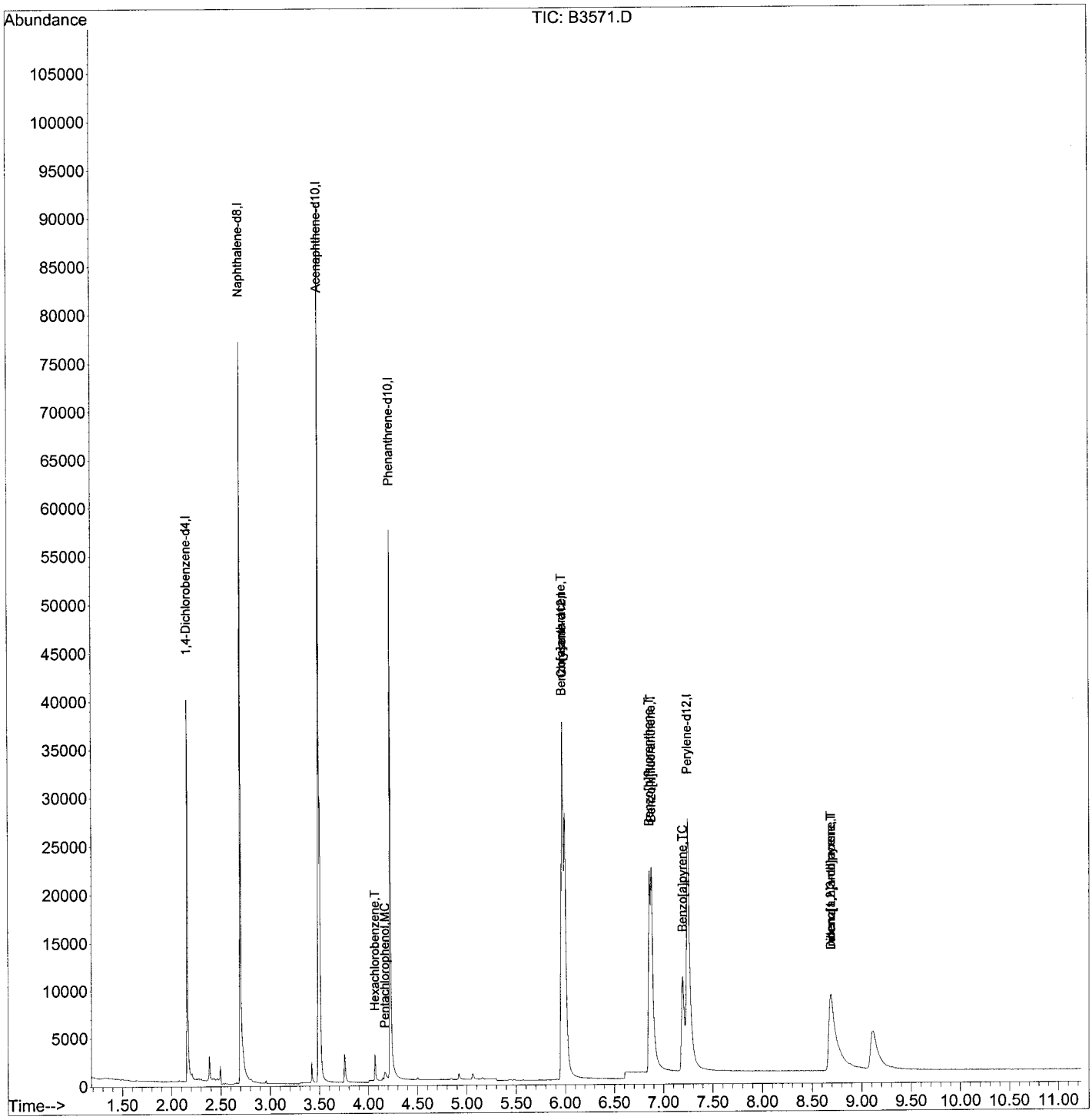
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	17155m	1.00	UG	-0.03
23) Naphthalene-d8	2.70	136	48707m	1.00	UG	-0.03
43) Acenaphthene-d10	3.49	164	25232m	1.00	UG	-0.04
66) Phenanthrene-d10	4.22	188	39333m	1.00	UG	-0.05
82) Chrysene-d12	5.97	240	31795m	1.00	UG	-0.05
92) Perylene-d12	7.24	264	39511m	1.00	UG	-0.05
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
Target Compounds						Qvalue
72) Hexachlorobenzene	4.07	284	1250m	0.08	UG	
74) Pentachlorophenol	4.17	266	785m	0.67	UG	
88) Benzo[a]anthracene	5.96	228	16869m	0.41	UG	
94) Benzo[b]fluoranthene	6.86	252	18986m	0.46	UG	
95) Benzo[k]fluoranthene	6.88	252	31806m	0.54	UG	
96) Benzo[a]pyrene	7.19	252	21147	0.46	UG	100
97) Indeno[1,2,3-cd]pyrene	8.69	276	19552m	0.48	UG	
98) Dibenz[a,h]anthracene	8.69	278	16851m	0.49	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3571.D
Acq On : 21 Oct 2015 16:46
Operator : KIM
Sample : ABN058-15,ICC000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 22 11:38:19 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3572.D
Acq On : 21 Oct 2015 14:52
Operator : KIM
Sample : ABN056-15,ICC000.1SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 22 11:53:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration

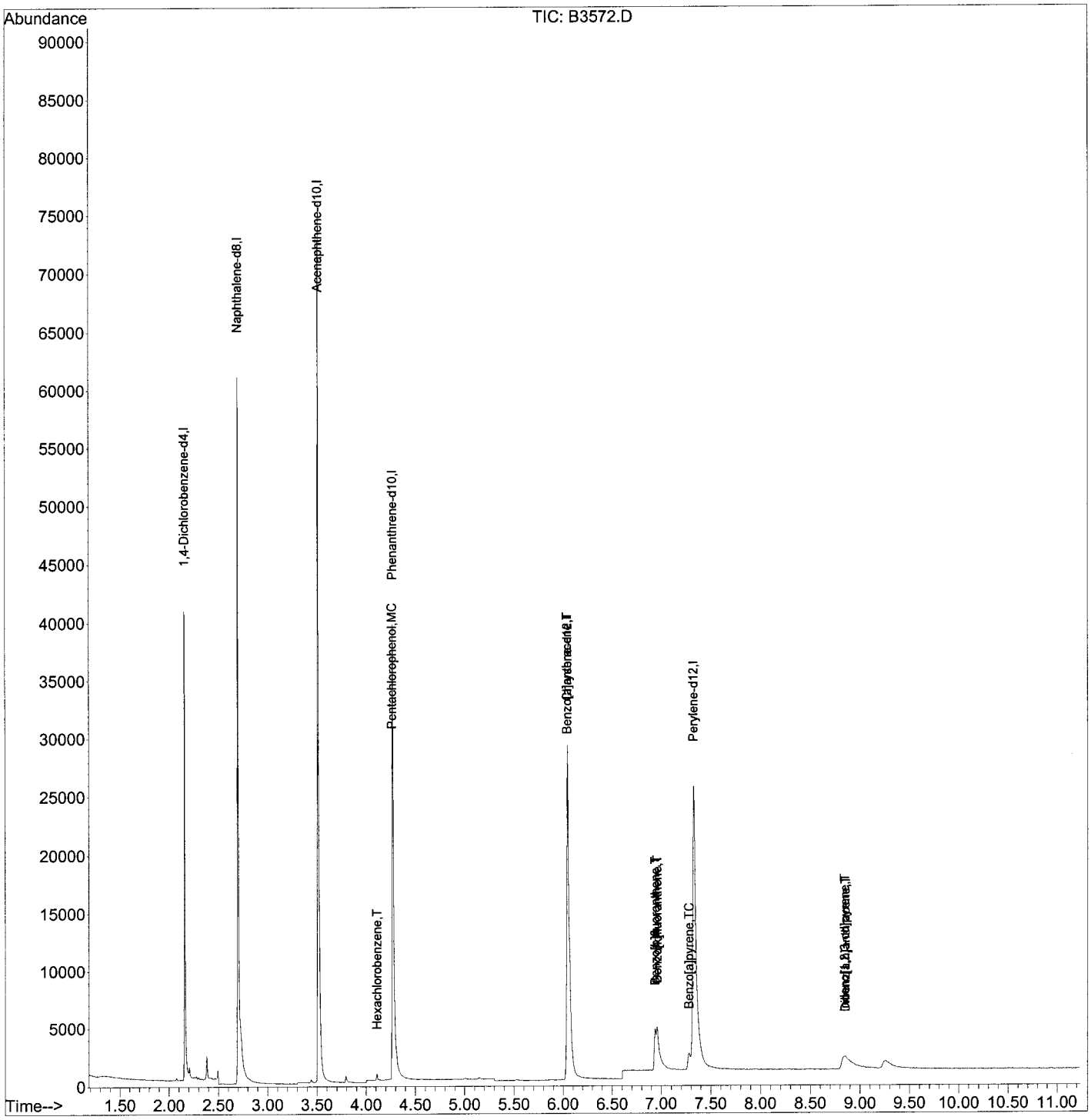
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	17454m	1.00	UG	-0.03
23) Naphthalene-d8	2.70	136	47753m	1.00	UG	-0.03
43) Acenaphthene-d10	3.51	164	25030m	1.00	UG	-0.02
66) Phenanthrene-d10	4.27	188	39949m	1.00	UG	0.00
82) Chrysene-d12	6.05	240	32166m	1.00	UG	0.02
92) Perylene-d12	7.32	264	42904m	1.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.11	284	285m	0.02	UG	
74) Pentachlorophenol	4.26	266	137m	0.12	UG	
88) Benzo[a]anthracene	6.03	228	2905m	0.07	UG	
94) Benzo[b]fluoranthene	6.94	252	4651m	0.10	UG	
95) Benzo[k]fluoranthene	6.96	252	7916m	0.12	UG	
96) Benzo[a]pyrene	7.28	252	4931m	0.10	UG	
97) Indeno[1,2,3-cd]pyrene	8.84	276	3487m	0.08	UG	
98) Dibenz[a,h]anthracene	8.85	278	3016m	0.08	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3572.D
Acq On : 21 Oct 2015 14:52
Operator : KIM
Sample : ABN056-15,ICC000.1SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 22 11:53:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3573.D
Acq On : 21 Oct 2015 15:07
Operator : KIM
Sample : ABN057-15,ICC000.2SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 22 11:51:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration

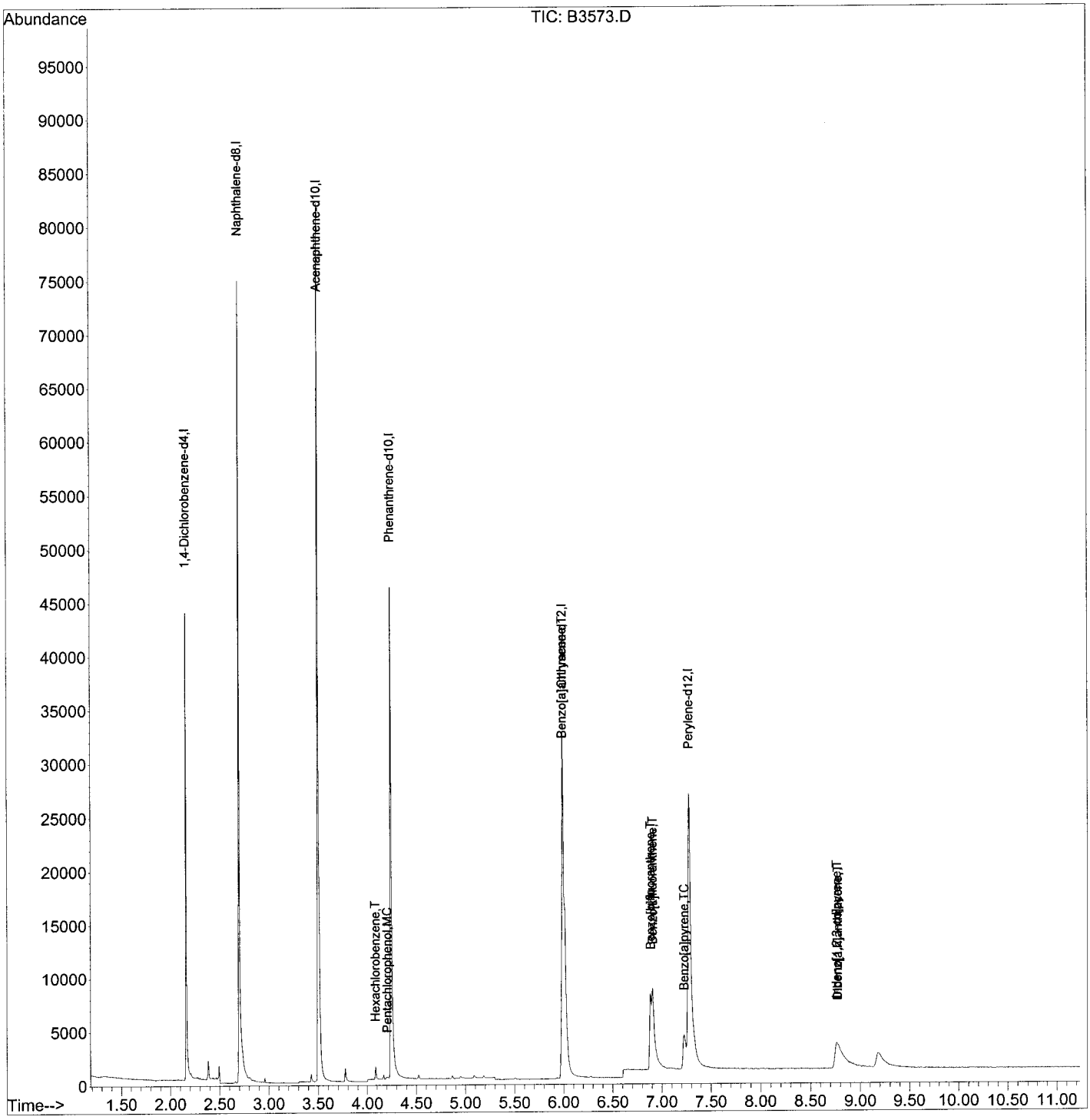
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	17615m	1.00	UG	-0.03
23) Naphthalene-d8	2.70	136	48423m	1.00	UG	-0.03
43) Acenaphthene-d10	3.50	164	26007m	1.00	UG	-0.03
66) Phenanthrene-d10	4.24	188	40384m	1.00	UG	-0.03
82) Chrysene-d12	5.99	240	33571m	1.00	UG	-0.03
92) Perylene-d12	7.28	264	40688m	1.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.09	284	614m	0.04	UG	
74) Pentachlorophenol	4.20	266	295m	0.25	UG	
88) Benzo[a]anthracene	5.98	228	6340m	0.14	UG	
94) Benzo[b]fluoranthene	6.89	252	7044m	0.17	UG	
95) Benzo[k]fluoranthene	6.91	252	13089m	0.22	UG	
96) Benzo[a]pyrene	7.22	252	9188m	0.20	UG	
97) Indeno[1,2,3-cd]pyrene	8.76	276	7708m	0.19	UG	
98) Dibenz[a,h]anthracene	8.78	278	6072m	0.17	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3573.D
Acq On : 21 Oct 2015 15:07
Operator : KIM
Sample : ABN057-15,ICC000.2SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Oct 22 11:51:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3574.D
Acq On : 21 Oct 2015 15:23
Operator : KIM
Sample : ABN059-15,ICC001.0SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 22 11:50:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration

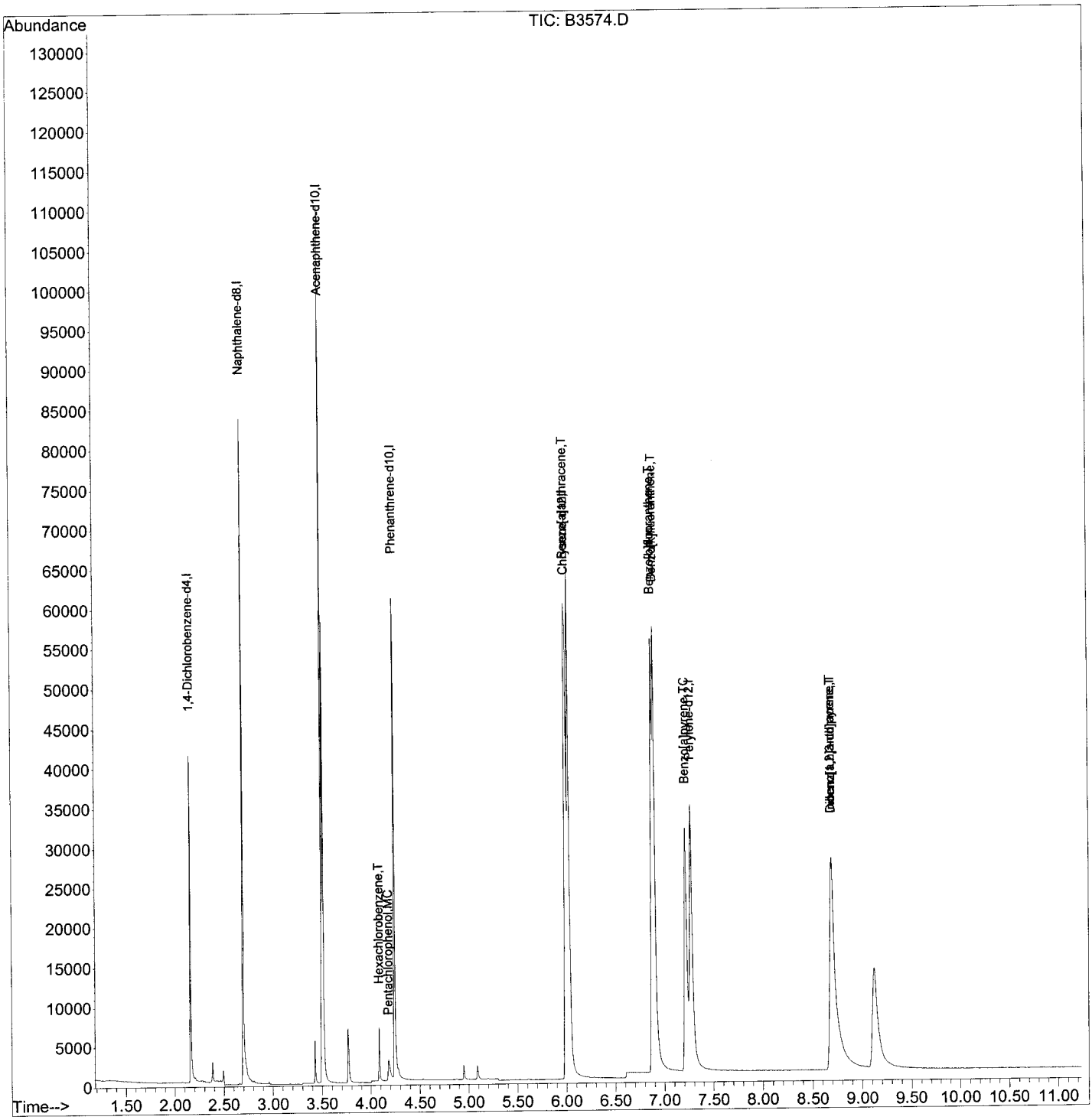
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	17388m	1.00	UG	-0.03
23) Naphthalene-d8	2.70	136	48538m	1.00	UG	-0.03
43) Acenaphthene-d10	3.50	164	25918m	1.00	UG	-0.03
66) Phenanthrene-d10	4.24	188	40744m	1.00	UG	-0.03
82) Chrysene-d12	6.00	240	34645m	1.00	UG	-0.02
92) Perylene-d12	7.27	264	44664m	1.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.09	284	3043m	0.19	UG	
74) Pentachlorophenol	4.18	266	1617m	1.34	UG	
88) Benzo[a]anthracene	5.99	228	42627m	0.94	UG	
94) Benzo[b]fluoranthene	6.87	252	50069m	1.08	UG	
95) Benzo[k]fluoranthene	6.90	252	67981m	1.02	UG	
96) Benzo[a]pyrene	7.21	252	53282m	1.03	UG	
97) Indeno[1,2,3-cd]pyrene	8.69	276	46994m	1.03	UG	
98) Dibenz[a,h]anthracene	8.69	278	38700m	0.99	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3574.D
Acq On : 21 Oct 2015 15:23
Operator : KIM
Sample : ABN059-15,ICC001.0SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 22 11:50:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3575.D
Acq On : 21 Oct 2015 15:39
Operator : KIM
Sample : ABN060-15,ICC002.0SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 22 12:08:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration

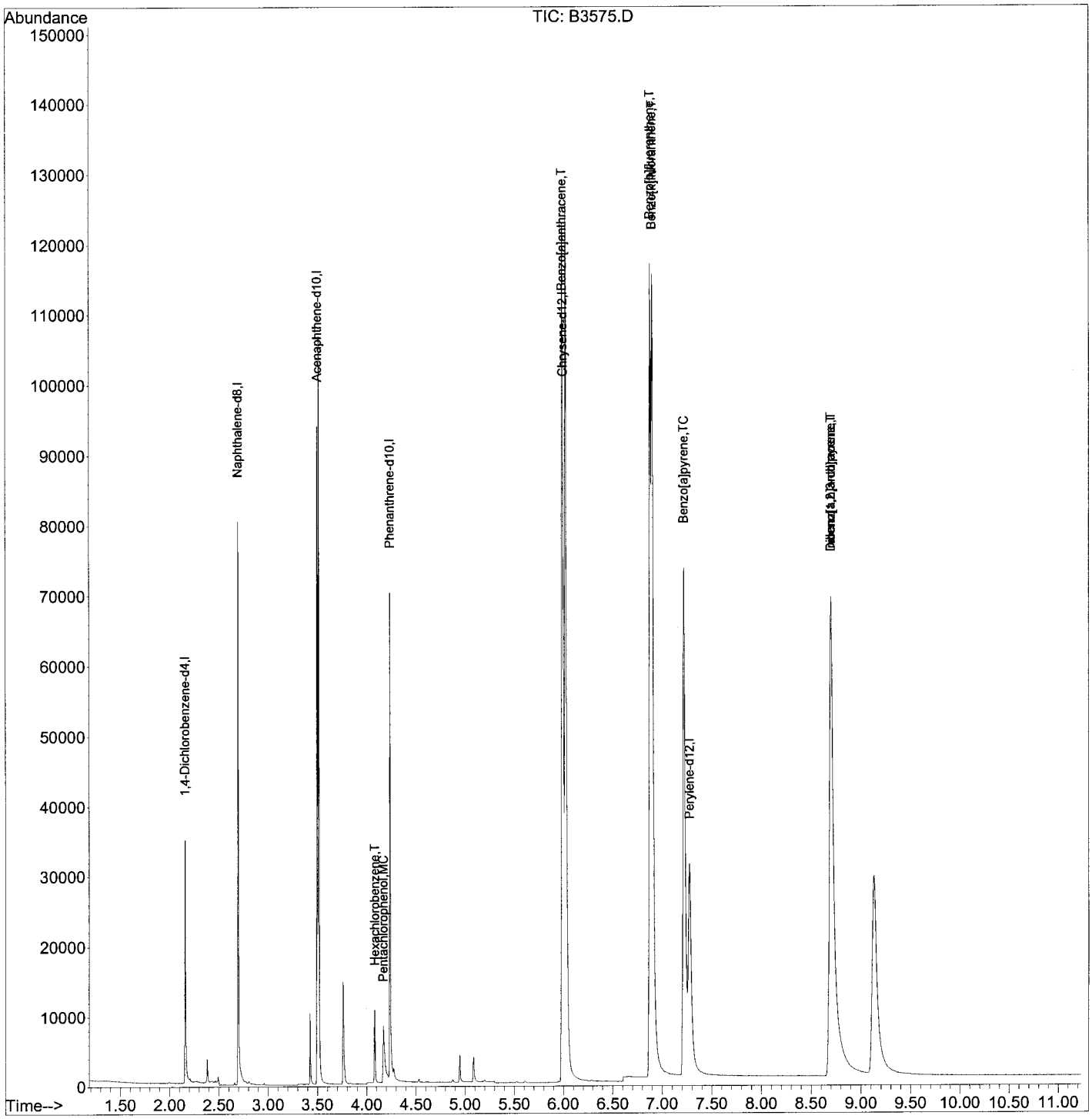
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	14293m	1.00	UG	-0.03
23) Naphthalene-d8	2.70	136	40644	1.00	UG	-0.03
43) Acenaphthene-d10	3.50	164	22356m	1.00	UG	-0.03
66) Phenanthrene-d10	4.24	188	35142m	1.00	UG	-0.03
82) Chrysene-d12	6.00	240	31508m	1.00	UG	-0.02
92) Perylene-d12	7.28	264	40810m	1.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.08	284	4905m	0.36	UG	
74) Pentachlorophenol	4.17	266	2758m	2.65	UG	
88) Benzo[a]anthracene	5.99	228	85427m	2.08	UG	
94) Benzo[b]fluoranthene	6.88	252	107368m	2.53	UG	
95) Benzo[k]fluoranthene	6.90	252	123296m	2.02	UG	
96) Benzo[a]pyrene	7.22	252	102868m	2.19	UG	
97) Indeno[1,2,3-cd]pyrene	8.70	276	99093m	2.38	UG	
98) Dibenz[a,h]anthracene	8.70	278	82745m	2.32	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3575.D
Acq On : 21 Oct 2015 15:39
Operator : KIM
Sample : ABN060-15,ICC002.0SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 22 12:08:45 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Sep 22 09:42:28 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3576.D
Acq On : 21 Oct 2015 15:56
Operator : KIM
Sample : ABN075-15,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 22 12:32:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 12:25:22 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	57	0.00
2	T	N-Nitrosodimethylamine	0.607	0.613	-1.0	54	-0.02
3	T	Pyridine	0.743	0.785	-5.7	56	0.00
4	S	2-Fluorophenol	0.982	0.939	4.4	56	0.00
5	T	Benzaldehyde	0.667	0.659	1.2	93	0.00
6	S	Phenol-d5	1.234	1.221	1.1	57	0.00
7	MC	Phenol	1.281	1.269	0.9	58	0.00
8	T	Aniline	0.546	0.555	-1.6	58	0.00
9	T	Bis(2-chloroethyl) ether	0.680	0.686	-0.9	56	0.00
10	M	2-Chlorophenol	1.085	1.081	0.4	58	0.00
11	T	1,3-Dichlorobenzene	1.241	1.196	3.6	57	0.00
12	MC	1,4-Dichlorobenzene	1.272	1.269	0.2	57	0.00
13	T	Benzyl alcohol	0.632	0.641	-1.4	56	0.00
14	T	1,2-Dichlorobenzene	1.175	1.177	-0.2	57	0.00
15	T	2-Methylphenol	0.982	0.977	0.5	57	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.233	1.252	-1.5	57	0.00
17	T	4-Methylphenol	0.964	1.003	-4.0	57	0.00
18	MP	N-Nitrosodi-n-propylamine	0.693	0.710	-2.5	58	0.00
19	T	Acetophenone	1.337	1.338	-0.1	58	0.00
20	T	3-Methylphenol	0.964	1.003	-4.0	57	0.00
21	T	Hexachloroethane	0.427	0.420	1.6	56	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	58	0.00
24	S	Nitrobenzene-d5	0.243	0.244	-0.4	58	0.00
25	T	Nitrobenzene	0.247	0.246	0.4	60	0.00
26	T	Isophorone	0.487	0.478	1.8	58	0.00
27	TC	2-Nitrophenol	0.130	0.132	-1.5	57	0.00
28	T	2,4-Dimethylphenol	0.227	0.228	-0.4	55	0.00
29	T	Bis(2-chloroethoxy) methane	0.292	0.307	-5.1	58	0.00
30	T	Benzoic acid	0.109	0.089	18.3	54	0.00
31	T	2,4-Dimethylaniline	0.326	0.328	-0.6	56	0.00
32	TC	2,4-Dichlorophenol	0.215	0.225	-4.7	58	0.00
33	M	1,2,4-Trichlorobenzene	0.263	0.260	1.1	58	0.00
34	T	Naphthalene	0.782	0.784	-0.3	58	0.00
35	T	4-Chloroaniline	0.340	0.336	1.2	58	0.00
36	T	4-Aminotoluene	0.447	0.462	-3.4	59	0.00
37	TC	Hexachlorobutadiene	0.142	0.144	-1.4	58	0.00
38	T	Caprolactam	0.096	0.102	-6.2	58	-0.04
39	T	2-Aminotoluene	0.447	0.462	-3.4	59	0.00
40	MC	4-Chloro-3-methylphenol	0.197	0.199	-1.0	56	0.00
41	T	2-Methylnaphthalene	0.501	0.512	-2.2	58	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	59	0.00
44	TP	Hexachlorocyclopentadiene	0.173	0.149	13.9	50	0.00
45	TC	2,4,6-Trichlorophenol	0.265	0.264	0.4	57	0.00
46	T	2,4,5-Trichlorophenol	0.295	0.288	2.4	58	0.00

47	S	2-Fluorobiphenyl	1.006	0.993	1.3	59	0.00
48	T	1,1'-Biphenyl	1.091	1.083	0.7	59	0.00
49	T	2-Chloronaphthalene	0.835	0.839	-0.5	59	0.00
50	T	2-Nitroaniline	0.183	0.193	-5.5	57	0.00
51	T	Dimethyl phthalate	0.931	0.951	-2.1	59	0.00
52	T	2,6-Dinitrotoluene	0.184	0.195	-6.0	58	0.00
53	T	Acenaphthylene	1.312	1.336	-1.8	59	0.00
54	T	3-Nitroaniline	0.218	0.234	-7.3	59	0.00
55	MC	Acenaphthene	0.834	0.831	0.4	59	0.00
56	TP	2,4-Dinitrophenol	0.077	0.074	3.9	53	0.00
57	MP	4-Nitrophenol	0.127	0.112	11.8	54	0.00
58	M	2,4-Dinitrotoluene	0.235	0.265	-12.8	57	0.00
59	T	Dibenzofuran	1.289	1.283	0.5	58	0.00
60	T	Diethyl phthalate	0.894	0.920	-2.9	59	0.00
61	T	Fluorene	0.997	1.000	-0.3	58	0.00
62	T	4-Chlorophenyl phenyl ether	0.504	0.522	-3.6	59	0.00
63	T	4-Nitroaniline	0.234	0.268	-14.5	60	-0.02
64		1,2,4,5-Tetrachlorobenzene	0.445	0.447	-0.4	59	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.258	0.292	-13.2	57	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	61	0.00
67	T	4,6-Dinitro-2-methylphenol	0.081	0.074	8.6	53	-0.02
68	TC	N-Nitrosodiphenylamine	0.417	0.413	1.0	59	-0.02
69	T	1,2-Diphenylhydrazine	0.551	0.549	0.4	59	-0.01
70	S	2,4,6-Tribromophenol	0.139	0.134	3.6	58	0.00
71	T	4-Bromophenyl phenyl ether	0.193	0.187	3.1	60	0.00
72	T	Hexachlorobenzene	0.237	0.231	2.5	59	0.00
73	T	Atrazine	0.154	0.157	-1.9	60	-0.01
74	MC	Pentachlorophenol	0.112	0.105	6.3	55	0.00
75	T	Phenanthrene	0.807	0.800	0.9	60	0.00
76	T	Anthracene	0.793	0.805	-1.5	61	0.00
77	T	Carbazole	0.721	0.753	-4.4	61	0.01
78	T	Di-n-butyl phthalate	0.834	0.853	-2.3	59	0.03
79	TC	Fluoranthene	0.834	0.868	-4.1	61	0.05
80	T	Benzidine	0.496	0.411	17.1	83	-0.01
82	I	Chrysene-d12	1.000	1.000	0.0	66	0.08
83	M	Pyrene	0.993	0.903	9.1	62	0.05
84	S	Terphenyl-d14	0.881	0.789	10.4	60	0.06
85	T	3,3'-Dimethylbenzidine	0.597	0.498	16.6	89	-0.03
86	T	Butyl benzyl phthalate	0.372	0.369	0.8	63	0.08
87	T	3,3'-Dichlorobenzidine	0.313	0.343	-9.6	68	0.09
88	T	Benzo[a]anthracene	0.923	0.898	2.7	68	0.09
89	T	Chrysene	0.854	0.860	-0.7	68	0.09
90	T	Bis(2-ethylhexyl) phthalate	0.504	0.518	-2.8	63	0.09
92	I	Perylene-d12	1.000	1.000	0.0	75	0.12
93	TC	Di-n-octyl phthalate	0.796	0.782	1.8	66	0.10
94	T	Benzo[b]fluoranthene	0.901	0.762	15.4	60	0.13
95	T	Benzo[k]fluoranthene	0.899	0.796	11.5	70	0.10
96	TC	Benzo[a]pyrene	0.814	0.811	0.4	74	0.11
97	T	Indeno[1,2,3-cd]pyrene	0.958	0.901	5.9	72	0.13
98	T	Dibenz[a,h]anthracene	0.787	0.759	3.6	73	0.13
99	T	Benzo[g,h,i]perylene	0.799	0.749	6.3	72	0.13

(#) = Out of Range

BW1115.M Thu Oct 22 12:57:52 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3576.D
Acq On : 21 Oct 2015 15:56
Operator : KIM
Sample : ABN075-15,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 22 11:32:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 12:25:22 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	32022	40.00	UG	0.00
23) Naphthalene-d8	4.34	136	130261	40.00	UG	0.00
43) Acenaphthene-d10	5.37	164	81570	40.00	UG	0.00
66) Phenanthrene-d10	6.30	188	146391	40.00	UG	0.00
82) Chrysene-d12	7.98	240	150951	40.00	UG	0.08
92) Perylene-d12	9.26	264	152389	40.00	UG	0.12
System Monitoring Compounds						
4) 2-Fluorophenol	2.73	112	75153	95.55	UG	0.00
Spiked Amount 100.000	Range 10 - 100		Recovery = 95.55%			
6) Phenol-d5	3.34	99	97764	98.93	UG	0.00
Spiked Amount 100.000	Range 10 - 102		Recovery = 98.93%			
24) Nitrobenzene-d5	3.91	82	39677	50.19	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 100.38%			
47) 2-Fluorobiphenyl	4.97	172	101227	49.33	UG	0.00
Spiked Amount 50.000	Range 26 - 101		Recovery = 98.66%			
70) 2,4,6-Tribromophenol	5.90	330	48905	95.93	UG	0.00
Spiked Amount 100.000	Range 22 - 115		Recovery = 95.93%			
84) Terphenyl-d14	7.25	244	148933	44.79	UG	0.06
Spiked Amount 50.000	Range 23 - 124		Recovery = 89.58%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.56	74	19629	40.40	UG	67
3) Pyridine	1.61	52	25130	42.25	UG	91
7) Phenol	3.35	94	40644	39.65	UG	75
8) Aniline	3.37	66	17787	40.73	UG	87
9) Bis(2-chloroethyl) ether	3.40	63	21957	40.33	UG	98
10) 2-Chlorophenol	3.45	128	34624	39.88	UG	97
11) 1,3-Dichlorobenzene	3.55	146	38306	38.55	UG	95
12) 1,4-Dichlorobenzene	3.58	146	40628	39.89	UG	97
13) Benzyl alcohol	3.65	108	20541	40.61	UG	88
14) 1,2-Dichlorobenzene	3.69	146	37689	40.05	UG	92
15) 2-Methylphenol	3.72	108	31276	39.78	UG	98
16) Bis(2-chloroisopropyl) eth	3.74	45	40088	40.61	UG	96
17) 4-Methylphenol	3.80	108	32111	41.61	UG	99
18) N-Nitrosodi-n-propylamine	3.82	70	22726	40.96	UG	93
19) Acetophenone	3.81	105	42839	40.03	UG	82
20) 3-Methylphenol	3.80	108	32111	41.61	UG	99
21) Hexachloroethane	3.89	117	13439	39.33	UG	94
25) Nitrobenzene	3.92	77	32056	39.93	UG	96
26) Isophorone	4.06	82	62214	39.23	UG	100
27) 2-Nitrophenol	4.12	139	17228	40.77	UG	84
28) 2,4-Dimethylphenol	4.12	107	29727	40.27	UG	93

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3576.D
Acq On : 21 Oct 2015 15:56
Operator : KIM
Sample : ABN075-15,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 22 11:32:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 12:25:22 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.17	93	40048	42.11	UG		99
30) Benzoic acid	4.19	105	11627m	32.81	UG		
31) 2,4-Dimethylaniline	4.23	121	42710	40.18	UG	#	100
32) 2,4-Dichlorophenol	4.26	162	29283	41.86	UG		99
33) 1,2,4-Trichlorobenzene	4.31	180	33824	39.52	UG		99
34) Naphthalene	4.35	128	102096	40.09	UG	#	99
35) 4-Chloroaniline	4.37	127	43780	39.55	UG		96
36) 4-Aminotoluene	3.84	106	60156	41.35	UG		100
37) Hexachlorobutadiene	4.45	225	18700	40.41	UG		99
38) Caprolactam	4.55	55	13284	42.59	UG		97
39) 2-Aminotoluene	3.84	106	60156	41.35	UG		100
40) 4-Chloro-3-methylphenol	4.65	107	25906	40.43	UG		97
41) 2-Methylnaphthalene	4.75	142	66738	40.89	UG		99
44) Hexachlorocyclopentadiene	4.89	237	12134	34.45	UG		99
45) 2,4,6-Trichlorophenol	4.93	196	21532	39.79	UG		97
46) 2,4,5-Trichlorophenol	4.96	196	23510	39.04	UG		99
48) 1,1'-Biphenyl	5.02	154	88315	39.69	UG		99
49) 2-Chloronaphthalene	5.04	162	68469	40.20	UG		99
50) 2-Nitroaniline	5.09	65	15767	42.17	UG		88
51) Dimethyl phthalate	5.20	163	77548	40.84	UG		99
52) 2,6-Dinitrotoluene	5.24	165	15904	42.31	UG		90
53) Acenaphthylene	5.29	152	108984	40.72	UG		99
54) 3-Nitroaniline	5.33	138	19116	42.95	UG		96
55) Acenaphthene	5.39	153	67809	39.88	UG		99
56) 2,4-Dinitrophenol	5.39	184	6004	38.05	UG		12
57) 4-Nitrophenol	5.41	65	9172	35.37	UG		85
58) 2,4-Dinitrotoluene	5.48	165	21586	45.07	UG		93
59) Dibenzofuran	5.48	168	104682	39.83	UG		96
60) Diethyl phthalate	5.63	149	75054	41.18	UG		100
61) Fluorene	5.72	166	81547	40.12	UG		98
62) 4-Chlorophenyl phenyl ethe	5.70	204	42615	41.44	UG		98
63) 4-Nitroaniline	5.72	138	21844	45.81	UG		78
64) 1,2,4,5-Tetrachlorobenzene	4.88	216	72859	80.22	UG		99
65) 2,3,4,6-Tetrachlorophenol	5.59	232	23842	45.23	UG		100
67) 4,6-Dinitro-2-methylphenol	5.76	198	10886	36.56	UG		77
68) N-Nitrosodiphenylamine	5.77	169	60490	39.64	UG		99
69) 1,2-Diphenylhydrazine	5.80	77	80438	39.92	UG		89
71) 4-Bromophenyl phenyl ether	6.02	248	27336	38.73	UG		98
72) Hexachlorobenzene	6.13	284	33872	39.07	UG		99
73) Atrazine	6.11	200	22912	40.74	UG		99
74) Pentachlorophenol	6.22	266	15333	37.37	UG		97
75) Phenanthrene	6.31	178	117165	39.68	UG		100
76) Anthracene	6.34	178	117857	40.60	UG		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3576.D
Acq On : 21 Oct 2015 15:56
Operator : KIM
Sample : ABN075-15,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 22 11:32:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 12:25:22 2015
Response via : Initial Calibration

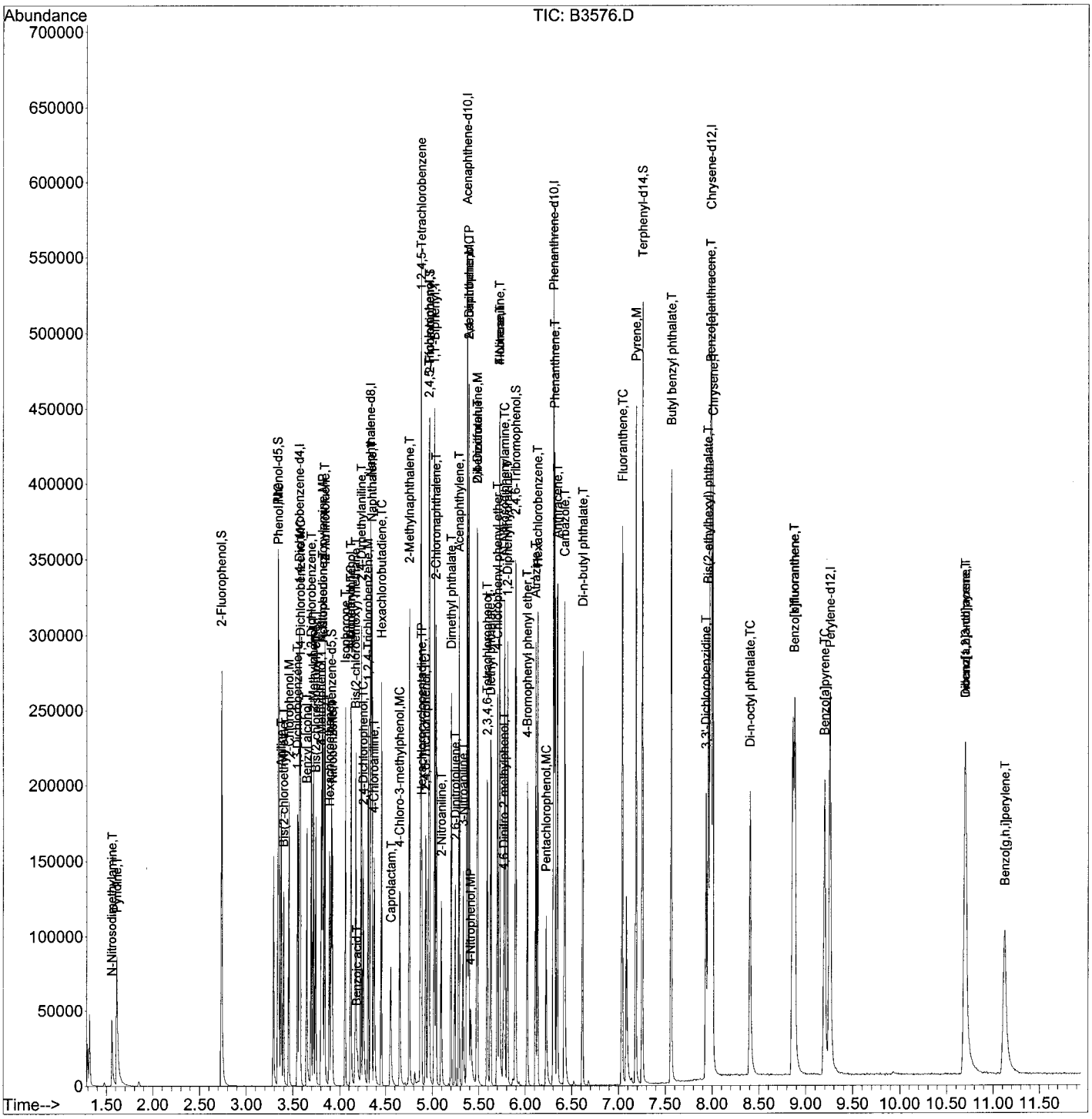
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
77) Carbazole	6.42	167	110161	41.77 UG	99
78) Di-n-butyl phthalate	6.62	149	124879	40.93 UG	98
79) Fluoranthene	7.04	202	127125	41.63 UG	93
83) Pyrene	7.18	202	136259	36.35 UG	92
86) Butyl benzyl phthalate	7.56	149	55691	39.63 UG	98
87) 3,3'-Dichlorobenzidine	7.93	252	51770	43.85 UG	99
88) Benzo[a]anthracene	7.97	228	135550	38.90 UG	99
89) Chrysene	8.01	228	129850	40.31 UG	100
90) Bis(2-ethylhexyl) phthalat	7.96	149	78166	41.13 UG	97
93) Di-n-octyl phthalate	8.40	149	119154	39.29 UG	99
94) Benzo[b]fluoranthene	8.88	252	116087	33.82 UG	95
95) Benzo[k]fluoranthene	8.88	252	121251	35.42 UG	96
96) Benzo[a]pyrene	9.20	252	123588	39.85 UG	98
97) Indeno[1,2,3-cd]pyrene	10.70	276	137376	37.65 UG	86
98) Dibenz[a,h]anthracene	10.70	278	115692	38.59 UG	96
99) Benzo[g,h,i]perylene	11.13	276	114175	37.50 UG	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3576.D
Acq On : 21 Oct 2015 15:56
Operator : KIM
Sample : ABN075-15,ICV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 22 11:32:04 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 12:25:22 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3577.D
Acq On : 21 Oct 2015 16:13
Operator : KIM
Sample : ABN076-15,ICV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 22 11:32:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 12:25:22 2015
Response via : Initial Calibration

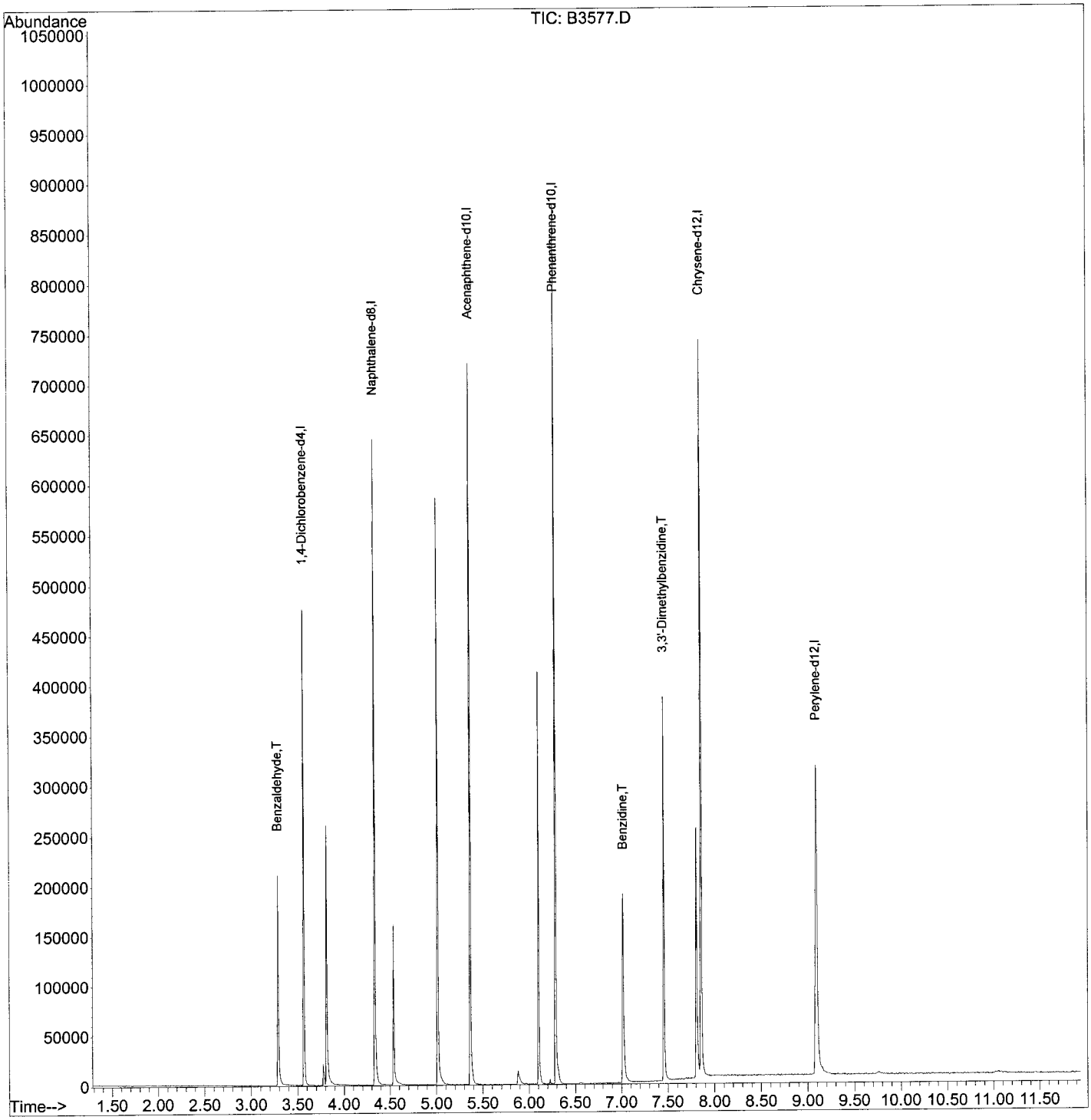
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.57	152	53220	40.00	UG	0.00
23) Naphthalene-d8	4.34	136	212173	40.00	UG	0.00
43) Acenaphthene-d10	5.37	164	129275	40.00	UG	0.00
66) Phenanthrene-d10	6.29	188	228267	40.00	UG	-0.01
82) Chrysene-d12	7.86	240	230758	40.00	UG	-0.05
92) Perylene-d12	9.09	264	185946	40.00	UG	-0.04
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.29	106	35056	39.53	UG	# 100
80) Benzidine	7.02	184	93755	33.11	UG	# 100
85) 3,3'-Dimethylbenzidine	7.46	212	114869	33.37	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3577.D
Acq On : 21 Oct 2015 16:13
Operator : KIM
Sample : ABN076-15,ICV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Oct 22 11:32:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 12:25:22 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\10-21-15\
Data File : B3578.D
Acq On : 21 Oct 2015 16:30
Operator : KIM
Sample : ABN061-15,ICV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 22 13:15:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	105	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	101	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	101	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00
72	T	Hexachlorobenzene	0.341	0.289	15.2	93	0.00
74	MC	Pentachlorophenol	0.038	0.037	2.6	95	0.00
82	I	Chrysene-d12	1.000	1.000	0.0	109	-0.02
88	T	Benzo[a]anthracene	1.099	1.086	1.2	111	-0.02
92	I	Perylene-d12	1.000	1.000	0.0	112	-0.02
94	T	Benzo[b]fluoranthene	1.069	1.126	-5.3	131	-0.02
95	T	Benzo[k]fluoranthene	1.619	1.634	-0.9	114	-0.02
96	TC	Benzo[a]pyrene	1.160	1.232	-6.2	129	-0.02
97	T	Indeno[1,2,3-cd]pyrene	1.003	1.044	-4.1	118	-0.01
98	T	Dibenz[a,h]anthracene	0.836	0.891	-6.6	117	0.00

(#) = Out of Range

BSIM1115.M Tue Oct 27 12:50:12 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3578.D
Acq On : 21 Oct 2015 16:30
Operator : KIM
Sample : ABN061-15,ICV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 22 12:15:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

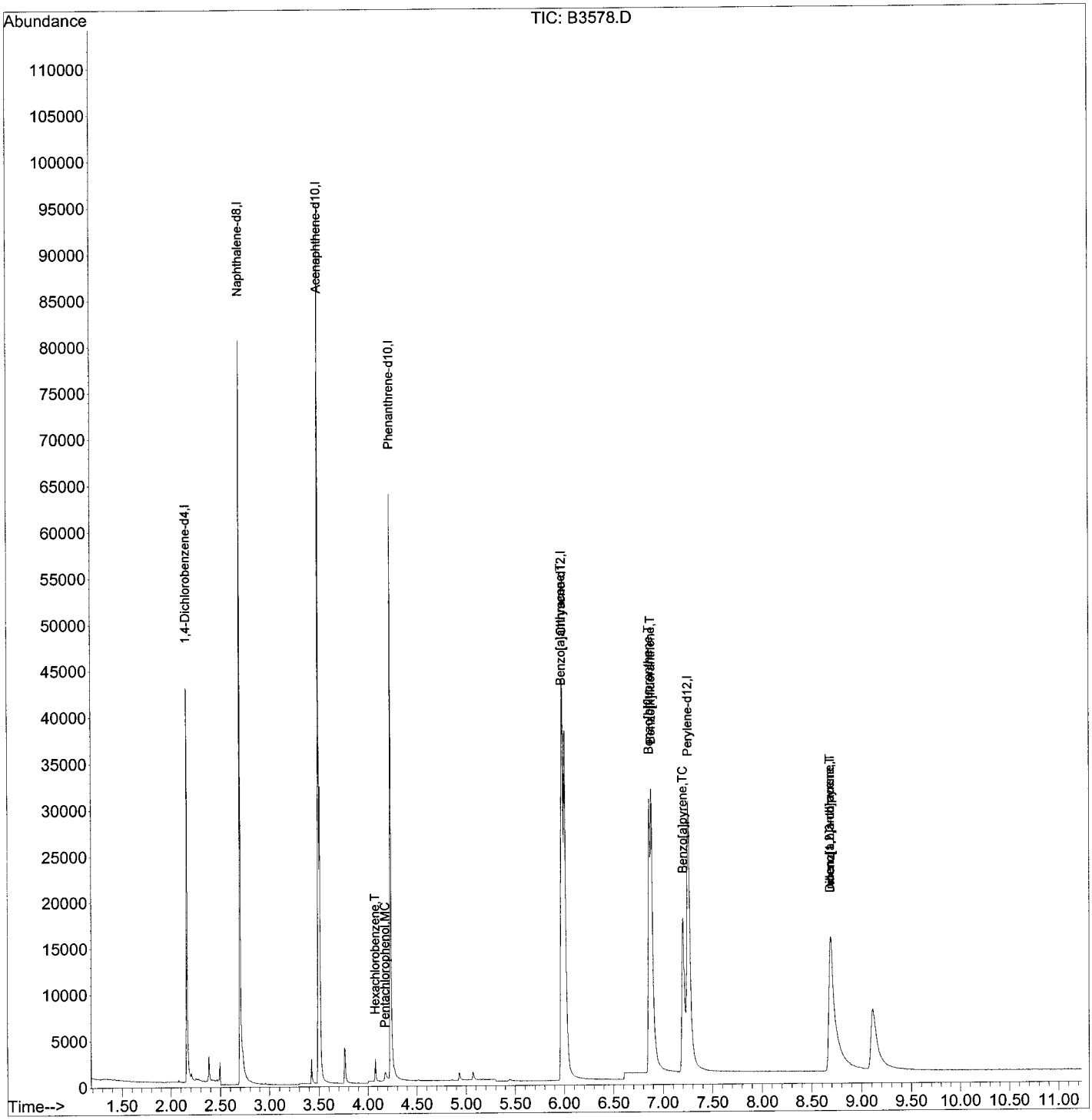
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	17966m	1.00	UG	0.00
23) Naphthalene-d8	2.70	136	49005m	1.00	UG	0.00
43) Acenaphthene-d10	3.49	164	25386m	1.00	UG	0.00
66) Phenanthrene-d10	4.23	188	40093m	1.00	UG	0.00
82) Chrysene-d12	5.98	240	34510m	1.00	UG	-0.02
92) Perylene-d12	7.25	264	44184m	1.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.08	284	1157m	0.08	UG	
74) Pentachlorophenol	4.18	266	746m	0.49	UG	
88) Benzo[a]anthracene	5.97	228	18747m	0.49	UG	
94) Benzo[b]fluoranthene	6.86	252	24865m	0.53	UG	
95) Benzo[k]fluoranthene	6.88	252	36100m	0.50	UG	
96) Benzo[a]pyrene	7.20	252	27211m	0.53	UG	
97) Indeno[1,2,3-cd]pyrene	8.69	276	23054m	0.52	UG	
98) Dibenz[a,h]anthracene	8.69	278	19681m	0.53	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3578.D
Acq On : 21 Oct 2015 16:30
Operator : KIM
Sample : ABN061-15,ICV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Oct 22 12:15:25 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\11-11-15\
Data File : B4000.D
Acq On : 11 Nov 2015 9:45
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 11 12:32:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	166	0.00
2	T	N-Nitrosodimethylamine	0.607	0.597	1.6	151	0.00
3	T	Pyridine	0.743	0.678	8.7	141	0.00
4	S	2-Fluorophenol	0.982	0.964	1.8	168	0.00
5	T	Benzaldehyde	0.667	0.624	6.4	156	0.00
6	S	Phenol-d5	1.234	1.172	5.0	159	0.00
7	MC	Phenol	1.281	1.316	-2.7	173	0.00
8	T	Aniline	0.546	0.470	13.9	141	0.00
9	T	Bis(2-chloroethyl) ether	0.680	0.623	8.4	147	0.00
10	M	2-Chlorophenol	1.085	1.069	1.5	167	-0.01
11	T	1,3-Dichlorobenzene	1.241	1.213	2.3	166	-0.01
12	MC	1,4-Dichlorobenzene	1.272	1.276	-0.3	166	0.00
13	T	Benzyl alcohol	0.632	0.658	-4.1	166	-0.01
14	T	1,2-Dichlorobenzene	1.175	1.175	0.0	166	0.00
15	T	2-Methylphenol	0.982	0.914	6.9	154	0.00
16	T	Bis(2-chloroisopropyl) ethe	1.233	1.069	13.3	142	0.00
17	T	4-Methylphenol	0.964	0.948	1.7	156	0.00
18	MP	N-Nitrosodi-n-propylamine	0.693	0.609	12.1	144	-0.01
19	T	Acetophenone	1.337	1.248	6.7	156	0.00
20	T	3-Methylphenol	0.964	0.948	1.7	156	0.00
21	T	Hexachloroethane	0.427	0.415	2.8	160	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	155	0.00
24	S	Nitrobenzene-d5	0.243	0.223	8.2	144	0.00
25	T	Nitrobenzene	0.247	0.226	8.5	147	-0.01
26	T	Isophorone	0.487	0.443	9.0	146	-0.01
27	TC	2-Nitrophenol	0.130	0.142	-9.2	164	0.00
28	T	2,4-Dimethylphenol	0.227	0.229	-0.9	148	0.00
29	T	Bis(2-chloroethoxy) methane	0.292	0.294	-0.7	150	0.00
30	T	Benzoic acid	0.109	0.091	16.5	147	0.00
31	T	2,4-Dimethylaniline	0.326	0.302	7.4	140	-0.01
32	TC	2,4-Dichlorophenol	0.215	0.229	-6.5	159	-0.01
33	M	1,2,4-Trichlorobenzene	0.263	0.268	-1.9	162	-0.01
34	T	Naphthalene	0.782	0.788	-0.8	158	0.00
35	T	4-Chloroaniline	0.340	0.314	7.6	145	0.00
36	T	4-Aminotoluene	0.447	0.441	1.3	151	0.00
37	TC	Hexachlorobutadiene	0.142	0.152	-7.0	164	0.00
38	T	Caprolactam	0.096	0.081	15.6	124	-0.04
39	T	2-Aminotoluene	0.447	0.441	1.3	151	0.00
40	MC	4-Chloro-3-methylphenol	0.197	0.190	3.6	145	0.00
41	T	2-Methylnaphthalene	0.501	0.493	1.6	150	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	144	-0.02
44	TP	Hexachlorocyclopentadiene	0.173	0.207	-19.7	170	0.00
45	TC	2,4,6-Trichlorophenol	0.265	0.277	-4.5	146	-0.01
46	T	2,4,5-Trichlorophenol	0.295	0.304	-3.1	149	-0.02

47	S	2-Fluorobiphenyl	1.006	1.034	-2.8	150	-0.01
48	T	1,1'-Biphenyl	1.091	1.105	-1.3	147	-0.02
49	T	2-Chloronaphthalene	0.835	0.869	-4.1	150	-0.01
50	T	2-Nitroaniline	0.183	0.182	0.5	132	-0.02
51	T	Dimethyl phthalate	0.931	0.906	2.7	139	-0.02
52	T	2,6-Dinitrotoluene	0.184	0.190	-3.3	138	-0.02
53	T	Acenaphthylene	1.312	1.342	-2.3	145	-0.01
54	T	3-Nitroaniline	0.218	0.221	-1.4	136	-0.02
55	MC	Acenaphthene	0.834	0.841	-0.8	147	-0.02
56	TP	2,4-Dinitrophenol	0.077	0.062	19.5	109	-0.01
57	MP	4-Nitrophenol	0.127	0.121	4.7	143	-0.02
58	M	2,4-Dinitrotoluene	0.235	0.247	-5.1	131	-0.02
59	T	Dibenzofuran	1.289	1.257	2.5	140	-0.02
60	T	Diethyl phthalate	0.894	0.840	6.0	132	-0.03
61	T	Fluorene	0.997	0.974	2.3	139	-0.03
62	T	4-Chlorophenyl phenyl ether	0.504	0.504	0.0	140	-0.03
63	T	4-Nitroaniline	0.234	0.223	4.7	123	-0.04
64		1,2,4,5-Tetrachlorobenzene	0.445	0.494	-11.0	159	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.258	0.292	-13.2	139	-0.02
66	I	Phenanthrene-d10	1.000	1.000	0.0	132	-0.03
67	T	4,6-Dinitro-2-methylphenol	0.081	0.074	8.6	114	-0.03
68	TC	N-Nitrosodiphenylamine	0.417	0.435	-4.3	135	-0.04
69	T	1,2-Diphenylhydrazine	0.551	0.541	1.8	125	-0.03
70	S	2,4,6-Tribromophenol	0.139	0.147	-5.8	138	-0.03
71	T	4-Bromophenyl phenyl ether	0.193	0.201	-4.1	138	-0.03
72	T	Hexachlorobenzene	0.237	0.245	-3.4	135	-0.03
73	T	Atrazine	0.154	0.145	5.8	121	-0.04
74	MC	Pentachlorophenol	0.112	0.121	-8.0	137	-0.03
75	T	Phenanthrene	0.807	0.800	0.9	130	-0.03
76	T	Anthracene	0.793	0.799	-0.8	130	-0.03
77	T	Carbazole	0.721	0.708	1.8	123	-0.03
78	T	Di-n-butyl phthalate	0.834	0.848	-1.7	127	-0.04
79	TC	Fluoranthene	0.834	0.800	4.1	122	-0.04
80	T	Benzidine	0.496	0.403	18.7	122	-0.04
82	I	Chrysene-d12	1.000	1.000	0.0	104	-0.07
83	M	Pyrene	0.993	1.074	-8.2	117	-0.05
84	S	Terphenyl-d14	0.881	0.927	-5.2	111	-0.05
85	T	3,3'-Dimethylbenzidine	0.597	0.529	11.4	119	-0.06
86	T	Butyl benzyl phthalate	0.372	0.410	-10.2	110	-0.06
87	T	3,3'-Dichlorobenzidine	0.313	0.336	-7.3	104	-0.06
88	T	Benzo[a]anthracene	0.923	0.897	2.8	107	-0.06
89	T	Chrysene	0.854	0.865	-1.3	107	-0.07
90	T	Bis(2-ethylhexyl) phthalate	0.504	0.582	-15.5	112	-0.07
92	I	Perylene-d12	1.000	1.000	0.0	108	-0.11
93	TC	Di-n-octyl phthalate	0.796	0.941	-18.2	115	-0.10
94	T	Benzo[b]fluoranthene	0.901	0.896	0.6	102	-0.10
95	T	Benzo[k]fluoranthene	0.899	0.875	2.7	112	-0.11
96	TC	Benzo[a]pyrene	0.814	0.822	-1.0	109	-0.11
97	T	Indeno[1,2,3-cd]pyrene	0.958	1.056	-10.2	122	-0.19
98	T	Dibenz[a,h]anthracene	0.787	0.856	-8.8	119	-0.19
99	T	Benzo[g,h,i]perylene	0.799	0.875	-9.5	122	-0.21

(#) = Out of Range

BW1115.M Wed Nov 11 16:58:07 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	116	-0.01
2	T	N-Nitrosodimethylamine	0.607	0.660	-8.7	116	-0.02
3	T	Pyridine	0.743	0.876	-17.9	127	-0.01
4	S	2-Fluorophenol	0.982	1.039	-5.8	126	-0.02
5	T	Benzaldehyde	0.667	0.689	-3.3	113	-0.01
6	S	Phenol-d5	1.234	1.347	-9.2	127	-0.01
7	MC	Phenol	1.281	1.385	-8.1	127	-0.02
8	T	Aniline	0.546	0.653	-19.6	137	-0.02
9	T	Bis(2-chloroethyl) ether	0.680	0.807	-18.7	133	-0.02
10	M	2-Chlorophenol	1.085	1.131	-4.2	123	-0.02
11	T	1,3-Dichlorobenzene	1.241	1.221	1.6	116	-0.02
12	MC	1,4-Dichlorobenzene	1.272	1.282	-0.8	116	-0.01
13	T	Benzyl alcohol	0.632	0.698	-10.4	123	-0.02
14	T	1,2-Dichlorobenzene	1.175	1.182	-0.6	116	-0.01
15	T	2-Methylphenol	0.982	1.034	-5.3	122	-0.02
16	T	Bis(2-chloroisopropyl) ethe	1.233	1.476	-19.7	136	-0.02
17	T	4-Methylphenol	0.964	1.060	-10.0	122	-0.02
18	MP	N-Nitrosodi-n-propylamine	0.693	0.828	-19.5	136	-0.02
19	T	Acetophenone	1.337	1.452	-8.6	126	-0.02
20	T	3-Methylphenol	0.964	1.060	-10.0	122	-0.02
21	T	Hexachloroethane	0.427	0.487	-14.1	131	-0.01
23	I	Naphthalene-d8	1.000	1.000	0.0	117	-0.02
24	S	Nitrobenzene-d5	0.243	0.206	15.2	100	-0.01
25	T	Nitrobenzene	0.247	0.288	-16.6	141	-0.02
26	T	Isophorone	0.487	0.547	-12.3	135	-0.02
27	TC	2-Nitrophenol	0.130	0.137	-5.4	119	-0.02
28	T	2,4-Dimethylphenol	0.227	0.255	-12.3	124	-0.02
29	T	Bis(2-chloroethoxy) methane	0.292	0.334	-14.4	128	-0.02
30	T	Benzoic acid	0.109	0.105	3.7	127	-0.02
31	T	2,4-Dimethylaniline	0.326	0.316	3.1	110	-0.02
32	TC	2,4-Dichlorophenol	0.215	0.216	-0.5	113	-0.02
33	M	1,2,4-Trichlorobenzene	0.263	0.247	6.1	112	-0.02
34	T	Naphthalene	0.782	0.776	0.8	117	-0.02
35	T	4-Chloroaniline	0.340	0.332	2.4	115	-0.01
36	T	4-Aminotoluene	0.447	0.465	-4.0	119	-0.02
37	TC	Hexachlorobutadiene	0.142	0.142	0.0	115	-0.02
38	T	Caprolactam	0.096	0.112	-16.7	128	-0.04
39	T	2-Aminotoluene	0.447	0.465	-4.0	119	-0.02
40	MC	4-Chloro-3-methylphenol	0.197	0.215	-9.1	123	-0.02
41	T	2-Methylnaphthalene	0.501	0.498	0.6	114	-0.01
43	I	Acenaphthene-d10	1.000	1.000	0.0	105	-0.02
44	TP	Hexachlorocyclopentadiene	0.173	0.180	-4.0	107	-0.02
45	TC	2,4,6-Trichlorophenol	0.265	0.268	-1.1	103	-0.02
46	T	2,4,5-Trichlorophenol	0.295	0.287	2.7	102	-0.02

47	S	2-Fluorobiphenyl	1.006	1.028	-2.2	108	-0.02
48	T	1,1'-Biphenyl	1.091	1.109	-1.6	107	-0.02
49	T	2-Chloronaphthalene	0.835	0.858	-2.8	108	-0.02
50	T	2-Nitroaniline	0.183	0.212	-15.8	111	-0.02
51	T	Dimethyl phthalate	0.931	0.946	-1.6	105	-0.03
52	T	2,6-Dinitrotoluene	0.184	0.187	-1.6	98	-0.03
53	T	Acenaphthylene	1.312	1.342	-2.3	105	-0.02
54	T	3-Nitroaniline	0.218	0.226	-3.7	101	-0.03
55	MC	Acenaphthene	0.834	0.819	1.8	104	-0.03
56	TP	2,4-Dinitrophenol	0.077	0.065	15.6	83	-0.02
57	MP	4-Nitrophenol	0.127	0.122	3.9	104	-0.02
58	M	2,4-Dinitrotoluene	0.235	0.254	-8.1	97	-0.03
59	T	Dibenzofuran	1.289	1.264	1.9	102	-0.03
60	T	Diethyl phthalate	0.894	0.964	-7.8	110	-0.04
61	T	Fluorene	0.997	1.002	-0.5	103	-0.03
62	T	4-Chlorophenyl phenyl ether	0.504	0.510	-1.2	103	-0.04
63	T	4-Nitroaniline	0.234	0.237	-1.3	95	-0.04
64		1,2,4,5-Tetrachlorobenzene	0.445	0.433	2.7	101	-0.02
65	T	2,3,4,6-Tetrachlorophenol	0.258	0.286	-10.9	99	-0.03
66	I	Phenanthrene-d10	1.000	1.000	0.0	92	-0.03
67	T	4,6-Dinitro-2-methylphenol	0.081	0.074	8.6	80	-0.04
68	TC	N-Nitrosodiphenylamine	0.417	0.481	-15.3	105	-0.04
69	T	1,2-Diphenylhydrazine	0.551	0.499	9.4	81	-0.04
70	S	2,4,6-Tribromophenol	0.139	0.143	-2.9	94	-0.03
71	T	4-Bromophenyl phenyl ether	0.193	0.206	-6.7	99	-0.04
72	T	Hexachlorobenzene	0.237	0.229	3.4	88	-0.03
73	T	Atrazine	0.154	0.161	-4.5	94	-0.04
74	MC	Pentachlorophenol	0.112	0.100	10.7	79	-0.03
75	T	Phenanthrene	0.807	0.807	0.0	92	-0.04
76	T	Anthracene	0.793	0.801	-1.0	91	-0.04
77	T	Carbazole	0.721	0.724	-0.4	88	-0.04
78	T	Di-n-butyl phthalate	0.834	0.933	-11.9	98	-0.05
79	TC	Fluoranthene	0.834	0.762	8.6	81	-0.05
80	T	Benzidine	0.496	0.371	25.2	71	-0.04
82	I	Chrysene-d12	1.000	1.000	0.0	70	-0.10
83	M	Pyrene	0.993	1.063	-7.0	78	-0.06
84	S	Terphenyl-d14	0.881	0.898	-1.9	72	-0.06
85	T	3,3'-Dimethylbenzidine	0.597	0.516	13.6	70	-0.06
86	T	Butyl benzyl phthalate	0.372	0.332	10.8	60	-0.08
87	T	3,3'-Dichlorobenzidine	0.313	0.311	0.6	65	-0.09
88	T	Benzo[a]anthracene	0.923	0.879	4.8	71	-0.09
89	T	Chrysene	0.854	0.872	-2.1	73	-0.10
90	T	Bis(2-ethylhexyl) phthalate	0.504	0.604	-19.8	79	-0.10
92	I	Perylene-d12	1.000	1.000	0.0	69	-0.14
93	TC	Di-n-octyl phthalate	0.796	0.899	-12.9	70	-0.13
94	T	Benzo[b]fluoranthene	0.901	0.733	18.6	53	-0.13
95	T	Benzo[k]fluoranthene	0.899	0.963	-7.1	78	-0.14
96	TC	Benzo[a]pyrene	0.814	0.821	-0.9	69	-0.15
97	T	Indeno[1,2,3-cd]pyrene	0.958	1.057	-10.3	77	-0.24
98	T	Dibenz[a,h]anthracene	0.787	0.842	-7.0	74	-0.24
99	T	Benzo[g,h,i]perylene	0.799	0.878	-9.9	78	-0.26

(#) = Out of Range

BW1115.M Mon Nov 16 16:05:03 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4000.D
Acq On : 11 Nov 2015 9:45
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 11 12:32:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	92558	40.00	UG	0.00
23) Naphthalene-d8	4.34	136	351012	40.00	UG	0.00
43) Acenaphthene-d10	5.35	164	200252	40.00	UG	-0.02
66) Phenanthrene-d10	6.27	188	315861	40.00	UG	-0.03
82) Chrysene-d12	7.83	240	237594	40.00	UG	-0.07
92) Perylene-d12	9.03	264	220966	40.00	UG	-0.11
System Monitoring Compounds						
4) 2-Fluorophenol	2.73	112	223118	98.14	UG	0.00
Spiked Amount 100.000	Range 10 - 100		Recovery = 98.14%			
6) Phenol-d5	3.34	99	271091	94.91	UG	0.00
Spiked Amount 100.000	Range 10 - 102		Recovery = 94.91%			
24) Nitrobenzene-d5	3.90	82	98016	46.01	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 92.02%			
47) 2-Fluorobiphenyl	4.95	172	258773	51.37	UG	-0.01
Spiked Amount 50.000	Range 26 - 101		Recovery = 102.74%#			
70) 2,4,6-Tribromophenol	5.87	330	116285	105.71	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 105.71%			
84) Terphenyl-d14	7.15	244	275189	52.58	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 105.16%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.57	74	55292	39.37	UG	65
3) Pyridine	1.62	52	62730	36.49	UG	84
7) Phenol	3.35	94	121790	41.10	UG	71
8) Aniline	3.37	66	43472	34.44	UG	79
9) Bis(2-chloroethyl) ether	3.40	63	57673	36.65	UG	94
10) 2-Chlorophenol	3.45	128	98933	39.42	UG	95
11) 1,3-Dichlorobenzene	3.54	146	112262	39.09	UG	95
12) 1,4-Dichlorobenzene	3.57	146	118111	40.12	UG	96
13) Benzyl alcohol	3.64	108	60945	41.69	UG	83
14) 1,2-Dichlorobenzene	3.69	146	108769	39.99	UG	93
15) 2-Methylphenol	3.72	108	84561	37.21	UG	100
16) Bis(2-chloroisopropyl) eth	3.74	45	98917	34.67	UG	96
17) 4-Methylphenol	3.80	108	87763	39.35	UG	99
18) N-Nitrosodi-n-propylamine	3.82	70	56394	35.16	UG	92
19) Acetophenone	3.81	105	115481	37.33	UG	84
20) 3-Methylphenol	3.80	108	87763	39.35	UG	99
21) Hexachloroethane	3.88	117	38390	38.87	UG	98
25) Nitrobenzene	3.91	77	79294	36.66	UG	91
26) Isophorone	4.05	82	155493	36.39	UG	98
27) 2-Nitrophenol	4.11	139	49781	43.72	UG	80
28) 2,4-Dimethylphenol	4.12	107	80353	40.40	UG	94

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4000.D
Acq On : 11 Nov 2015 9:45
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 11 12:32:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.17	93	103297	40.31	UG		98
30) Benzoic acid	4.19	105	31945m	33.45	UG		
31) 2,4-Dimethylaniline	4.23	121	105856	36.96	UG	#	100
32) 2,4-Dichlorophenol	4.25	162	80226	42.56	UG		98
33) 1,2,4-Trichlorobenzene	4.30	180	93935	40.73	UG		99
34) Naphthalene	4.35	128	276761	40.33	UG	#	100
35) 4-Chloroaniline	4.37	127	110170	36.94	UG		97
36) 4-Aminotoluene	3.84	106	154954	39.53	UG		99
37) Hexachlorobutadiene	4.45	225	53271	42.72	UG		99
38) Caprolactam	4.55	55	28547	33.97	UG		87
39) 2-Aminotoluene	3.84	106	154954	39.53	UG		99
40) 4-Chloro-3-methylphenol	4.64	107	66836	38.71	UG		95
41) 2-Methylnaphthalene	4.74	142	172985	39.33	UG		99
44) Hexachlorocyclopentadiene	4.88	237	41401m	47.89	UG		
45) 2,4,6-Trichlorophenol	4.91	196	55384	41.69	UG		100
46) 2,4,5-Trichlorophenol	4.94	196	60906	41.20	UG		98
48) 1,1'-Biphenyl	5.00	154	221222	40.50	UG		98
49) 2-Chloronaphthalene	5.02	162	173954	41.60	UG		99
50) 2-Nitroaniline	5.08	65	36527	39.80	UG		81
51) Dimethyl phthalate	5.18	163	181369	38.91	UG		100
52) 2,6-Dinitrotoluene	5.23	165	38016	41.20	UG		89
53) Acenaphthylene	5.27	152	268818	40.91	UG		100
54) 3-Nitroaniline	5.31	138	44161	40.42	UG		90
55) Acenaphthene	5.37	153	168394	40.35	UG		99
56) 2,4-Dinitrophenol	5.38	184	12498m	32.27	UG		
57) 4-Nitrophenol	5.39	65	24274m	38.13	UG		
58) 2,4-Dinitrotoluene	5.46	165	49553	42.14	UG		99
59) Dibenzofuran	5.46	168	251663	39.01	UG		95
60) Diethyl phthalate	5.60	149	168196	37.59	UG		99
61) Fluorene	5.70	166	195137	39.10	UG		100
62) 4-Chlorophenyl phenyl ethe	5.67	204	100905	39.97	UG		98
63) 4-Nitroaniline	5.70	138	44713	38.19	UG		75
64) 1,2,4,5-Tetrachlorobenzene	4.86	216	197726	88.68	UG		99
65) 2,3,4,6-Tetrachlorophenol	5.56	232	58404	45.14	UG		99
67) 4,6-Dinitro-2-methylphenol	5.75	198	23262m	36.20	UG		
68) N-Nitrosodiphenylamine	5.75	169	137540	41.77	UG		100
69) 1,2-Diphenylhydrazine	5.78	77	171033	39.34	UG		86
71) 4-Bromophenyl phenyl ether	6.00	248	63497	41.70	UG		99
72) Hexachlorobenzene	6.11	284	77508	41.43	UG		98
73) Atrazine	6.08	200	45919	37.84	UG		97
74) Pentachlorophenol	6.19	266	38194	43.15	UG		98
75) Phenanthrene	6.28	178	252638	39.66	UG		100
76) Anthracene	6.31	178	252235	40.27	UG		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4000.D
Acq On : 11 Nov 2015 9:45
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 11 12:32:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

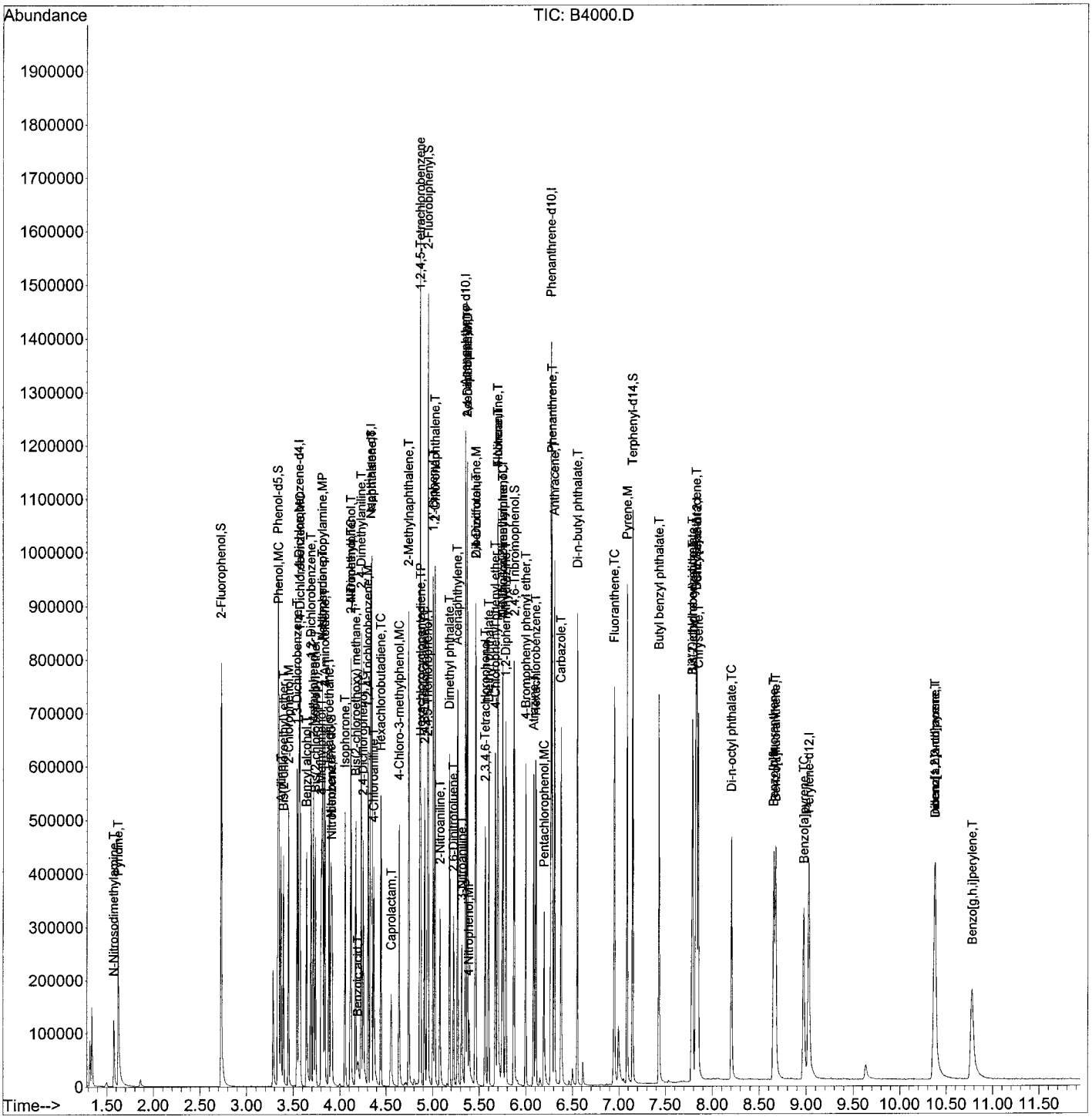
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
77) Carbazole	6.38	167	223541	39.29	UG	99
78) Di-n-butyl phthalate	6.55	149	267907	40.70	UG	99
79) Fluoranthene	6.95	202	252768	38.37	UG	95
83) Pyrene	7.09	202	255083	43.23	UG	94
86) Butyl benzyl phthalate	7.43	149	97378	44.03	UG	97
87) 3,3'-Dichlorobenzidine	7.78	252	79846	42.96	UG	98
88) Benzo[a]anthracene	7.82	228	213232	38.88	UG	99
89) Chrysene	7.85	228	205487	40.52	UG	100
90) Bis(2-ethylhexyl) phthalat	7.79	149	138281	46.23	UG	98
93) Di-n-octyl phthalate	8.20	149	207905	47.28	UG	99
94) Benzo[b]fluoranthene	8.65	252	198072	39.80	UG	96
95) Benzo[k]fluoranthene	8.67	252	193375	38.96	UG	98
96) Benzo[a]pyrene	8.97	252	181690	40.40	UG	97
97) Indeno[1,2,3-cd]pyrene	10.38	276	233357	44.10	UG	88
98) Dibenz[a,h]anthracene	10.37	278	189143	43.51	UG	96
99) Benzo[g,h,i]perylene	10.78	276	193238	43.77	UG	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4000.D
Acq On : 11 Nov 2015 9:45
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 11 12:32:37 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4001.D
Acq On : 11 Nov 2015 10:02
Operator : KIM
Sample : ABN076-15,CCV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 11 13:12:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

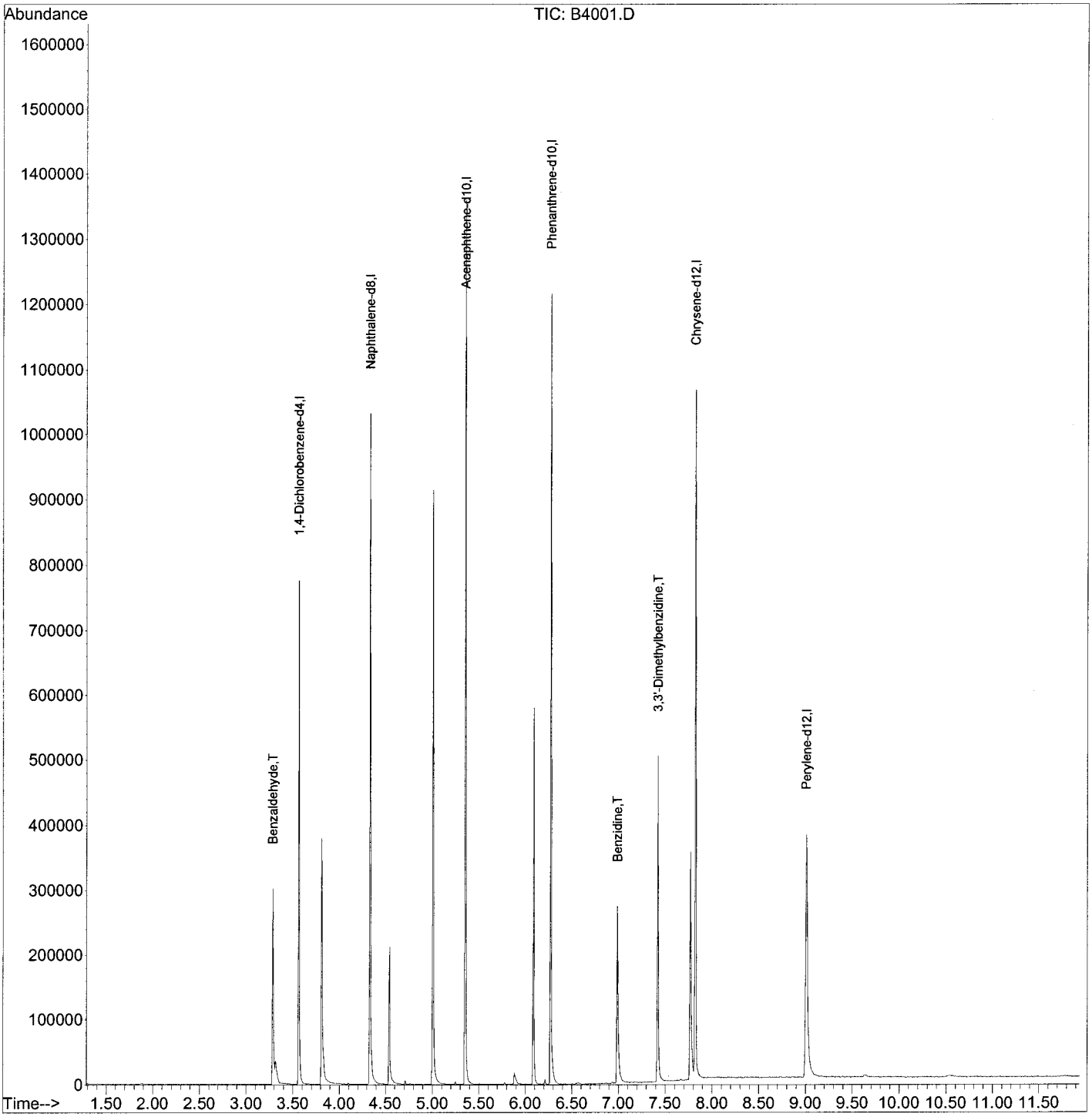
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	94249	40.00	UG	0.00
23) Naphthalene-d8	4.33	136	360397	40.00	UG	-0.01
43) Acenaphthene-d10	5.35	164	214923	40.00	UG	-0.02
66) Phenanthrene-d10	6.27	188	342234	40.00	UG	-0.03
82) Chrysene-d12	7.82	240	292707	40.00	UG	-0.09
92) Perylene-d12	9.00	264	236187m	40.00	UG	-0.13
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0d	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0d	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.28	106	58853	37.48	UG	# 100
80) Benzidine	6.99	184	137973m	32.50	UG	
85) 3,3'-Dimethylbenzidine	7.42	212	154970	35.49	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4001.D
Acq On : 11 Nov 2015 10:02
Operator : KIM
Sample : ABN076-15,CCV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 11 13:12:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	64485	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	263713	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	145260	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	221191	40.00	UG	-0.03
82) Chrysene-d12	7.81	240	160428	40.00	UG	-0.10
92) Perylene-d12	8.99	264	140015	40.00	UG	-0.14
System Monitoring Compounds						
4) 2-Fluorophenol	2.72	112	167547	105.78	UG	-0.02
Spiked Amount 100.000	Range 10 - 100		Recovery = 105.78%#			
6) Phenol-d5	3.33	99	217187	109.14	UG	-0.01
Spiked Amount 100.000	Range 10 - 102		Recovery = 109.14%#			
24) Nitrobenzene-d5	3.90	82	68002m	42.49	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 84.98%			
47) 2-Fluorobiphenyl	4.94	172	186600	51.07	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery = 102.14%#			
70) 2,4,6-Tribromophenol	5.87	330	78981	102.53	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 102.53%			
84) Terphenyl-d14	7.13	244	180043	50.95	UG	-0.06
Spiked Amount 50.000	Range 23 - 124		Recovery = 101.90%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.56	74	42538m	43.48	UG	
3) Pyridine	1.61	52	56458m	47.14	UG	
7) Phenol	3.34	94	89288	43.25	UG	85
8) Aniline	3.36	66	42094	47.86	UG	96
9) Bis(2-chloroethyl) ether	3.38	63	52037m	47.47	UG	
10) 2-Chlorophenol	3.44	128	72901	41.70	UG	95
11) 1,3-Dichlorobenzene	3.53	146	78716	39.34	UG	96
12) 1,4-Dichlorobenzene	3.57	146	82648	40.29	UG	96
13) Benzyl alcohol	3.64	108	45029	44.21	UG	96
14) 1,2-Dichlorobenzene	3.68	146	76203	40.21	UG	93
15) 2-Methylphenol	3.71	108	66693	42.12	UG	99
16) Bis(2-chloroisopropyl) eth	3.73	45	95179m	47.88	UG	
17) 4-Methylphenol	3.79	108	68327	43.97	UG	99
18) N-Nitrosodi-n-propylamine	3.81	70	53401m	47.79	UG	
19) Acetophenone	3.80	105	93657	43.46	UG	67
20) 3-Methylphenol	3.79	108	68327	43.97	UG	99
21) Hexachloroethane	3.88	117	31403	45.63	UG	80
25) Nitrobenzene	3.91	77	76069	46.81	UG	96
26) Isophorone	4.05	82	144178	44.91	UG	94
27) 2-Nitrophenol	4.10	139	36033	42.12	UG	98
28) 2,4-Dimethylphenol	4.11	107	67323	45.05	UG	98

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.16	93	88033	45.73 UG		98
30) Benzoic acid	4.18	105	27592m	38.46 UG		
31) 2,4-Dimethylaniline	4.22	121	83419	38.77 UG	#	100
32) 2,4-Dichlorophenol	4.24	162	56863	40.15 UG		97
33) 1,2,4-Trichlorobenzene	4.30	180	65237	37.65 UG		98
34) Naphthalene	4.34	128	204701	39.70 UG	#	100
35) 4-Chloroaniline	4.36	127	87437	39.02 UG		96
36) 4-Aminotoluene	3.83	106	122597	41.62 UG		99
37) Hexachlorobutadiene	4.44	225	37426	39.95 UG		98
38) Caprolactam	4.55	55	29452	46.64 UG		91
39) 2-Aminotoluene	3.83	106	122597	41.62 UG		99
40) 4-Chloro-3-methylphenol	4.63	107	56678	43.69 UG		92
41) 2-Methylnaphthalene	4.74	142	131298	39.73 UG		100
44) Hexachlorocyclopentadiene	4.86	237	26091	41.60 UG		99
45) 2,4,6-Trichlorophenol	4.91	196	38914	40.38 UG		98
46) 2,4,5-Trichlorophenol	4.93	196	41721	38.91 UG		99
48) 1,1'-Biphenyl	5.00	154	161128	40.67 UG		99
49) 2-Chloronaphthalene	5.01	162	124691	41.11 UG		96
50) 2-Nitroaniline	5.07	65	30788m	46.24 UG		
51) Dimethyl phthalate	5.17	163	137414	40.64 UG		99
52) 2,6-Dinitrotoluene	5.22	165	27185	40.62 UG		95
53) Acenaphthylene	5.26	152	194909	40.89 UG		99
54) 3-Nitroaniline	5.30	138	32762	41.34 UG		90
55) Acenaphthene	5.36	153	119030	39.31 UG		98
56) 2,4-Dinitrophenol	5.37	184	9428m	33.55 UG		
57) 4-Nitrophenol	5.39	65	17735	38.40 UG		93
58) 2,4-Dinitrotoluene	5.45	165	36844	43.20 UG		64
59) Dibenzofuran	5.45	168	183541	39.22 UG		96
60) Diethyl phthalate	5.59	149	140048	43.15 UG		99
61) Fluorene	5.69	166	145602	40.22 UG		99
62) 4-Chlorophenyl phenyl ethe	5.67	204	74039	40.43 UG		96
63) 4-Nitroaniline	5.70	138	34418	40.53 UG		89
64) 1,2,4,5-Tetrachlorobenzene	4.85	216	125809	77.79 UG		99
65) 2,3,4,6-Tetrachlorophenol	5.55	232	41560	44.28 UG		99
67) 4,6-Dinitro-2-methylphenol	5.74	198	16413	36.48 UG		97
68) N-Nitrosodiphenylamine	5.75	169	106331	46.11 UG		99
69) 1,2-Diphenylhydrazine	5.78	77	110437m	36.28 UG		
71) 4-Bromophenyl phenyl ether	5.99	248	45612	42.77 UG		94
72) Hexachlorobenzene	6.10	284	50573	38.61 UG		90
73) Atrazine	6.08	200	35718	42.03 UG		100
74) Pentachlorophenol	6.19	266	22124	35.69 UG		97
75) Phenanthrene	6.27	178	178424	40.00 UG		98
76) Anthracene	6.30	178	177262	40.42 UG		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

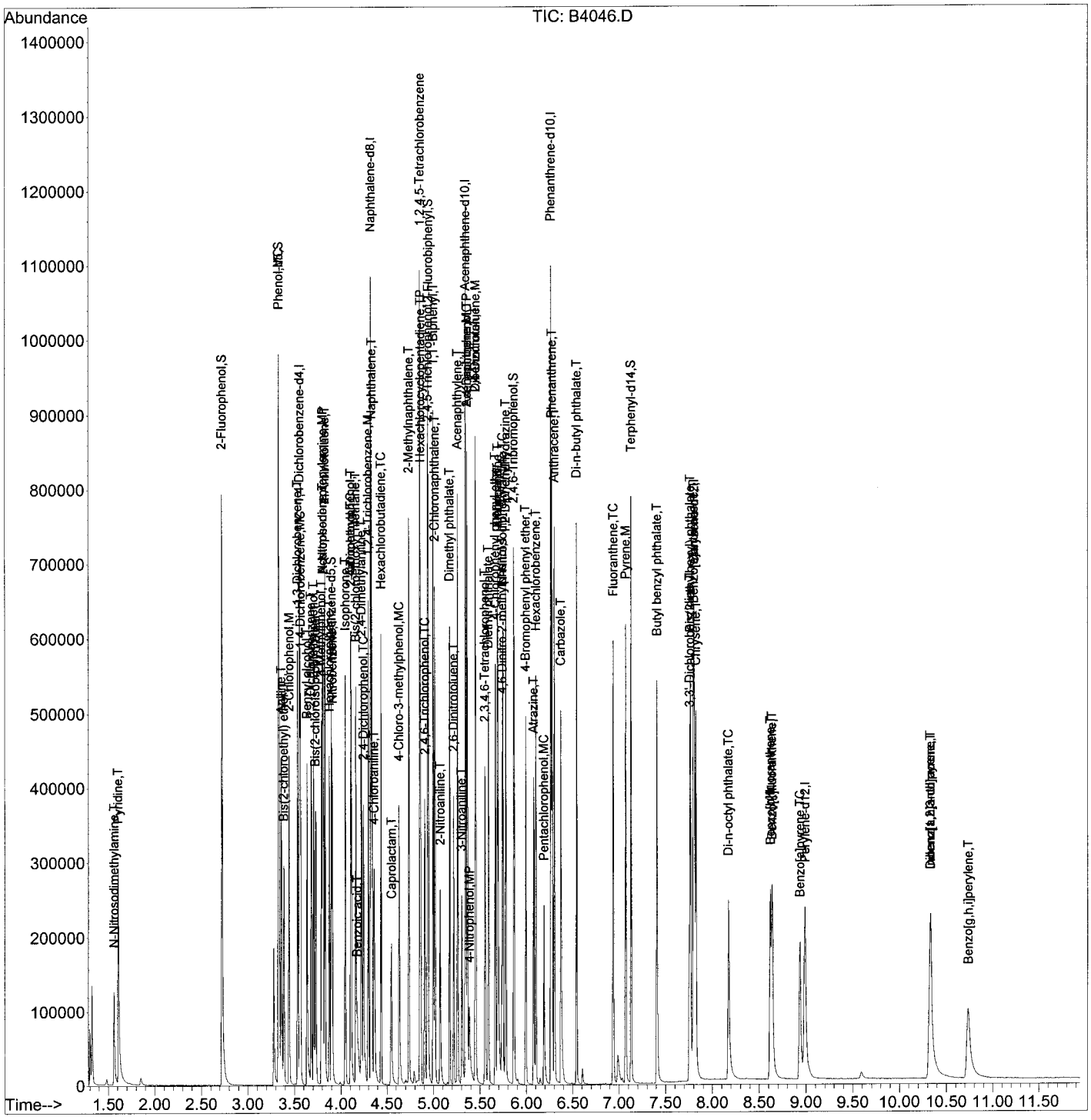
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
77) Carbazole	6.37	167	160110	40.18	UG	98
78) Di-n-butyl phthalate	6.54	149	206357	44.76	UG	100
79) Fluoranthene	6.94	202	168558	36.54	UG	90
83) Pyrene	7.07	202	170565	42.81	UG	89
86) Butyl benzyl phthalate	7.41	149	53280m	35.68	UG	
87) 3,3'-Dichlorobenzidine	7.75	252	49900	39.77	UG	98
88) Benzo[a]anthracene	7.80	228	140973	38.07	UG	99
89) Chrysene	7.82	228	139879	40.85	UG	98
90) Bis(2-ethylhexyl) phthalat	7.77	149	96869m	47.96	UG	
93) Di-n-octyl phthalate	8.17	149	125913m	45.19	UG	
94) Benzo[b]fluoranthene	8.62	252	102607	32.53	UG	94
95) Benzo[k]fluoranthene	8.64	252	134838	42.87	UG	98
96) Benzo[a]pyrene	8.94	252	115018	40.37	UG	97
97) Indeno[1,2,3-cd]pyrene	10.33	276	147926	44.12	UG	85
98) Dibenz[a,h]anthracene	10.32	278	117863	42.79	UG	96
99) Benzo[g,h,i]perylene	10.74	276	122964	43.96	UG	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4047.D
Acq On : 12 Nov 2015 16:39
Operator : KIM
Sample : ABN076-15,CCV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 13 11:49:49 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

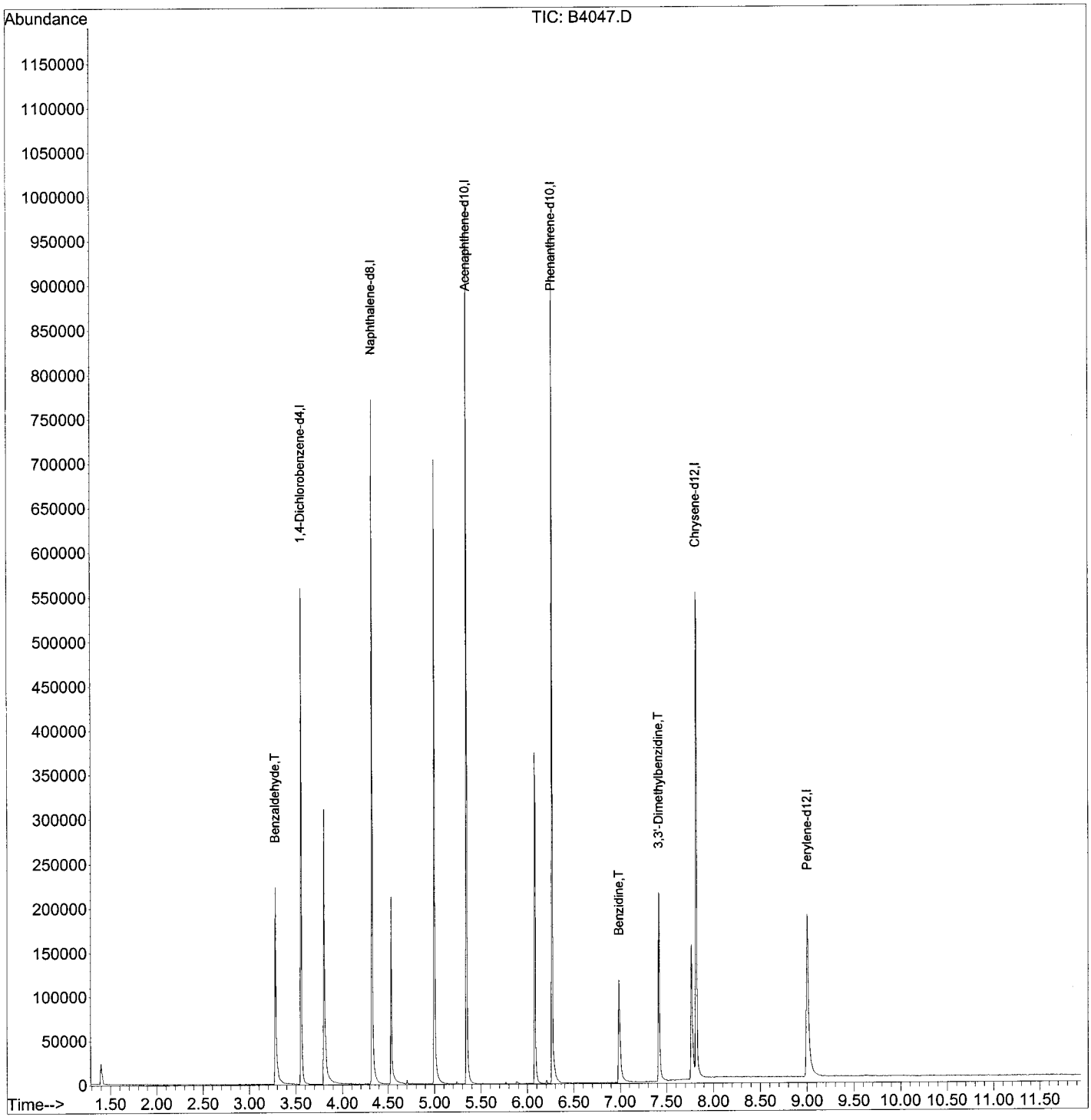
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	61802	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	251761	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	144659	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	215833	40.00	UG	-0.03
82) Chrysene-d12	7.82	240	174792	40.00	UG	-0.09
92) Perylene-d12	9.00	264	125646	40.00	UG	-0.13
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Benzaldehyde	3.28	106	42597	41.36	UG	# 100
80) Benzidine	6.99	184	80136m	29.93	UG	
85) 3,3'-Dimethylbenzidine	7.42	212	90212m	34.59	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4047.D
Acq On : 12 Nov 2015 16:39
Operator : KIM
Sample : ABN076-15,CCV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 13 11:49:49 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4002.D
Acq On : 11 Nov 2015 10:18
Operator : KIM
Sample : ABN061-15,CCV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 11 12:45:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	164	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	166	0.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	164	0.00
66	I	Phenanthrene-d10	1.000	1.000	0.0	167	-0.01
72	T	Hexachlorobenzene	0.341	0.349	-2.3	183	0.00
74	MC	Pentachlorophenol	0.038	0.039	-2.6	165	0.03
82	I	Chrysene-d12	1.000	1.000	0.0	164	-0.04
88	T	Benzo[a]anthracene	1.099	1.194	-8.6	185	-0.04
92	I	Perylene-d12	1.000	1.000	0.0	146	-0.07
94	T	Benzo[b]fluoranthene	1.069	1.077	-0.7	163	-0.05
95	T	Benzo[k]fluoranthene	1.619	1.648	-1.8	149	-0.05
96	TC	Benzo[a]pyrene	1.160	1.174	-1.2	160	-0.06
97	T	Indeno[1,2,3-cd]pyrene	1.003	1.058	-5.5	156	-0.09
98	T	Dibenz[a,h]anthracene	0.836	0.832	0.5	142	-0.09

(#) = Out of Range

BSIM1115.M Wed Nov 11 16:59:05 2015 MSD_B

Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4048.D
Acq On : 12 Nov 2015 16:56
Operator : KIM
Sample : ABN061-15,CCV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 12 17:19:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	138	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	121	0.01
43	I	Acenaphthene-d10	1.000	1.000	0.0	112	0.06
66	I	Phenanthrene-d10	1.000	1.000	0.0	95	0.12
72	T	Hexachlorobenzene	0.341	0.303	11.1	91	0.10
74	MC	Pentachlorophenol	0.038	0.032	15.8	77	0.14
82	I	Chrysene-d12	1.000	1.000	0.0	67	0.18
88	T	Benzo[a]anthracene	1.099	0.974	11.4	62	0.20
92	I	Perylene-d12	1.000	1.000	0.0	55	0.14
94	T	Benzo[b]fluoranthene	1.069	1.167	-9.2	67	0.17
95	T	Benzo[k]fluoranthene	1.619	1.737	-7.3	59	0.16
96	TC	Benzo[a]pyrene	1.160	1.231	-6.1	63	0.16
97	T	Indeno[1,2,3-cd]pyrene	1.003	0.976	2.7	54	0.16
98	T	Dibenz[a,h]anthracene	0.836	0.815	2.5	53	0.17

(#) = Out of Range

BSIM1115.M Mon Nov 16 16:06:55 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4002.D
Acq On : 11 Nov 2015 10:18
Operator : KIM
Sample : ABN061-15,CCV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 11 12:45:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

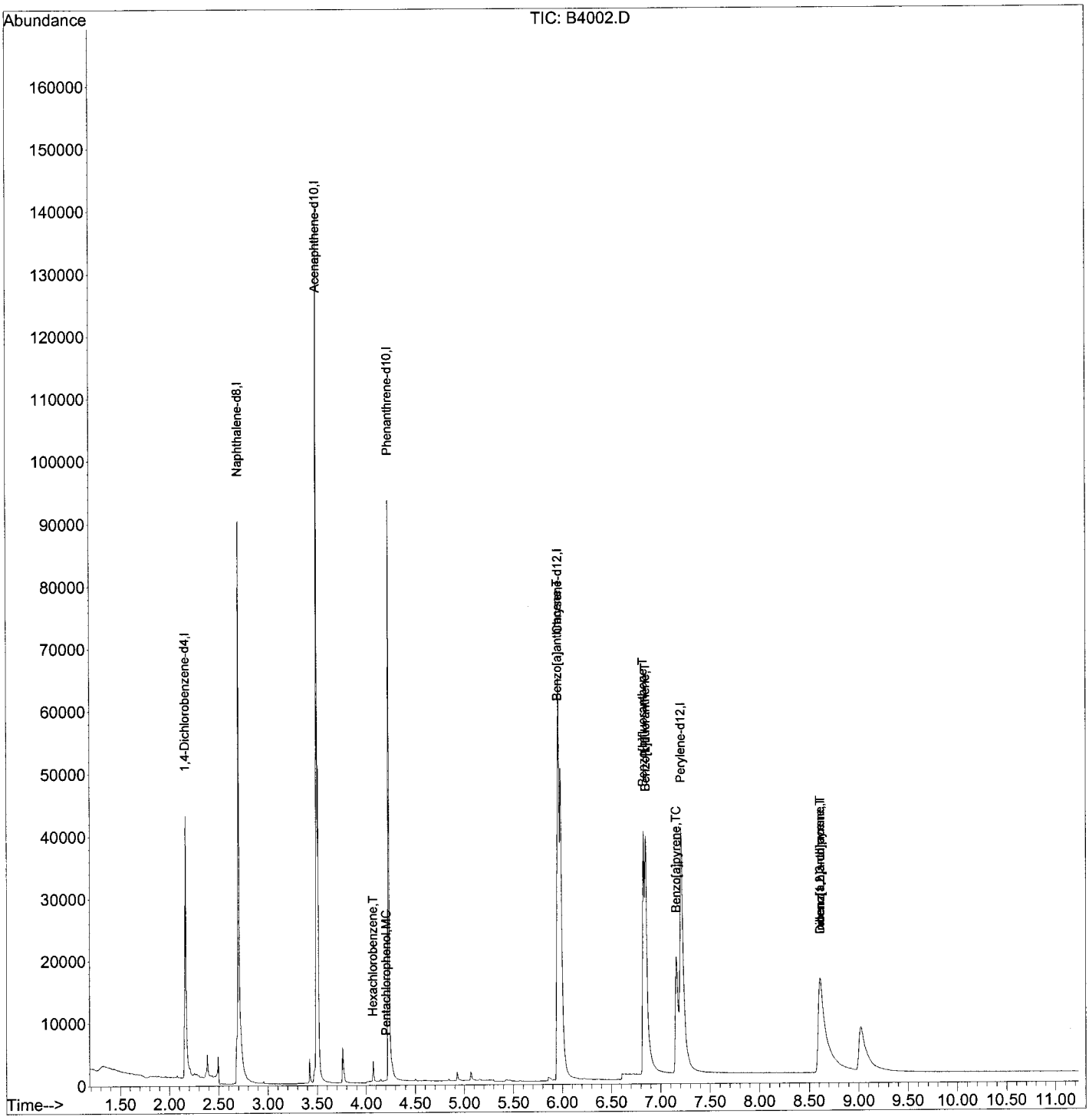
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	28060m	1.00	UG	0.00
23) Naphthalene-d8	2.70	136	80853m	1.00	UG	0.00
43) Acenaphthene-d10	3.49	164	41325m	1.00	UG	0.00
66) Phenanthrene-d10	4.22	188	65581m	1.00	UG	-0.01
82) Chrysene-d12	5.96	240	52228m	1.00	UG	-0.04
92) Perylene-d12	7.21	264	57569	1.00	UG	-0.07
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery =	0.00%#		
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery =	0.00%#		
Target Compounds						Qvalue
72) Hexachlorobenzene	4.08	284	2292m	0.10	UG	
74) Pentachlorophenol	4.20	266	1293m	0.52	UG	
88) Benzo[a]anthracene	5.95	228	31179m	0.54	UG	
94) Benzo[b]fluoranthene	6.82	252	31002m	0.50	UG	
95) Benzo[k]fluoranthene	6.85	252	47443m	0.51	UG	
96) Benzo[a]pyrene	7.16	252	33781m	0.51	UG	
97) Indeno[1,2,3-cd]pyrene	8.61	276	30442m	0.53	UG	
98) Dibenz[a,h]anthracene	8.62	278	23944m	0.50	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4002.D
Acq On : 11 Nov 2015 10:18
Operator : KIM
Sample : ABN061-15,CCV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 11 12:45:53 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4048.D
Acq On : 12 Nov 2015 16:56
Operator : KIM
Sample : ABN061-15,CCV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 12 17:19:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

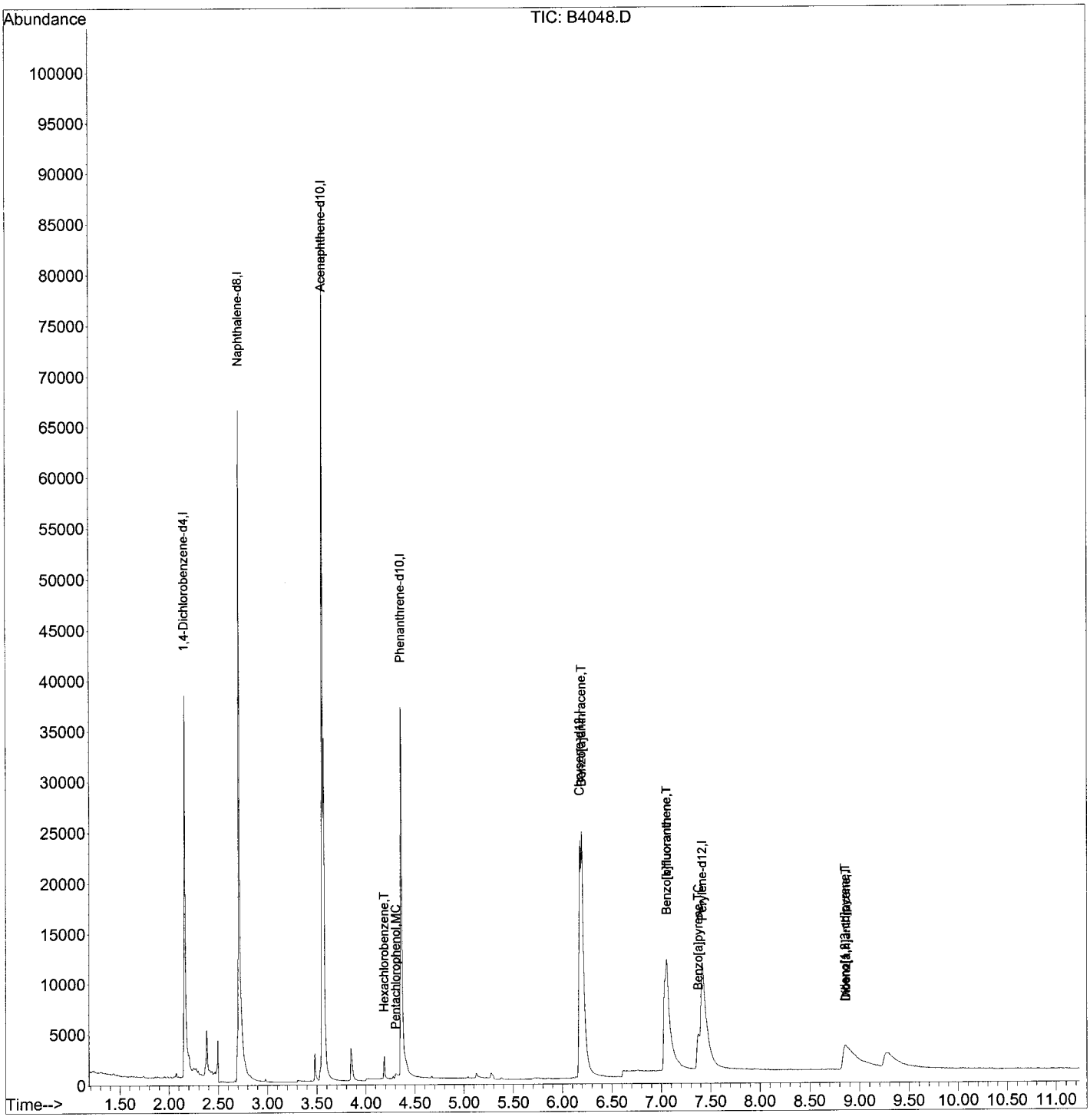
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	23683m	1.00	UG	0.00
23) Naphthalene-d8	2.71	136	59146m	1.00	UG	0.01
43) Acenaphthene-d10	3.55	164	28296m	1.00	UG	0.06
66) Phenanthrene-d10	4.36	188	37421m	1.00	UG	0.12
82) Chrysene-d12	6.18	240	21303m	1.00	UG	0.18
92) Perylene-d12	7.42	264	21770m	1.00	UG	0.14
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
Target Compounds						Qvalue
72) Hexachlorobenzene	4.19	284	1133m	0.09	UG	
74) Pentachlorophenol	4.31	266	605m	0.43	UG	
88) Benzo[a]anthracene	6.19	228	10377m	0.44	UG	
94) Benzo[b]fluoranthene	7.05	252	12705m	0.55	UG	
95) Benzo[k]fluoranthene	7.05	252	18911m	0.54	UG	
96) Benzo[a]pyrene	7.37	252	13399m	0.53	UG	
97) Indeno[1,2,3-cd]pyrene	8.85	276	10625m	0.49	UG	
98) Dibenz[a,h]anthracene	8.87	278	8873m	0.49	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4048.D
Acq On : 12 Nov 2015 16:56
Operator : KIM
Sample : ABN061-15,CCV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 12 17:19:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 5.00min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	116	-0.01
2	T	N-Nitrosodimethylamine	0.607	0.660	-8.7	116	-0.02
3	T	Pyridine	0.743	0.876	-17.9	127	-0.01
4	S	2-Fluorophenol	0.982	1.039	-5.8	126	-0.02
5	T	Benzaldehyde	0.667	0.689	-3.3	113	-0.01
6	S	Phenol-d5	1.234	1.347	-9.2	127	-0.01
7	MC	Phenol	1.281	1.385	-8.1	127	-0.02
8	T	Aniline	0.546	0.653	-19.6	137	-0.02
9	T	Bis(2-chloroethyl) ether	0.680	0.807	-18.7	133	-0.02
10	M	2-Chlorophenol	1.085	1.131	-4.2	123	-0.02
11	T	1,3-Dichlorobenzene	1.241	1.221	1.6	116	-0.02
12	MC	1,4-Dichlorobenzene	1.272	1.282	-0.8	116	-0.01
13	T	Benzyl alcohol	0.632	0.698	-10.4	123	-0.02
14	T	1,2-Dichlorobenzene	1.175	1.182	-0.6	116	-0.01
15	T	2-Methylphenol	0.982	1.034	-5.3	122	-0.02
16	T	Bis(2-chloroisopropyl) ethe	1.233	1.476	-19.7	136	-0.02
17	T	4-Methylphenol	0.964	1.060	-10.0	122	-0.02
18	MP	N-Nitrosodi-n-propylamine	0.693	0.828	-19.5	136	-0.02
19	T	Acetophenone	1.337	1.452	-8.6	126	-0.02
20	T	3-Methylphenol	0.964	1.060	-10.0	122	-0.02
21	T	Hexachloroethane	0.427	0.487	-14.1	131	-0.01
23	I	Naphthalene-d8	1.000	1.000	0.0	117	-0.02
24	S	Nitrobenzene-d5	0.243	0.206	15.2	100	-0.01
25	T	Nitrobenzene	0.247	0.288	-16.6	141	-0.02
26	T	Isophorone	0.487	0.547	-12.3	135	-0.02
27	TC	2-Nitrophenol	0.130	0.137	-5.4	119	-0.02
28	T	2,4-Dimethylphenol	0.227	0.255	-12.3	124	-0.02
29	T	Bis(2-chloroethoxy) methane	0.292	0.334	-14.4	128	-0.02
30	T	Benzoic acid	0.109	0.105	3.7	127	-0.02
31	T	2,4-Dimethylaniline	0.326	0.316	3.1	110	-0.02
32	TC	2,4-Dichlorophenol	0.215	0.216	-0.5	113	-0.02
33	M	1,2,4-Trichlorobenzene	0.263	0.247	6.1	112	-0.02
34	T	Naphthalene	0.782	0.776	0.8	117	-0.02
35	T	4-Chloroaniline	0.340	0.332	2.4	115	-0.01
36	T	4-Aminotoluene	0.447	0.465	-4.0	119	-0.02
37	TC	Hexachlorobutadiene	0.142	0.142	0.0	115	-0.02
38	T	Caprolactam	0.096	0.112	-16.7	128	-0.04
39	T	2-Aminotoluene	0.447	0.465	-4.0	119	-0.02
40	MC	4-Chloro-3-methylphenol	0.197	0.215	-9.1	123	-0.02
41	T	2-Methylnaphthalene	0.501	0.498	0.6	114	-0.01
43	I	Acenaphthene-d10	1.000	1.000	0.0	105	-0.02
44	TP	Hexachlorocyclopentadiene	0.173	0.180	-4.0	107	-0.02
45	TC	2,4,6-Trichlorophenol	0.265	0.268	-1.1	103	-0.02
46	T	2,4,5-Trichlorophenol	0.295	0.287	2.7	102	-0.02

47	S	2-Fluorobiphenyl	1.006	1.028	-2.2	108	-0.02
48	T	1,1'-Biphenyl	1.091	1.109	-1.6	107	-0.02
49	T	2-Chloronaphthalene	0.835	0.858	-2.8	108	-0.02
50	T	2-Nitroaniline	0.183	0.212	-15.8	111	-0.02
51	T	Dimethyl phthalate	0.931	0.946	-1.6	105	-0.03
52	T	2,6-Dinitrotoluene	0.184	0.187	-1.6	98	-0.03
53	T	Acenaphthylene	1.312	1.342	-2.3	105	-0.02
54	T	3-Nitroaniline	0.218	0.226	-3.7	101	-0.03
55	MC	Acenaphthene	0.834	0.819	1.8	104	-0.03
56	TP	2,4-Dinitrophenol	0.077	0.065	15.6	83	-0.02
57	MP	4-Nitrophenol	0.127	0.122	3.9	104	-0.02
58	M	2,4-Dinitrotoluene	0.235	0.254	-8.1	97	-0.03
59	T	Dibenzofuran	1.289	1.264	1.9	102	-0.03
60	T	Diethyl phthalate	0.894	0.964	-7.8	110	-0.04
61	T	Fluorene	0.997	1.002	-0.5	103	-0.03
62	T	4-Chlorophenyl phenyl ether	0.504	0.510	-1.2	103	-0.04
63	T	4-Nitroaniline	0.234	0.237	-1.3	95	-0.04
64		1,2,4,5-Tetrachlorobenzene	0.445	0.433	2.7	101	-0.02
65	T	2,3,4,6-Tetrachlorophenol	0.258	0.286	-10.9	99	-0.03
66	I	Phenanthrene-d10	1.000	1.000	0.0	92	-0.03
67	T	4,6-Dinitro-2-methylphenol	0.081	0.074	8.6	80	-0.04
68	TC	N-Nitrosodiphenylamine	0.417	0.481	-15.3	105	-0.04
69	T	1,2-Diphenylhydrazine	0.551	0.499	9.4	81	-0.04
70	S	2,4,6-Tribromophenol	0.139	0.143	-2.9	94	-0.03
71	T	4-Bromophenyl phenyl ether	0.193	0.206	-6.7	99	-0.04
72	T	Hexachlorobenzene	0.237	0.229	3.4	88	-0.03
73	T	Atrazine	0.154	0.161	-4.5	94	-0.04
74	MC	Pentachlorophenol	0.112	0.100	10.7	79	-0.03
75	T	Phenanthrene	0.807	0.807	0.0	92	-0.04
76	T	Anthracene	0.793	0.801	-1.0	91	-0.04
77	T	Carbazole	0.721	0.724	-0.4	88	-0.04
78	T	Di-n-butyl phthalate	0.834	0.933	-11.9	98	-0.05
79	TC	Fluoranthene	0.834	0.762	8.6	81	-0.05
80	T	Benzidine	0.496	0.371	25.2	71	-0.04
82	I	Chrysene-d12	1.000	1.000	0.0	70	-0.10
83	M	Pyrene	0.993	1.063	-7.0	78	-0.06
84	S	Terphenyl-d14	0.881	0.898	-1.9	72	-0.06
85	T	3,3'-Dimethylbenzidine	0.597	0.516	13.6	70	-0.06
86	T	Butyl benzyl phthalate	0.372	0.332	10.8	60	-0.08
87	T	3,3'-Dichlorobenzidine	0.313	0.311	0.6	65	-0.09
88	T	Benzo[a]anthracene	0.923	0.879	4.8	71	-0.09
89	T	Chrysene	0.854	0.872	-2.1	73	-0.10
90	T	Bis(2-ethylhexyl) phthalate	0.504	0.604	-19.8	79	-0.10
92	I	Perylene-d12	1.000	1.000	0.0	69	-0.14
93	TC	Di-n-octyl phthalate	0.796	0.899	-12.9	70	-0.13
94	T	Benzo[b]fluoranthene	0.901	0.733	18.6	53	-0.13
95	T	Benzo[k]fluoranthene	0.899	0.963	-7.1	78	-0.14
96	TC	Benzo[a]pyrene	0.814	0.821	-0.9	69	-0.15
97	T	Indeno[1,2,3-cd]pyrene	0.958	1.057	-10.3	77	-0.24
98	T	Dibenz[a,h]anthracene	0.787	0.842	-7.0	74	-0.24
99	T	Benzo[g,h,i]perylene	0.799	0.878	-9.9	78	-0.26

(#) = Out of Range

BW1115.M Mon Nov 16 16:05:03 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	64485	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	263713	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	145260	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	221191	40.00	UG	-0.03
82) Chrysene-d12	7.81	240	160428	40.00	UG	-0.10
92) Perylene-d12	8.99	264	140015	40.00	UG	-0.14
System Monitoring Compounds						
4) 2-Fluorophenol	2.72	112	167547	105.78	UG	-0.02
Spiked Amount 100.000	Range 10 - 100		Recovery = 105.78%#			
6) Phenol-d5	3.33	99	217187	109.14	UG	-0.01
Spiked Amount 100.000	Range 10 - 102		Recovery = 109.14%#			
24) Nitrobenzene-d5	3.90	82	68002m	42.49	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 84.98%			
47) 2-Fluorobiphenyl	4.94	172	186600	51.07	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery = 102.14%#			
70) 2,4,6-Tribromophenol	5.87	330	78981	102.53	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 102.53%			
84) Terphenyl-d14	7.13	244	180043	50.95	UG	-0.06
Spiked Amount 50.000	Range 23 - 124		Recovery = 101.90%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.56	74	42538m	43.48	UG	
3) Pyridine	1.61	52	56458m	47.14	UG	
7) Phenol	3.34	94	89288	43.25	UG	85
8) Aniline	3.36	66	42094	47.86	UG	96
9) Bis(2-chloroethyl) ether	3.38	63	52037m	47.47	UG	
10) 2-Chlorophenol	3.44	128	72901	41.70	UG	95
11) 1,3-Dichlorobenzene	3.53	146	78716	39.34	UG	96
12) 1,4-Dichlorobenzene	3.57	146	82648	40.29	UG	96
13) Benzyl alcohol	3.64	108	45029	44.21	UG	96
14) 1,2-Dichlorobenzene	3.68	146	76203	40.21	UG	93
15) 2-Methylphenol	3.71	108	66693	42.12	UG	99
16) Bis(2-chloroisopropyl) eth	3.73	45	95179m	47.88	UG	
17) 4-Methylphenol	3.79	108	68327	43.97	UG	99
18) N-Nitrosodi-n-propylamine	3.81	70	53401m	47.79	UG	
19) Acetophenone	3.80	105	93657	43.46	UG	67
20) 3-Methylphenol	3.79	108	68327	43.97	UG	99
21) Hexachloroethane	3.88	117	31403	45.63	UG	80
25) Nitrobenzene	3.91	77	76069	46.81	UG	96
26) Isophorone	4.05	82	144178	44.91	UG	94
27) 2-Nitrophenol	4.10	139	36033	42.12	UG	98
28) 2,4-Dimethylphenol	4.11	107	67323	45.05	UG	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
29) Bis(2-chloroethoxy) methan	4.16	93	88033	45.73 UG		98
30) Benzoic acid	4.18	105	27592m	38.46 UG		
31) 2,4-Dimethylaniline	4.22	121	83419	38.77 UG	#	100
32) 2,4-Dichlorophenol	4.24	162	56863	40.15 UG		97
33) 1,2,4-Trichlorobenzene	4.30	180	65237	37.65 UG		98
34) Naphthalene	4.34	128	204701	39.70 UG	#	100
35) 4-Chloroaniline	4.36	127	87437	39.02 UG		96
36) 4-Aminotoluene	3.83	106	122597	41.62 UG		99
37) Hexachlorobutadiene	4.44	225	37426	39.95 UG		98
38) Caprolactam	4.55	55	29452	46.64 UG		91
39) 2-Aminotoluene	3.83	106	122597	41.62 UG		99
40) 4-Chloro-3-methylphenol	4.63	107	56678	43.69 UG		92
41) 2-Methylnaphthalene	4.74	142	131298	39.73 UG		100
44) Hexachlorocyclopentadiene	4.86	237	26091	41.60 UG		99
45) 2,4,6-Trichlorophenol	4.91	196	38914	40.38 UG		98
46) 2,4,5-Trichlorophenol	4.93	196	41721	38.91 UG		99
48) 1,1'-Biphenyl	5.00	154	161128	40.67 UG		99
49) 2-Chloronaphthalene	5.01	162	124691	41.11 UG		96
50) 2-Nitroaniline	5.07	65	30788m	46.24 UG		
51) Dimethyl phthalate	5.17	163	137414	40.64 UG		99
52) 2,6-Dinitrotoluene	5.22	165	27185	40.62 UG		95
53) Acenaphthylene	5.26	152	194909	40.89 UG		99
54) 3-Nitroaniline	5.30	138	32762	41.34 UG		90
55) Acenaphthene	5.36	153	119030	39.31 UG		98
56) 2,4-Dinitrophenol	5.37	184	9428m	33.55 UG		
57) 4-Nitrophenol	5.39	65	17735	38.40 UG		93
58) 2,4-Dinitrotoluene	5.45	165	36844	43.20 UG		64
59) Dibenzofuran	5.45	168	183541	39.22 UG		96
60) Diethyl phthalate	5.59	149	140048	43.15 UG		99
61) Fluorene	5.69	166	145602	40.22 UG		99
62) 4-Chlorophenyl phenyl ethe	5.67	204	74039	40.43 UG		96
63) 4-Nitroaniline	5.70	138	34418	40.53 UG		89
64) 1,2,4,5-Tetrachlorobenzene	4.85	216	125809	77.79 UG		99
65) 2,3,4,6-Tetrachlorophenol	5.55	232	41560	44.28 UG		99
67) 4,6-Dinitro-2-methylphenol	5.74	198	16413	36.48 UG		97
68) N-Nitrosodiphenylamine	5.75	169	106331	46.11 UG		99
69) 1,2-Diphenylhydrazine	5.78	77	110437m	36.28 UG		
71) 4-Bromophenyl phenyl ether	5.99	248	45612	42.77 UG		94
72) Hexachlorobenzene	6.10	284	50573	38.61 UG		90
73) Atrazine	6.08	200	35718	42.03 UG		100
74) Pentachlorophenol	6.19	266	22124	35.69 UG		97
75) Phenanthrene	6.27	178	178424	40.00 UG		98
76) Anthracene	6.30	178	177262	40.42 UG		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

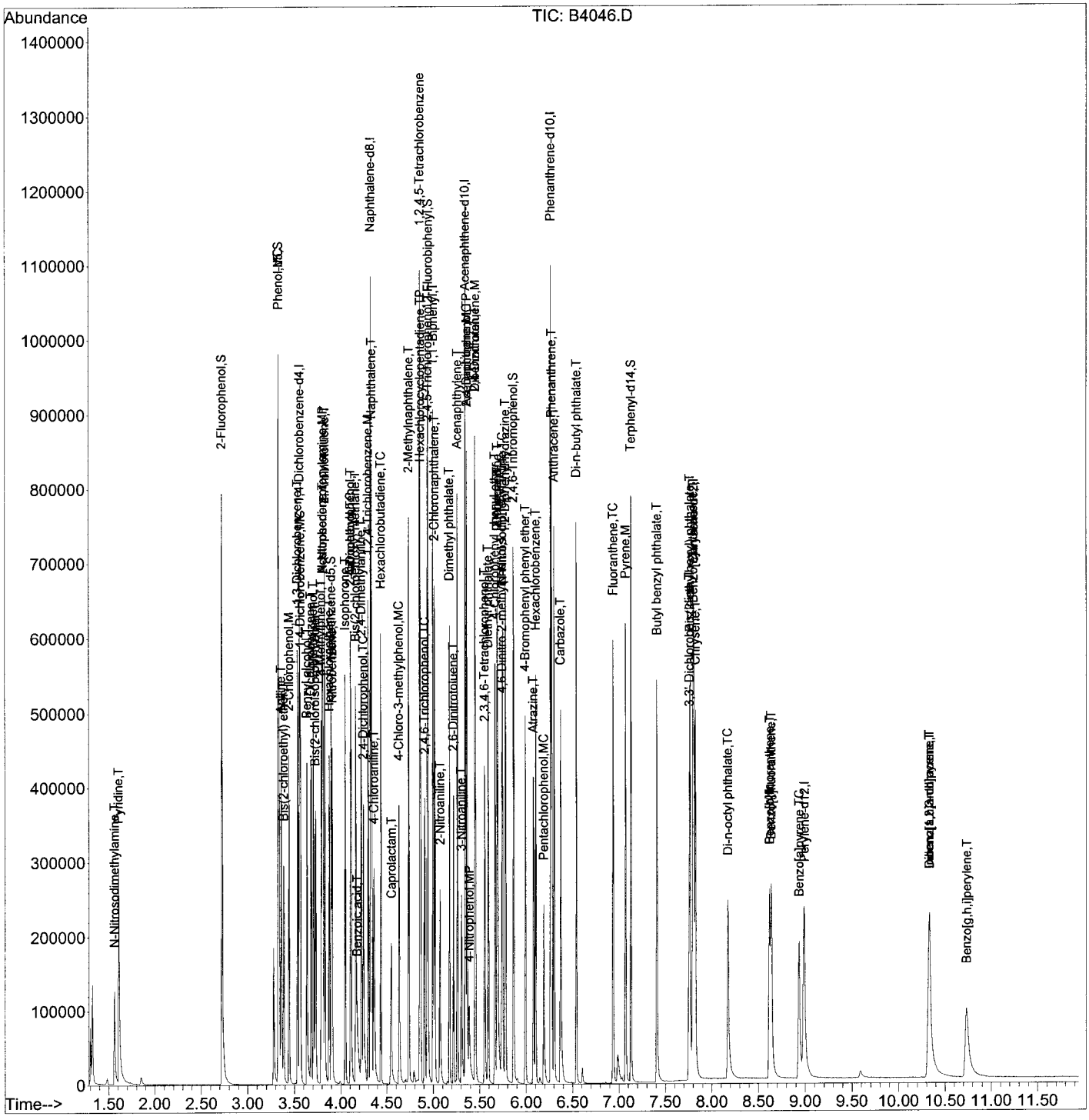
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
77) Carbazole	6.37	167	160110	40.18	UG	98
78) Di-n-butyl phthalate	6.54	149	206357	44.76	UG	100
79) Fluoranthene	6.94	202	168558	36.54	UG	90
83) Pyrene	7.07	202	170565	42.81	UG	89
86) Butyl benzyl phthalate	7.41	149	53280m	35.68	UG	
87) 3,3'-Dichlorobenzidine	7.75	252	49900	39.77	UG	98
88) Benzo[a]anthracene	7.80	228	140973	38.07	UG	99
89) Chrysene	7.82	228	139879	40.85	UG	98
90) Bis(2-ethylhexyl) phthalat	7.77	149	96869m	47.96	UG	
93) Di-n-octyl phthalate	8.17	149	125913m	45.19	UG	
94) Benzo[b]fluoranthene	8.62	252	102607	32.53	UG	94
95) Benzo[k]fluoranthene	8.64	252	134838	42.87	UG	98
96) Benzo[a]pyrene	8.94	252	115018	40.37	UG	97
97) Indeno[1,2,3-cd]pyrene	10.33	276	147926	44.12	UG	85
98) Dibenz[a,h]anthracene	10.32	278	117863	42.79	UG	96
99) Benzo[g,h,i]perylene	10.74	276	122964	43.96	UG	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4046.D
Acq On : 12 Nov 2015 16:52
Operator : KIM
Sample : ABN075-15,CCV040BNA1,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 16 15:03:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\11-12-15\
Data File : B4048.D
Acq On : 12 Nov 2015 16:56
Operator : KIM
Sample : ABN061-15,CCV000.5SIM,Ia,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 12 17:19:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	138	0.00
23	I	Naphthalene-d8	1.000	1.000	0.0	121	0.01
43	I	Acenaphthene-d10	1.000	1.000	0.0	112	0.06
66	I	Phenanthrene-d10	1.000	1.000	0.0	95	0.12
72	T	Hexachlorobenzene	0.341	0.303	11.1	91	0.10
74	MC	Pentachlorophenol	0.038	0.032	15.8	77	0.14
82	I	Chrysene-d12	1.000	1.000	0.0	67	0.18
88	T	Benzo[a]anthracene	1.099	0.974	11.4	62	0.20
92	I	Perylene-d12	1.000	1.000	0.0	55	0.14
94	T	Benzo[b]fluoranthene	1.069	1.167	-9.2	67	0.17
95	T	Benzo[k]fluoranthene	1.619	1.737	-7.3	59	0.16
96	TC	Benzo[a]pyrene	1.160	1.231	-6.1	63	0.16
97	T	Indeno[1,2,3-cd]pyrene	1.003	0.976	2.7	54	0.16
98	T	Dibenz[a,h]anthracene	0.836	0.815	2.5	53	0.17

(#) = Out of Range

BSIM1115.M Mon Nov 16 16:06:55 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4047.D
Acq On : 12 Nov 2015 16:39
Operator : KIM
Sample : ABN076-15,CCV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 13 11:49:49 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

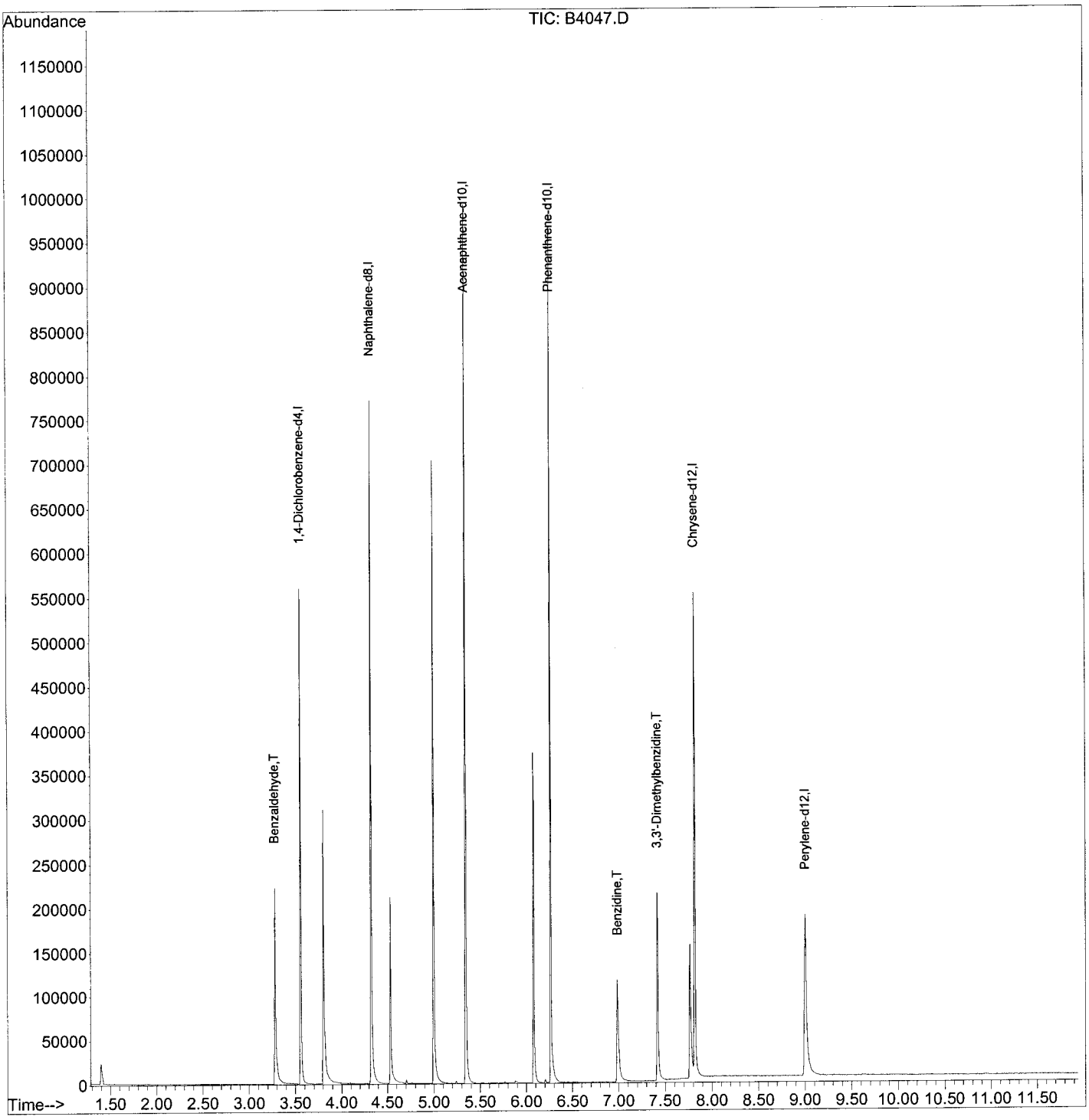
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	61802	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	251761	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	144659	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	215833	40.00	UG	-0.03
82) Chrysene-d12	7.82	240	174792	40.00	UG	-0.09
92) Perylene-d12	9.00	264	125646	40.00	UG	-0.13
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 10 - 102		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 50.000	Range 27 - 102		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 50.000	Range 26 - 101		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 22 - 115		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 23 - 124		Recovery = 0.00%#			
Target Compounds						Qvalue
5) Benzaldehyde	3.28	106	42597	41.36	UG	# 100
80) Benzidine	6.99	184	80136m	29.93	UG	
85) 3,3'-Dimethylbenzidine	7.42	212	90212m	34.59	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4047.D
Acq On : 12 Nov 2015 16:39
Operator : KIM
Sample : ABN076-15,CCV040BNA2,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 13 11:49:49 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



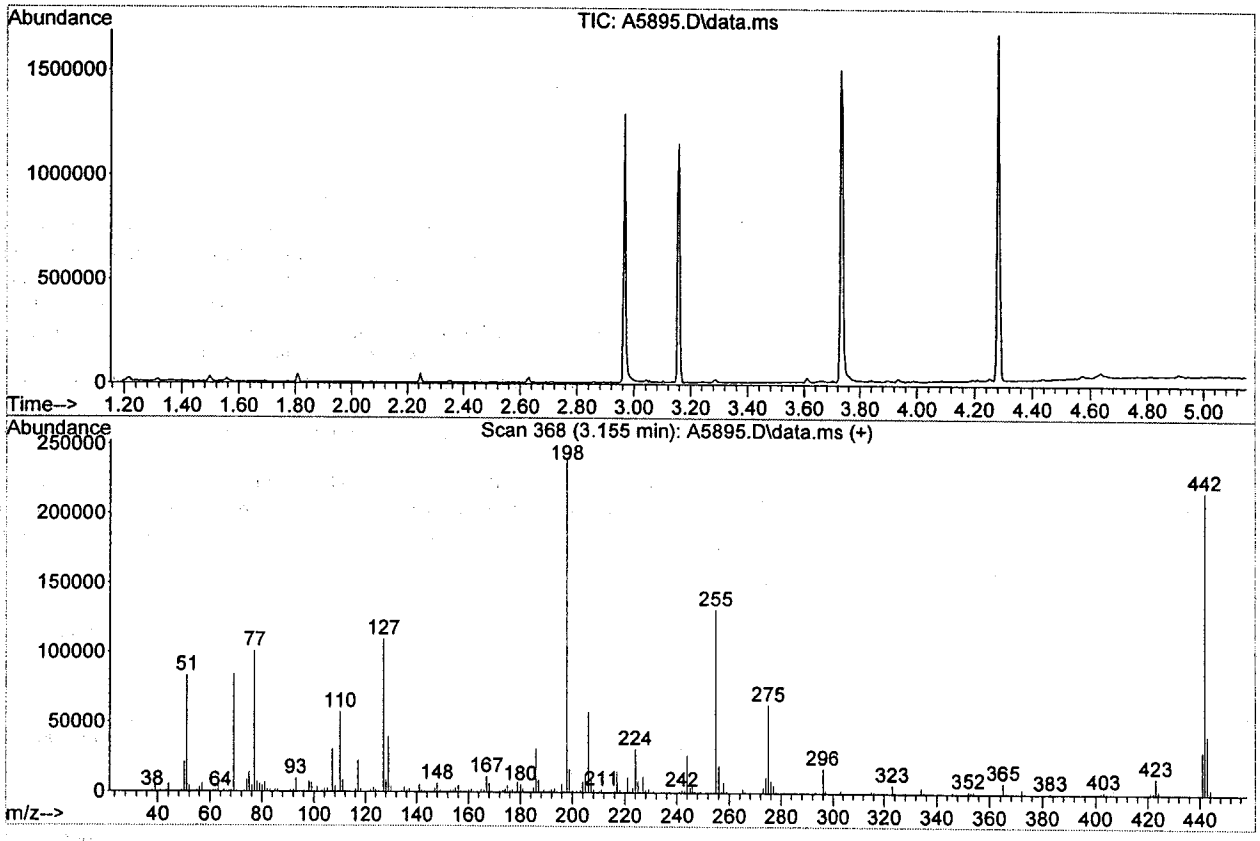
SEMI-VOLATILE ORGANICS RAW QC DATA

DFTPP

Data Path : C:\msdchem\1\DATA\10-29-15\
Data File : A5895.D
Acq On : 29 Oct 2015 11:40
Operator : JC
Sample : ABN054-15,DFTPP1510028
Misc : N/A,N/A/,N/A,1
ALS Vial : 96 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP2.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Dec 19 07:39:30 2013



Spectrum Information: Scan 368

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.7	83376	PASS
68	69	0.00	2	1.4	1224	PASS
69	198	0.00	100	35.2	84552	PASS
70	69	0.00	2	0.9	783	PASS
127	198	40	60	45.6	109656	PASS
197	198	0.00	1	0.3	703	PASS
198	198	100	100	100.0	240504	PASS
199	198	5	9	6.9	16603	PASS
275	198	10	30	26.3	63320	PASS
365	198	1	100	3.2	7792	PASS
441	443	0.01	100	73.0	30841	PASS
442	198	40	100	90.4	217488	PASS
443	442	17	23	19.4	42262	PASS

Scan 368 (3.155 min): A5895.D\data.ms
ABN054-15,DFTPP1510028
Modified:added

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	657	50.00	21377	64.05	454	76.00	4533
37.10	287	51.05	83376	65.00	1631	77.05	101216
38.00	1291	52.05	4136	67.05	471	78.00	7339
39.05	6953	53.00	419	68.00	1224	79.00	5894
39.95	794	55.05	1246	69.00	84552	80.00	4719
41.00	1172	55.95	3162	70.05	783	81.00	6628
42.00	349	57.00	6028	71.00	258	82.00	1998
43.05	1249	60.00	198	71.20	176	83.05	2041
44.00	5880	61.00	1125	73.00	1101	83.95	920
44.95	538	62.00	1056	74.00	8533	84.95	1790
48.95	1071	63.00	3786	75.00	14067	85.95	2099

Scan 368 (3.155 min): A5895.D\data.ms
ABN054-15,DFTPP1510028
Modified:added

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.95	983	99.90	647	111.00	8518	123.90	1543
87.90	275	100.95	3653	111.90	1182	124.95	1196
90.95	1705	101.90	148	112.90	548	126.10	260
92.00	1783	103.00	1299	115.95	1743	127.00	109656
93.00	9857	103.90	2486	117.00	22720	128.00	8614
94.00	867	105.00	2692	117.95	2188	129.00	39936
94.95	522	105.90	681	118.80	165	129.95	3706
96.00	890	107.00	30679	119.15	363	130.95	774
96.95	462	108.00	4347	119.90	445	131.95	657
98.00	7644	108.95	774	121.90	1777	132.95	566
99.00	6941	110.00	57608	123.00	3082	133.90	1088

Scan 368 (3.155 min): A5895.D\data.ms
ABN054-15,DFTPP1510028
Modified:added

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.95	3543	145.90	866	154.95	2926	165.95	1626
135.95	1333	146.95	2797	156.00	4632	167.00	11335
137.00	2220	147.95	6354	157.00	996	168.00	6585
137.80	152	148.95	1307	158.00	800	169.00	1104
138.10	167	149.80	158	158.90	765	169.80	177
139.90	470	150.10	173	160.00	1412	170.95	468
140.95	5292	150.95	808	160.95	2011	171.90	892
141.90	1589	151.80	249	161.90	690	173.00	1232
142.90	1108	152.10	163	163.00	149	174.00	2407
144.00	487	152.95	1786	163.90	146	175.00	4800
144.90	197	153.90	1378	164.95	2061	175.90	1395

Scan 368 (3.155 min): A5895.D\data.ms
ABN054-15,DFTPP1510028
Modified:added

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.90	1916	187.95	904	200.00	1262	210.90	2149
178.00	780	188.95	1973	200.90	161	211.80	205
178.90	7365	190.95	1009	201.50	1288	214.95	459
180.00	5458	191.95	2249	203.00	1440	215.95	1101
180.95	2699	192.95	2556	203.90	7614	216.90	15359
181.90	143	193.90	764	205.00	13336	217.95	1670
182.20	181	194.95	418	206.00	57640	221.00	10990
183.85	610	196.00	6105	207.00	9527	221.90	1181
185.00	3588	196.80	703	207.90	2089	222.95	3474
186.00	31461	197.90	240504	208.90	812	224.00	31169
187.00	8863	198.90	16603	210.10	848	225.00	8230

Scan 368 (3.155 min): A5895.D\data.ms
ABN054-15,DFTPP1510028
Modified:added

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
225.90	889	236.95	1075	249.00	1095	261.00	254
226.95	11978	238.00	198	250.00	165	263.85	300
227.90	1964	238.90	575	251.00	160	264.95	2800
228.95	2759	240.00	298	251.95	286	265.85	630
229.90	482	240.90	764	252.85	794	267.80	193
230.95	1129	241.90	1928	253.90	638	269.90	161
231.80	155	243.00	1856	255.00	131608	270.80	144
232.85	337	244.00	26872	256.00	19596	271.80	384

233.85	884	245.00	3801	256.95	1399	272.95	3868
234.95	1094	245.95	5198	257.90	7553	274.00	11283
235.95	627	246.90	1296	258.90	1370	275.00	63320

Scan 368 (3.155 min): A5895.D\data.ms
ABN054-15,DFTPP1510028
Modified:added

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
276.00	8740	293.00	1276	315.00	1767	334.00	4299
277.00	5405	293.80	232	315.95	1282	335.00	989
277.95	968	294.90	140	320.80	441	340.90	690
281.00	843	296.00	17768	321.90	172	346.00	1450
282.10	151	296.90	2169	323.00	6245	347.00	155
282.95	751	297.80	162	324.00	1072	351.95	1733
283.90	265	300.90	184	324.90	153	352.90	1232
285.05	911	301.90	230	327.00	942	353.95	1794
286.00	196	302.95	1998	327.90	548	355.00	339
288.80	190	303.90	502	332.00	214	365.00	7792
292.00	156	313.95	852	332.95	548	366.00	1088

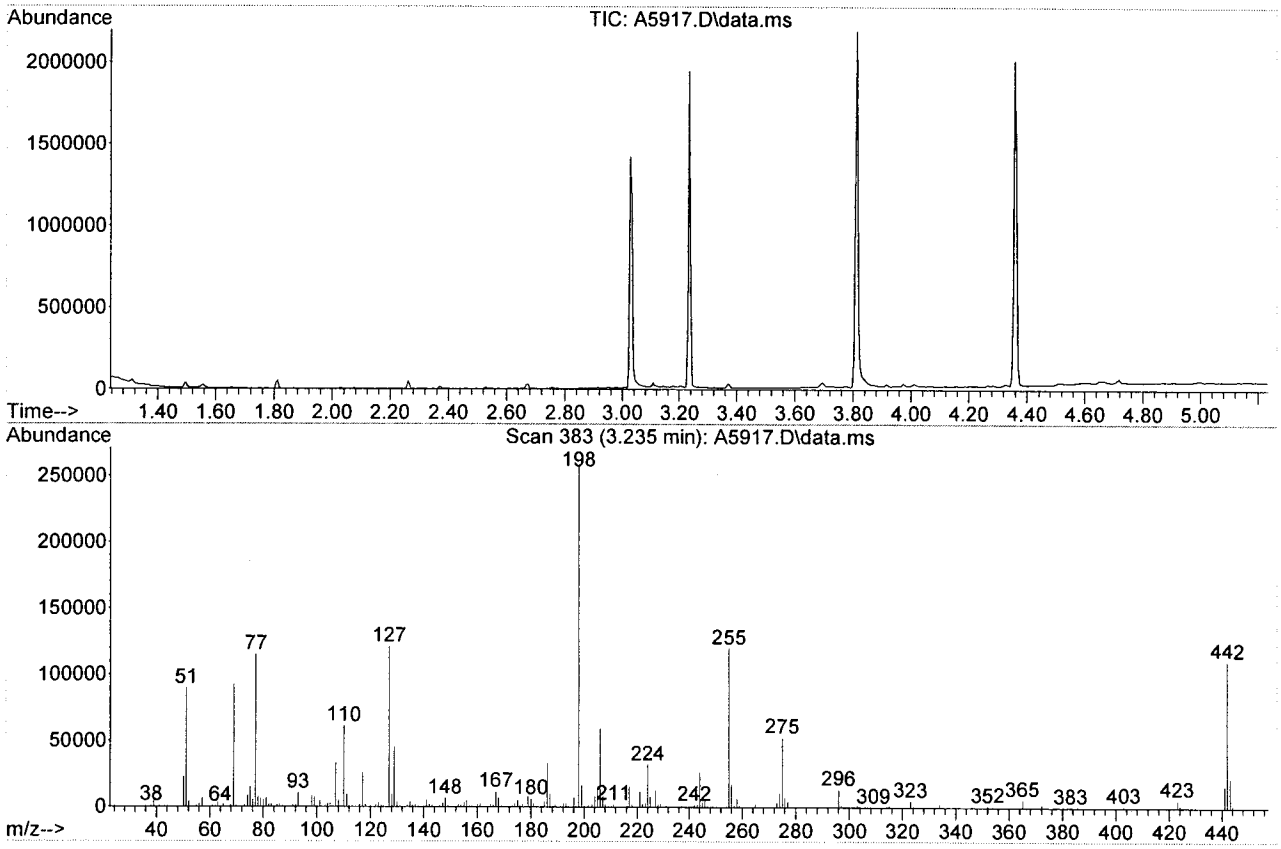
Scan 368 (3.155 min): A5895.D\data.ms
ABN054-15,DFTPP1510028
Modified:added

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
370.90	232	423.00	11594				
372.00	3617	424.00	2339				
373.00	881	441.00	30841				
382.90	843	442.00	217488				
389.90	295	443.00	42262				
391.00	325	444.00	3840				
402.00	1342	444.90	154				
403.00	1830						
403.90	570						
420.90	1669						
422.00	1351						

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5917.D
Acq On : 11 Nov 2015 14:20
Operator : JC
Sample : ABN054-15,DFTPP151111
Misc : NA,NA,NA,1
ALS Vial : 96 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP2.M
Title : BNA CALIBRATION METHOD
Last Update : Thu Dec 19 07:39:30 2013



Spectrum Information: Scan 383

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.7	89504	PASS
68	69	0.00	2	1.4	1321	PASS
69	198	0.00	100	35.8	92360	PASS
70	69	0.00	2	0.9	842	PASS
127	198	40	60	46.9	121072	PASS
197	198	0.00	1	0.4	1000	PASS
198	198	100	100	100.0	258304	PASS
199	198	5	9	6.2	16124	PASS
275	198	10	30	20.4	52672	PASS
365	198	1	100	2.2	5771	PASS
441	443	0.01	100	74.5	16392	PASS
442	198	40	100	42.8	110472	PASS
443	442	17	23	19.9	22016	PASS

Scan 383 (3.235 min): A5917.D\data.ms
ABN054-15,DFTPP151111

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	359	50.00	22560	62.00	1213	74.00	8633
37.00	369	51.00	89504	63.00	3541	75.00	15084
38.00	1225	52.00	4054	64.00	561	76.00	5630
39.00	6722	53.10	264	65.00	1902	77.00	114816
40.10	469	53.90	172	66.00	286	78.00	7694
41.00	1068	55.00	1236	66.90	287	79.00	6452
42.00	178	56.00	2644	67.90	1321	80.00	5182
43.00	937	57.00	6663	69.00	92360	81.00	6788
44.00	747	57.90	235	70.00	842	82.00	1912
44.90	238	59.90	484	71.00	498	83.00	2099
48.90	616	61.00	1073	72.90	1414	84.00	410

Scan 383 (3.235 min): A5917.D\data.ms
ABN054-15,DFTPP151111

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.00	1685	97.00	447	108.00	5096	120.00	515
85.90	1808	98.00	8130	109.00	823	121.00	163
87.00	1236	99.00	7743	110.00	61304	121.90	2212
88.00	380	99.90	716	111.00	9724	122.90	3375
89.10	179	101.00	4906	111.90	1294	123.90	1425
90.90	1675	101.90	256	112.90	477	124.90	1696
92.00	1648	103.00	1311	114.80	292	125.90	373
93.00	10524	103.90	2700	115.90	1906	127.00	121072
94.00	975	104.90	2606	117.00	26080	128.00	9713
95.00	402	105.90	855	118.00	2085	128.90	45464
96.00	762	107.00	33632	118.90	356	130.00	3779

Scan 383 (3.235 min): A5917.D\data.ms
ABN054-15,DFTPP151111

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
130.90	682	141.90	1992	152.90	1903	163.90	292
131.90	329	143.00	1334	153.90	1578	164.90	2331
132.90	351	144.10	236	155.00	3707	165.90	1695
133.80	1344	145.10	444	156.00	4860	167.00	11363
134.90	3909	145.90	984	157.00	1212	168.00	6749
135.90	1643	147.00	2812	157.90	1203	169.00	1231
136.90	1958	147.90	6678	158.90	890	169.90	419
137.80	607	148.90	1275	160.00	1861	170.80	603
138.90	310	149.90	358	161.00	2737	171.90	1102
140.00	668	151.00	789	161.90	820	173.00	1317
140.90	5605	152.00	630	162.80	189	174.00	2476

Scan 383 (3.235 min): A5917.D\data.ms
ABN054-15,DFTPP151111

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
175.00	5088	187.00	9572	197.90	258304	210.20	1022
175.90	1387	188.00	951	198.90	16124	211.00	2154
176.90	2344	188.90	1893	199.90	1287	213.00	218
178.00	545	189.90	263	201.50	1114	214.90	644
178.90	7928	191.00	985	202.90	1820	216.00	1195
180.00	6123	191.90	2780	204.00	8026	216.90	15072
180.90	2631	193.00	2821	205.00	13524	218.00	1934
182.10	533	193.90	765	206.00	59280	219.00	197
183.90	812	194.90	420	207.00	8068	221.00	11856
185.00	4099	196.00	6955	208.00	2029	221.90	2406
186.00	33040	196.80	1000	208.90	791	223.00	2913

Scan 383 (3.235 min): A5917.D\data.ms
ABN054-15,DFTPP151111

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
224.00	32200	234.90	1005	245.90	4772	258.90	1275
225.00	8055	236.00	527	246.90	904	259.90	182
226.00	712	237.00	1084	248.00	362	260.90	146
227.00	12474	238.10	168	248.80	883	263.90	317
228.00	1936	238.90	492	251.00	208	264.90	2461
229.00	2417	239.90	381	252.80	453	265.80	545
229.80	427	240.90	675	254.00	615	269.90	147
231.00	1379	242.00	1705	255.00	119896	270.80	310

231.90	176	243.00	1849	256.00	17448	271.90	335
232.90	331	244.00	26368	256.90	1511	273.00	3522
233.90	926	245.00	3564	258.00	6598	274.00	10366

Scan 383 (3.235 min): A5917.D\data.ms
ABN054-15,DFTPP151111

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
275.00	52672	292.00	174	314.10	718	332.90	313
276.00	7285	292.90	924	315.00	1498	334.00	2814
277.00	4253	294.00	366	315.90	804	334.90	923
278.00	761	294.80	281	316.90	175	341.00	549
278.80	145	296.00	13578	321.00	505	346.00	986
281.00	338	296.90	1970	323.00	4834	347.00	160
283.00	644	301.90	199	324.00	827	352.00	1177
283.90	387	302.90	1681	326.10	144	353.00	792
284.90	699	304.00	380	326.90	948	354.00	1295
288.90	193	307.80	178	328.00	473	355.00	200
289.90	141	309.00	177	332.00	422	359.00	145

Scan 383 (3.235 min): A5917.D\data.ms
ABN054-15,DFTPP151111

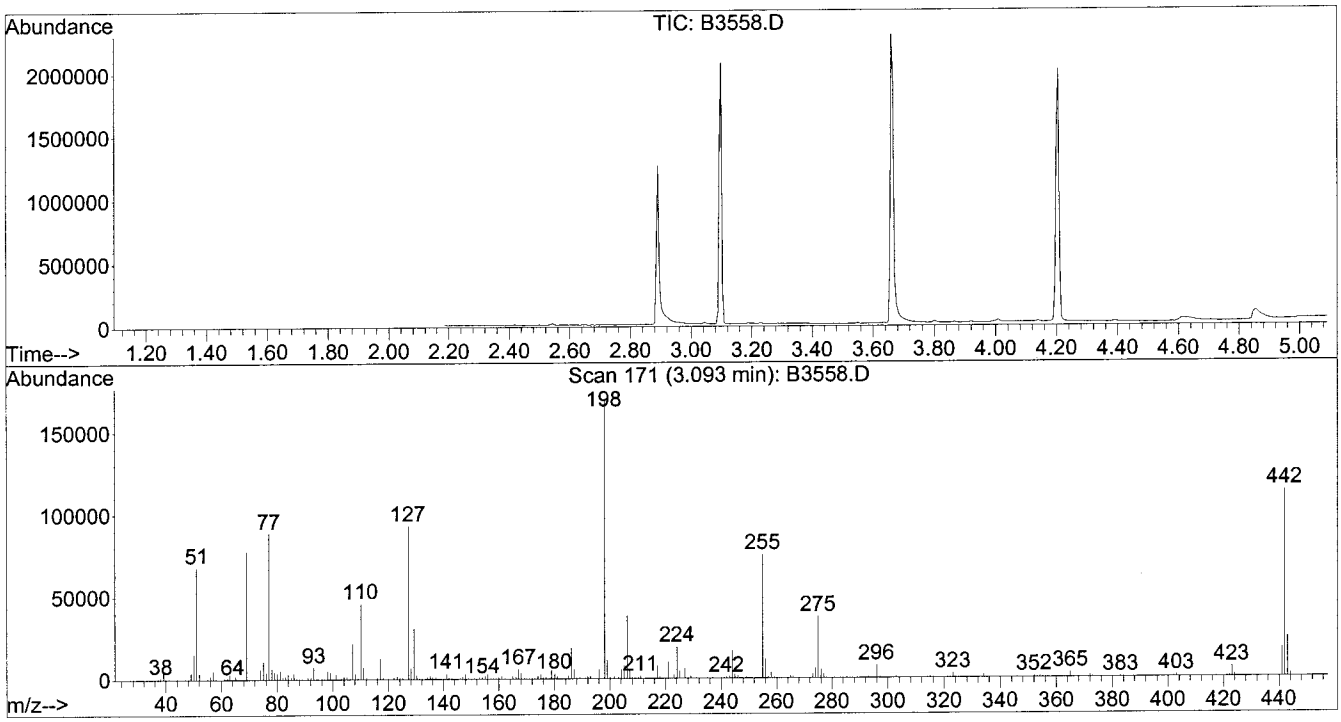
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
365.00	5771	402.90	1287				
366.00	716	403.90	522				
370.00	156	421.00	936				
370.90	345	421.90	781				
372.00	2331	423.10	5851				
373.00	482	424.00	1715				
383.00	416	425.10	188				
383.90	219	441.00	16392				
389.90	235	442.00	110472				
391.00	147	443.00	22016				
401.90	797	444.00	1858				

DFTPP

Data Path : C:\MSDChem\1\DATA\10-21-15\
Data File : B3558.D
Acq On : 21 Oct 2015 10:21
Operator : KIM
Sample : ABN054-15,DFTPP,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP1.M
Title :
Last Update : Fri Oct 07 04:35:10 2011



Spectrum Information: Scan 171

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	40.2	67816	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	46.0	77552	PASS
70	69	0.00	2	0.6	460	PASS
127	198	40	60	55.1	92960	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	168640	PASS
199	198	5	9	6.6	11108	PASS
275	198	10	30	22.1	37272	PASS
365	198	1	100	1.8	3068	PASS
441	443	0.01	100	72.0	17600	PASS
442	198	40	100	67.2	113408	PASS
443	442	17	23	21.6	24456	PASS

Scan 171 (3.093 min): B3558.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.20	289	47.10	825	61.10	794	76.20	3981
36.00	443	48.10	386	62.10	914	77.10	88616
37.20	432	49.10	4379	63.10	3020	78.10	6450
38.10	826	50.10	15472	64.10	509	79.10	4588
39.10	5024	51.10	67816	65.10	1862	80.10	4031
40.00	695	52.10	3775	69.10	77552	81.10	5226
41.10	604	53.10	154	70.10	460	82.00	1524
42.20	212	55.10	416	71.10	193	83.10	1837
43.00	319	56.10	1905	73.00	503	84.00	3101
44.10	672	57.10	5339	74.10	6230	85.10	1521
45.10	195	58.00	220	75.10	10895	86.10	3743

Scan 171 (3.093 min): B3558.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.10	718	99.10	4235	110.10	45888	123.10	1852
88.10	679	100.10	617	111.10	7243	124.00	1020
89.00	279	101.10	2976	112.20	826	125.10	967
91.10	1480	101.90	181	112.90	273	125.90	140
92.10	1211	103.00	906	116.00	1027	127.10	92960
93.10	7231	104.00	1609	117.10	12471	128.10	6812
94.10	393	105.10	1636	118.10	1002	129.10	30816
94.90	311	106.20	864	119.00	233	130.10	2614
96.00	646	107.10	21920	120.00	410	131.20	435
97.00	418	108.10	3616	121.30	180	132.00	284
98.10	5170	109.10	751	122.00	1151	133.00	222

Scan 171 (3.093 min): B3558.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.10	965	146.00	569	157.10	612	169.20	768
135.10	1955	147.10	1660	158.10	457	170.10	184
136.00	1203	148.00	3194	159.10	543	171.00	287
137.10	1354	149.00	777	160.00	838	172.00	587
138.00	301	150.00	333	161.00	1739	173.00	725
140.00	272	151.20	608	162.20	355	174.10	1739
141.10	3451	151.80	244	164.00	219	175.10	2725
142.10	920	153.00	990	165.00	1598	176.00	805
143.00	865	154.10	780	166.10	1377	177.00	1179
144.00	252	155.10	1759	167.10	5927	178.10	492
145.10	324	156.10	3012	168.00	3477	179.00	5424

Scan 171 (3.093 min): B3558.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
180.10	3200	191.20	541	204.10	5240	217.00	7770
181.00	1816	192.00	1511	205.10	7864	218.00	1026
182.10	301	193.00	1751	206.10	38280	221.00	10308
183.20	173	194.10	361	207.10	5547	223.00	1904
184.10	353	195.00	176	208.00	1004	224.10	19176
185.10	2038	196.10	5495	209.10	465	225.10	4739
186.10	18752	198.00	168640	210.20	804	226.10	363
187.10	5815	199.00	11108	211.00	1563	227.00	6266
188.10	711	200.00	933	213.00	166	228.00	807
189.10	992	201.50	1133	215.00	291	229.00	1500
190.00	232	203.00	776	216.00	563	230.10	219

Scan 171 (3.093 min): B3558.D

ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
231.00	583	244.10	16856	258.00	3429	275.00	37272
232.00	156	245.00	2380	259.10	589	276.00	5181
233.90	194	246.10	1732	264.00	415	277.00	2455
235.00	673	247.00	409	265.00	1430	278.00	364
235.90	356	249.00	712	265.80	801	281.00	177
237.00	605	249.90	155	267.90	259	282.10	167
239.00	201	250.60	221	270.20	181	283.10	294
240.00	228	253.10	320	271.00	200	284.00	277
241.10	553	255.00	74776	272.20	168	285.10	519
242.00	725	256.00	11625	273.00	2587	290.10	140
243.10	1375	257.00	752	274.00	6122	293.00	638

Scan 171 (3.093 min): B3558.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
294.10	282	323.10	2815	354.10	897	400.80	169
296.00	7711	324.10	693	355.20	235	402.10	580
297.00	1087	327.10	421	365.00	3068	403.00	1129
301.90	163	328.20	267	366.00	412	403.80	200
303.00	1192	332.90	261	371.00	174	421.00	669
304.10	385	334.10	1996	372.00	1293	422.10	734
313.90	437	335.10	320	372.90	375	423.00	6218
315.00	964	341.00	383	383.00	459	424.00	1541
316.00	605	346.00	599	384.00	171	424.80	224
321.00	160	352.10	867	389.90	207	441.00	17600
322.10	201	353.10	601	391.10	166	442.00	113408

Scan 171 (3.093 min): B3558.D
ABN054-15,DFTPP,A,1000ml,100,1

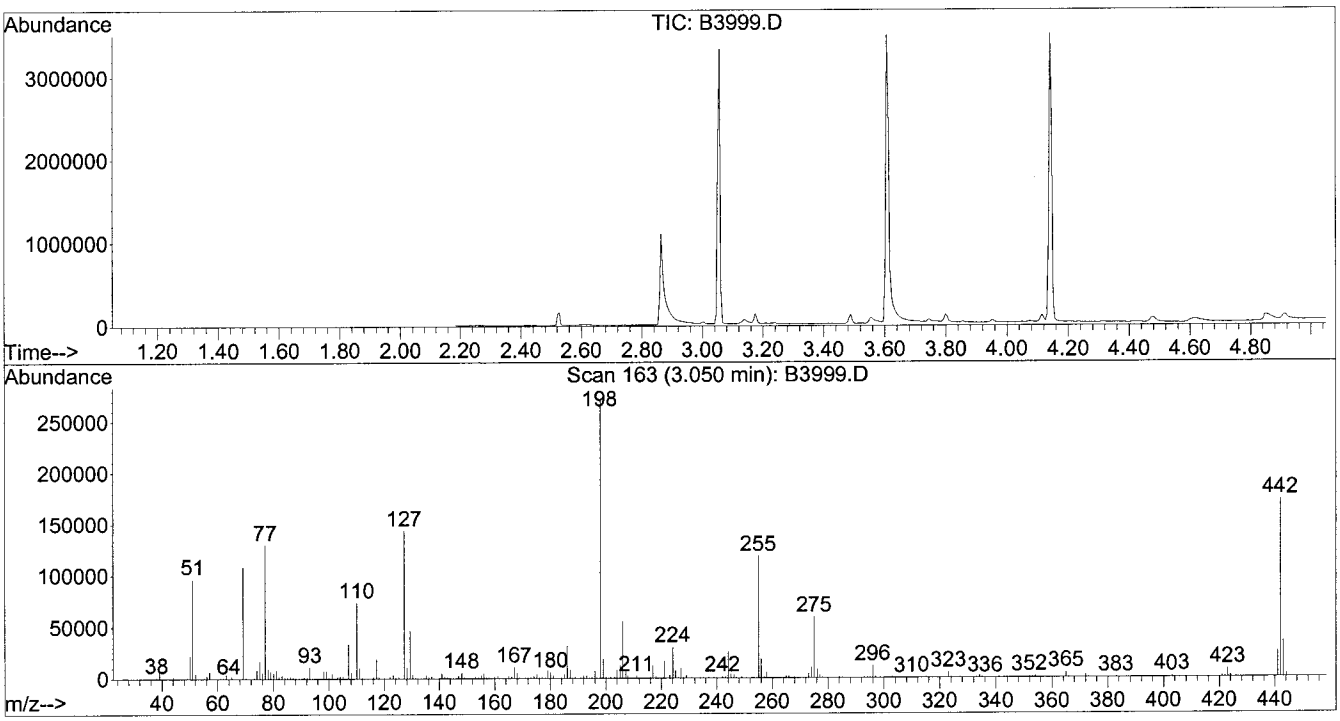
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
443.00	24456						
444.10	2067						

DFTPP

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B3999.D
Acq On : 11 Nov 2015 9:34
Operator : KIM
Sample : ABN054-15,DFTPP,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP1.M
Title :
Last Update : Fri Oct 07 04:35:10 2011



Spectrum Information: Scan 163

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.7	96488	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.1	108320	PASS
70	69	0.00	2	0.6	638	PASS
127	198	40	60	53.2	143616	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	270208	PASS
199	198	5	9	6.9	18760	PASS
275	198	10	30	21.9	59240	PASS
365	198	1	100	1.9	5052	PASS
441	443	0.01	100	72.4	25600	PASS
442	198	40	100	63.9	172736	PASS
443	442	17	23	20.5	35360	PASS

Scan 163 (3.050 min): B3999.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	385	49.10	1415	61.10	1149	74.10	8952
37.10	406	50.10	22168	62.10	1333	75.10	17008
38.10	1241	51.10	96488	63.10	4016	76.10	5860
39.10	6854	52.10	4702	64.10	481	77.10	129944
40.10	1148	53.10	235	65.10	2180	78.10	9432
41.20	704	55.10	720	66.30	140	79.10	6803
42.20	286	56.10	3039	66.90	324	80.10	5191
43.20	763	57.10	7016	69.10	108320	81.10	8552
44.10	1561	58.20	284	70.10	638	82.10	2002
45.20	331	59.10	349	71.10	388	83.10	3120
47.10	292	60.10	204	73.10	1131	84.10	1472

Scan 163 (3.050 min): B3999.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.10	1804	97.00	369	108.10	5825	120.00	737
86.10	2116	98.10	7365	110.10	73624	120.90	189
87.00	1297	99.10	7627	111.10	10150	122.00	1794
88.00	707	100.00	893	112.00	1105	123.10	3794
89.20	301	101.10	5173	113.00	588	124.10	1376
91.10	1752	101.90	255	114.00	297	125.10	1597
92.10	1730	103.10	1527	115.10	239	127.10	143616
93.10	11367	104.10	2328	116.10	1927	128.10	10658
94.10	943	105.10	2490	117.10	19240	129.10	46760
95.00	594	106.10	774	118.10	1669	130.10	4244
96.10	711	107.10	33712	119.10	378	131.10	851

Scan 163 (3.050 min): B3999.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
132.00	748	143.00	1270	154.10	1400	165.00	2189
133.10	639	144.00	363	155.10	3345	166.10	1968
134.10	1124	145.10	712	156.10	4738	167.10	10747
135.10	3604	146.10	1070	157.10	1122	168.00	5305
136.10	1426	147.00	2862	158.00	1154	169.00	1152
137.10	2253	148.10	5319	159.00	757	169.90	366
138.00	488	149.10	1380	160.10	1584	170.20	325
138.90	222	150.20	415	161.10	2535	171.00	668
140.00	628	151.20	843	162.10	764	172.00	938
141.00	5219	151.90	461	163.00	308	173.00	1151
142.00	1778	153.10	1680	164.00	495	174.10	2248

Scan 163 (3.050 min): B3999.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
175.10	3901	186.10	31272	198.00	270208	210.20	817
176.10	1401	187.10	8404	199.00	18760	211.10	2162
177.00	1777	188.10	843	200.10	1359	213.20	187
178.10	960	189.00	1579	201.70	1266	215.10	374
179.00	7550	190.00	304	203.10	1363	216.10	1157
180.10	5945	191.00	1100	204.00	7841	217.00	12135
181.10	2986	192.00	2465	205.10	12677	218.00	1660
182.00	363	193.00	2964	206.10	54728	219.20	207
183.00	402	194.10	540	207.10	8738	221.00	16560
184.00	555	195.00	581	208.00	2274	223.00	3152
185.10	4082	196.00	7219	209.00	779	224.10	30032

Scan 163 (3.050 min): B3999.D

ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
225.10	7534	236.00	486	247.00	679	258.00	5304
226.10	908	237.10	987	247.90	212	259.00	985
227.00	9887	238.10	147	249.00	983	259.90	178
228.00	1304	239.00	651	250.00	246	263.80	967
229.00	2741	240.10	387	250.90	210	265.00	2225
229.90	523	241.00	520	251.20	208	265.90	1991
231.00	1120	242.10	1464	252.10	155	267.80	1159
232.10	349	243.10	1602	253.10	689	269.00	221
233.30	176	244.00	26136	255.00	118464	269.90	634
234.00	688	245.10	3425	256.00	18528	271.10	260
235.00	699	246.10	3146	257.00	1199	271.90	339

Scan 163 (3.050 min): B3999.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
273.00	4486	290.10	161	304.20	343	327.10	756
274.00	10195	292.00	260	308.00	236	328.00	412
275.00	59240	293.00	523	309.90	147	332.10	265
276.10	8111	294.00	415	312.90	161	333.00	524
277.00	2987	295.00	571	314.00	821	334.10	2317
278.00	631	296.00	11677	315.00	1252	335.00	728
281.20	397	296.90	1823	316.00	689	336.20	160
283.10	543	298.10	147	320.90	274	341.00	565
284.10	534	301.10	244	323.10	5016	342.00	188
285.00	737	302.00	315	324.00	864	346.00	948
286.00	250	303.00	1343	326.00	168	352.00	1258

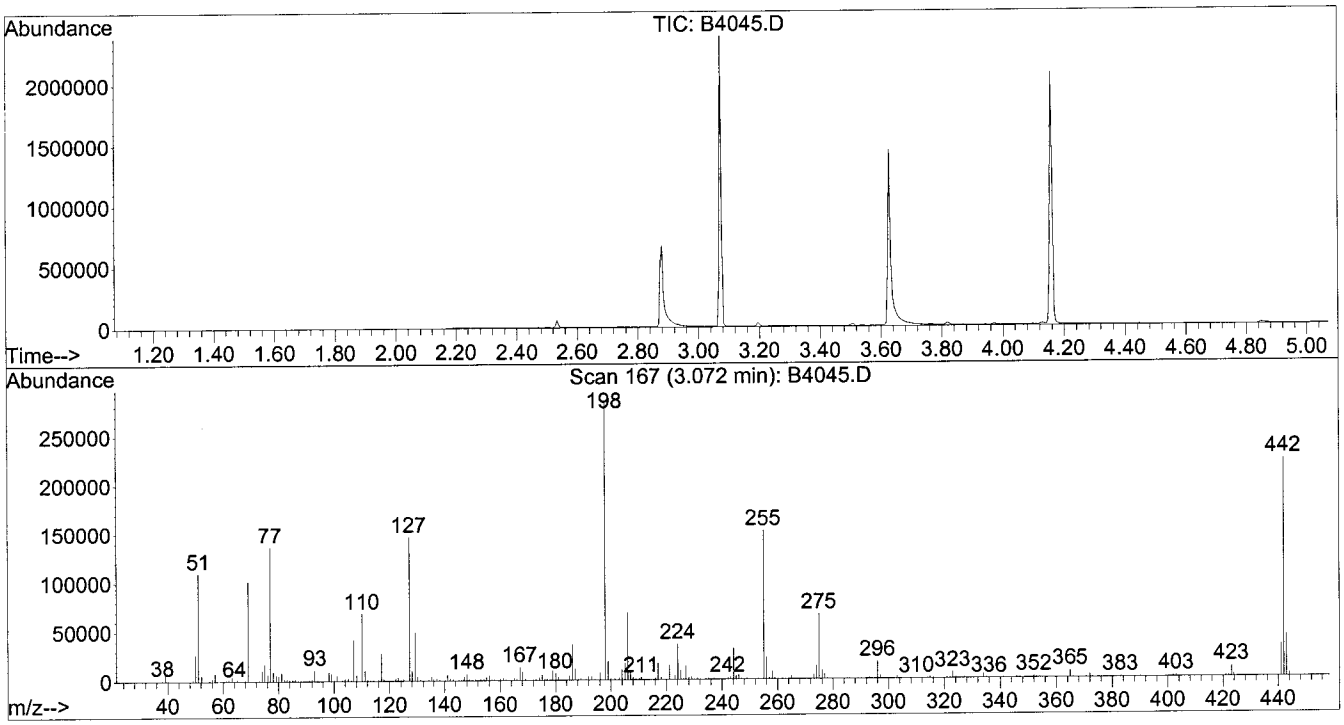
Scan 163 (3.050 min): B3999.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
353.00	1030	383.90	203	424.00	2199		
354.00	1504	389.80	247	441.00	25600		
355.10	295	391.00	172	442.00	172736		
365.00	5052	392.10	314	443.00	35360		
366.00	739	401.20	195	444.10	3396		
370.10	151	401.90	668	445.10	220		
371.00	492	403.00	1488				
372.00	2480	403.90	519				
373.10	802	421.00	1202				
374.10	143	422.00	1122				
383.00	573	423.00	8322				

Data Path : C:\MSDChem\1\DATA\11-12-15\
Data File : B4045.D
Acq On : 12 Nov 2015 15:55
Operator : KIM
Sample : ABN054-15,DFTPP,A,1000ml,100,1
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

Method : C:\MSDCHEM\1\METHODS\DFTPP1.M
Title :
Last Update : Fri Oct 07 04:35:10 2011



Spectrum Information: Scan 167

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.8	109680	PASS
68	69	0.00	2	1.3	1344	PASS
69	198	0.00	100	35.8	101152	PASS
70	69	0.00	2	0.2	235	PASS
127	198	40	60	51.9	146752	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	282816	PASS
199	198	5	9	6.7	18992	PASS
275	198	10	30	23.3	65944	PASS
365	198	1	100	2.6	7312	PASS
441	443	0.01	100	77.4	32816	PASS
442	198	40	100	78.7	222592	PASS
443	442	17	23	19.0	42392	PASS

Scan 167 (3.072 min): B4045.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.20	167	48.10	209	62.10	1759	74.10	10661
36.10	616	49.10	1469	63.10	4357	75.10	17296
37.10	414	50.10	27000	64.10	558	76.10	6894
38.10	1457	51.10	109680	65.10	2078	77.10	136576
39.20	8627	52.20	6047	66.30	212	78.10	9385
40.10	1204	53.20	241	67.00	196	79.10	6007
41.00	321	55.10	689	68.10	1344	80.10	5534
43.20	141	56.10	3013	69.10	101152	81.10	8447
44.10	691	57.10	8033	70.10	235	82.10	2095
45.20	247	58.00	288	71.00	184	83.10	2211
47.10	496	61.10	1111	73.20	664	84.00	1155

Scan 167 (3.072 min): B4045.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.10	1585	96.10	552	107.10	41712	120.00	362
86.10	2489	97.20	322	108.10	5797	121.20	187
87.00	1099	98.10	9202	110.10	68424	122.10	2275
88.10	518	99.00	7807	111.10	10286	123.10	3217
89.10	391	100.10	760	112.10	1417	124.00	1275
90.00	144	101.10	5281	113.10	611	125.10	1853
91.10	1528	102.10	173	114.10	152	127.10	146752
92.10	1954	103.00	1326	116.10	1468	128.10	10407
93.10	11402	104.00	2542	117.10	28368	129.10	48928
94.10	983	105.10	2591	118.00	2075	130.00	4139
95.10	353	106.10	1038	119.00	391	131.10	943

Scan 167 (3.072 min): B4045.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
132.00	432	143.10	1480	155.10	3466	166.00	1770
133.00	320	144.00	418	156.10	5389	167.10	13477
134.10	1391	145.10	280	157.10	1006	168.10	8553
135.10	4256	146.10	955	158.00	1146	169.10	1199
136.00	1823	147.10	3864	159.10	894	170.00	337
137.10	1945	148.10	6534	160.10	2013	171.00	506
138.10	683	149.00	1581	161.10	2703	172.00	999
139.00	198	150.00	487	162.00	926	173.00	1327
140.20	466	151.10	1111	163.00	229	174.10	2696
141.00	5736	153.00	1702	164.10	440	175.10	5703
142.00	1914	154.10	1415	165.00	2343	176.10	1523

Scan 167 (3.072 min): B4045.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.00	1827	188.10	1233	200.00	1508	211.00	2569
178.00	755	189.10	1810	200.80	263	212.00	443
179.00	9507	190.00	380	201.50	1298	215.10	602
180.00	7002	191.00	940	203.00	1791	216.10	1672
181.10	3203	192.00	3270	204.00	10153	217.00	16552
182.00	330	193.10	3441	205.10	17104	218.10	2312
183.00	206	194.10	787	206.10	68152	219.00	196
184.00	633	195.00	307	207.00	9175	221.10	14386
185.00	4503	196.10	7596	208.00	2330	223.00	4102
186.10	36048	198.00	282816	209.00	928	224.10	36160
187.10	11557	199.00	18992	210.30	1264	225.10	9322

Scan 167 (3.072 min): B4045.D

ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
226.10	1106	237.00	1475	248.10	170	260.10	313
227.00	13818	238.00	223	249.00	1160	260.90	230
228.00	2004	239.10	561	250.10	186	263.10	162
229.00	2760	240.10	419	250.90	287	263.90	471
230.00	536	241.00	772	252.00	324	265.00	3162
231.00	1492	242.10	2096	253.10	784	265.90	682
232.10	203	243.00	2288	255.00	151488	267.80	241
232.90	196	244.10	31736	256.00	22400	270.10	157
234.00	775	245.10	3742	257.00	1528	271.10	420
235.10	999	246.00	4788	258.00	7492	271.90	604
236.00	655	247.00	1157	259.00	1292	273.00	4085

Scan 167 (3.072 min): B4045.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
274.00	13151	289.00	213	303.00	2399	320.90	768
275.00	65944	290.10	349	304.00	438	322.00	417
276.00	8928	292.00	343	304.90	219	323.00	6148
277.00	5092	293.10	1272	307.90	276	324.10	1360
278.00	827	294.10	296	309.10	206	327.00	1160
279.00	219	294.90	442	310.00	414	328.00	487
281.00	324	296.00	17496	313.10	163	332.00	408
282.90	592	297.00	2802	314.00	996	333.10	526
284.10	454	297.90	201	314.90	2073	334.00	3816
285.10	814	301.00	495	316.10	1194	335.00	855
286.00	290	301.90	325	317.00	359	336.10	150

Scan 167 (3.072 min): B4045.D
ABN054-15,DFTPP,A,1000ml,100,1

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
341.10	799	365.00	7312	390.90	353	423.90	2781
341.90	220	366.00	1057	392.00	233	425.00	304
345.90	1408	366.90	228	401.00	176	437.30	170
347.00	288	370.10	209	401.90	1268	438.00	227
351.00	141	370.80	473	403.00	1787	438.60	342
352.00	1752	372.00	3324	403.90	725	439.30	487
353.00	1359	373.00	846	405.00	152	441.00	32816
354.00	1372	383.00	697	415.00	153	442.00	222592
355.00	427	383.90	237	421.00	1510	443.00	42392
359.00	159	384.90	222	422.00	1350	444.00	3710
363.70	184	390.00	529	423.00	10993	445.10	189

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA151110-05
Client ID: .
Date Received: NA
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5942.D
SIM Data file: A5922.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		1.00	0.235
Pyridine	ND		1.00	0.286
Benzaldehyde	ND		1.00	0.276
Phenol	ND		1.00	0.204
Aniline	ND		1.00	0.283
Bis(2-chloroethyl) ether	ND		1.00	0.373
2-Chlorophenol	ND		1.00	0.211
1,3-Dichlorobenzene	ND		1.00	0.293
1,4-Dichlorobenzene	ND		1.00	0.299
Benzyl alcohol	ND		1.00	0.208
1,2-Dichlorobenzene	ND		1.00	0.258
2-Methylphenol	ND		1.00	0.294
Bis(2-chloroisopropyl) ether	ND		1.00	0.253
4-Methylphenol **	ND		1.00	0.376
N-Nitrosodi-n-propylamine	ND		1.00	0.223
Acetophenone	ND		1.00	0.244
3-Methylphenol	ND		1.00	0.376
Hexachloroethane	ND		1.00	0.364
Nitrobenzene	ND		1.00	0.239
Isophorone	ND		1.00	0.233
2-Nitrophenol	ND		1.00	0.319
2,4-Dimethylphenol	ND		1.00	0.285
Bis(2-chloroethoxy) methane	ND		1.00	0.232
Benzoic acid	ND		1.00	0.330
2,4-Dimethylaniline	ND		1.00	0.234
2,4-Dichlorophenol	ND		1.00	0.253
1,2,4-Trichlorobenzene	ND		1.00	0.245
Naphthalene	ND		1.00	0.341
4-Chloroaniline	ND		1.00	0.337
4-Aminotoluene	ND		1.00	0.266
Hexachlorobutadiene	ND		1.00	0.229
Caprolactam	ND		1.00	0.366
2-Aminotoluene	ND		1.00	0.266
4-Chloro-3-methylphenol	ND		1.00	0.334
2-Methylnaphthalene	ND		1.00	0.224
Hexachlorocyclopentadiene	ND		1.00	0.362
2,4,6-Trichlorophenol	ND		1.00	0.261
2,4,5-Trichlorophenol	ND		1.00	0.306
1,1'-Biphenyl	ND		1.00	0.210
2-Chloronaphthalene	ND		1.00	0.256
2-Nitroaniline	ND		1.00	0.288
Dimethyl phthalate	ND		1.00	0.265

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA151110-05
Client ID: .
Date Received: NA
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5942.D
SIM Data file: A5922.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		1.00	0.235
Acenaphthylene	ND		1.00	0.246
3-Nitroaniline	ND		1.00	0.281
Acenaphthene	ND		1.00	0.251
2,4-Dinitrophenol	ND		10.0	0.413
4-Nitrophenol	ND		1.00	0.371
2,4-Dinitrotoluene	ND		1.00	0.263
Dibenzofuran	ND		1.00	0.298
Diethyl phthalate	ND		1.00	0.264
Fluorene	ND		1.00	0.203
4-Chlorophenyl phenyl ether	ND		1.00	0.297
4-Nitroaniline	ND		1.00	0.318
1,2,4,5-Tetrachlorobenzene	ND		1.00	0.226
2,3,4,6-Tetrachlorophenol	ND		1.00	0.275
4,6-Dinitro-2-methylphenol	ND		10.0	0.220
N-Nitrosodiphenylamine	ND		1.00	0.260
1,2-Diphenylhydrazine	ND		1.00	0.250
4-Bromophenyl phenyl ether	ND		1.00	0.248
Hexachlorobenzene *	ND		0.020	0.020
Atrazine	ND		1.00	0.259
Pentachlorophenol *	ND		0.100	0.100
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Carbazole	ND		1.00	0.248
Di-n-butyl phthalate	ND		1.00	0.262
Fluoranthene	ND		1.00	0.206
Benzidine	ND		1.00	0.267
Pyrene	ND		1.00	0.256
3,3'-Dimethylbenzidine	ND		10.0	0.320
Butyl benzyl phthalate	ND		1.00	0.391
3,3'-Dichlorobenzidine	ND		1.00	0.391
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Bis(2-ethylhexyl) phthalate	ND		1.00	0.429
Di-n-octyl phthalate	ND		1.00	0.399
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (83): 0

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve

* - RL & MDL from SIM run
** - represents the total of 3+4-Methylphenol
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA151110-05
Client ID: .
Date Received: NA
Date Extracted: 11/10/2015
Date Analyzed: 11/11/2015
Data file: A5942.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time

No peaks detected

Total TICs = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5942.D
Acq On : 11 Nov 2015 20:06
Operator : JC
Sample : .,BLKA151110-05,A,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 12 08:24:03 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.413	152	68569	40.00	UG	0.00
23) Naphthalene-d8	4.167	136	272236	40.00	UG	0.00
43) Acenaphthene-d10	5.183	164	156382	40.00	UG	0.00
66) Phenanthrene-d10	6.023	188	251578	40.00	UG	0.00
82) Chrysene-d12	7.606	240	213494	40.00	UG	-0.02
92) Perylene-d12	8.837	264	100160	40.00	UG	-0.03
System Monitoring Compounds						
4) 2-Fluorophenol	2.627	112	60951	37.82	UG	0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 37.82%			
6) Phenol-d5	3.178	99	50845m	26.05	UG	-0.01
Spiked Amount 100.000	Range 10 - 91		Recovery = 26.05%			
24) Nitrobenzene-d5	3.739	82	44608	26.05	UG	0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 52.10%			
47) 2-Fluorobiphenyl	4.777	172	112657	31.51	UG	0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 63.02%			
70) 2,4,6-Tribromophenol	5.627	330	25640	51.39	UG	0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 51.39%			
84) Terphenyl-d14	6.927	244	202848	47.20	UG	0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 94.40%			

Target Compounds	Qvalue

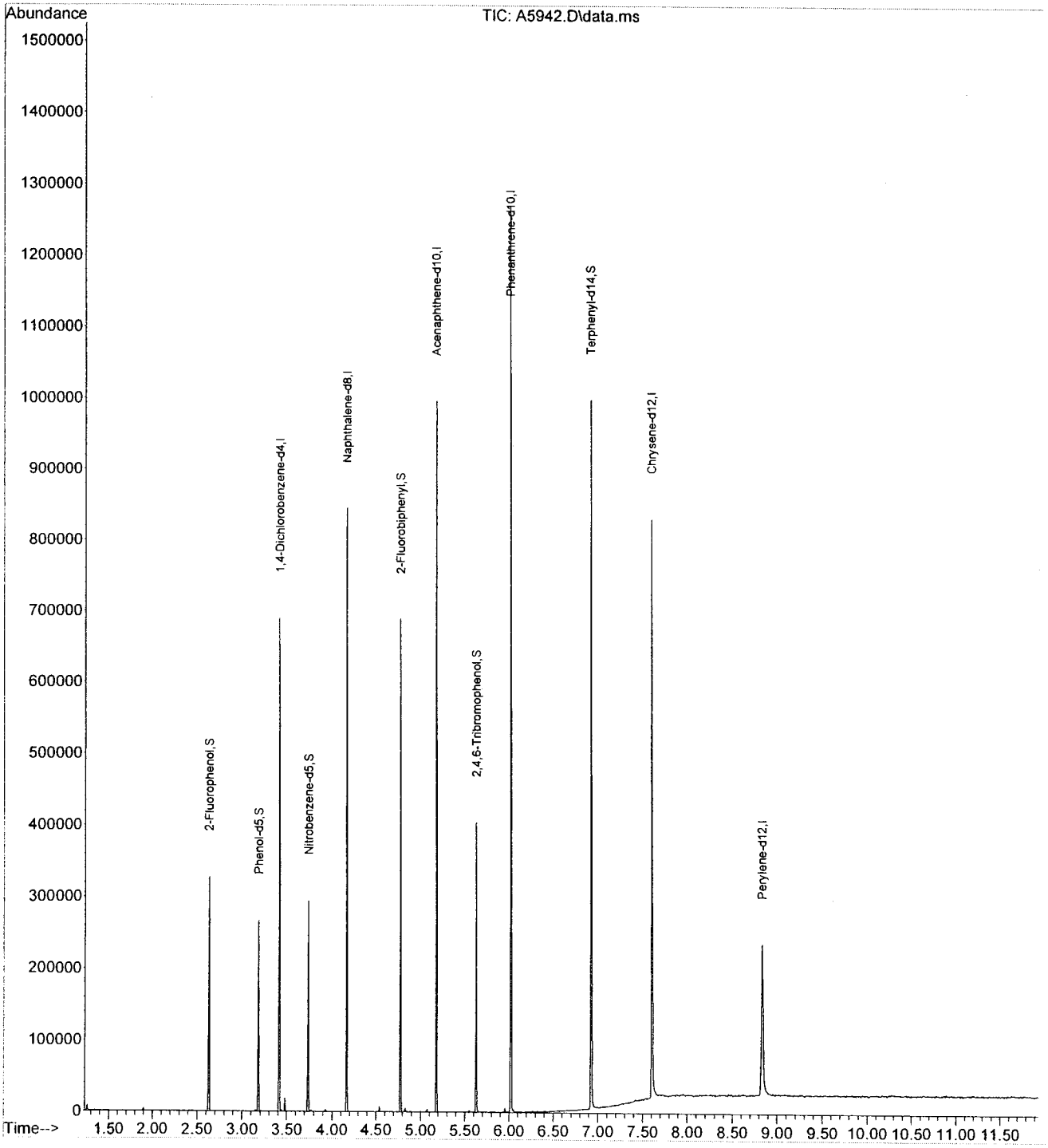
(#) = qualifier out of range (m) = manual integration (+) = signals summed

E15-10258 0624

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5942.D
Acq On : 11 Nov 2015 20:06
Operator : JC
Sample : .,BLKA151110-05,A,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 12 08:24:03 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



E15-10258 0625

Library Search Compound Report

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5942.D
Acq On : 11 Nov 2015 20:06
Operator : JC
Sample : .,BLKA151110-05,A,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\Database\NIST11a.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

AW1215.M Thu Nov 12 08:25:49 2015 MSD_A

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5922.D
Acq On : 11 Nov 2015 15:16
Operator : JC
Sample : .,BLKA151110-05,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 11 15:52:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.253	152	8306	1.00	UG	0.00
23) Naphthalene-d8	2.793	136	26493	1.00	UG	0.00
43) Acenaphthene-d10	3.575	164	13917	1.00	UG	0.00
66) Phenanthrene-d10	4.281	188	22605	1.00	UG	-0.02
82) Chrysene-d12	6.186	240	17162	1.00	UG	-0.01
92) Perylene-d12	7.521	264	14539	1.00	UG	-0.02

System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 83		Recovery = 0.00%#			
6) Phenol-d5	0.000	99	0	0.00	UG	
Spiked Amount 100.000	Range 10 - 91		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.000	82	0	0.00	UG	
Spiked Amount 50.000	Range 25 - 94		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.000	172	0	0.00	UG	
Spiked Amount 50.000	Range 23 - 102		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.000	330	0	0.00	UG	
Spiked Amount 100.000	Range 27 - 110		Recovery = 0.00%#			
84) Terphenyl-d14	0.000	244	0	0.00	UG	
Spiked Amount 50.000	Range 33 - 113		Recovery = 0.00%#			

Target Compounds	Qvalue

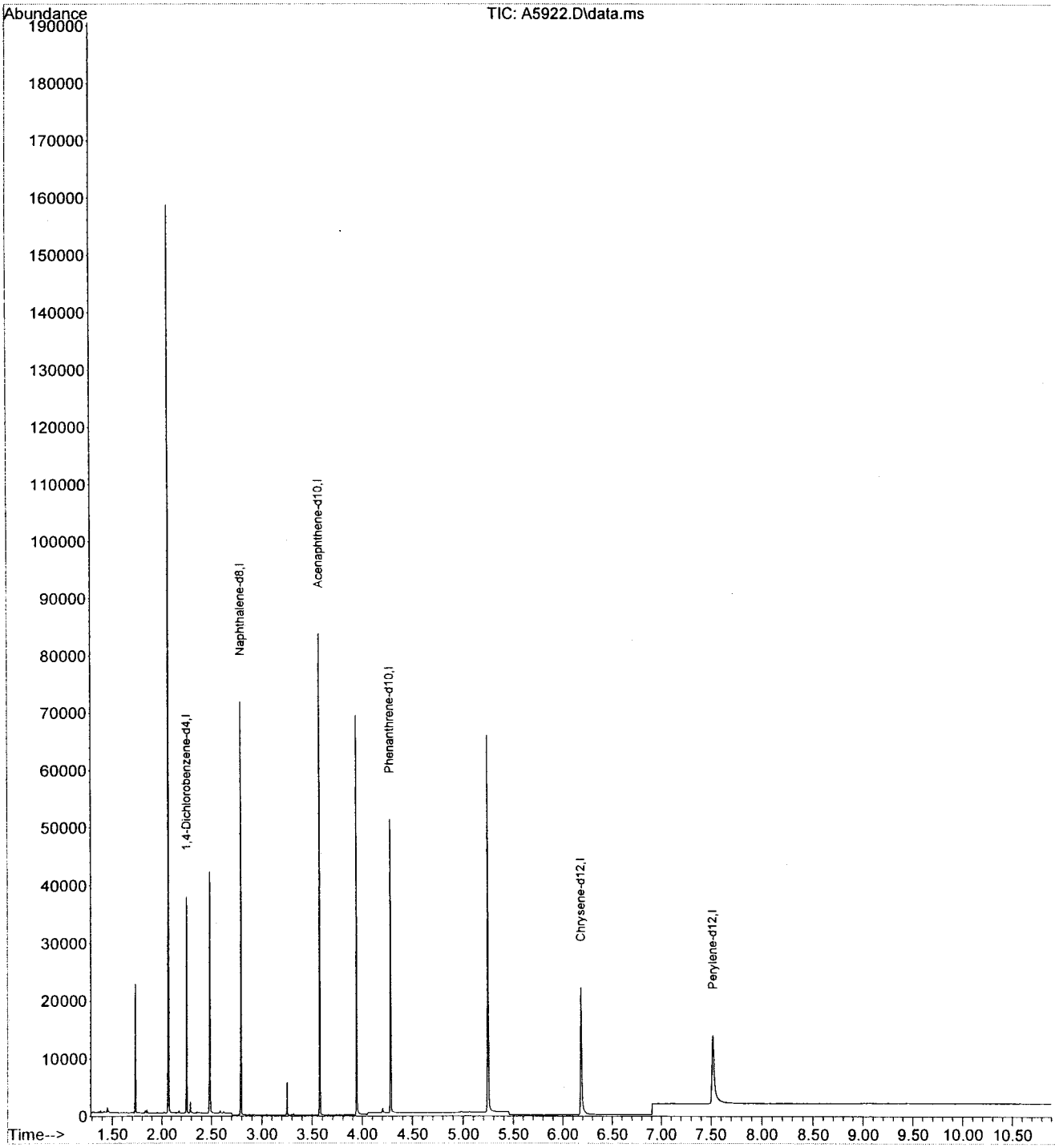
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Jean Clark E15-10258 0627

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5922.D
Acq On : 11 Nov 2015 15:16
Operator : JC
Sample : .,BLKA151110-05,Ia,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 11 15:52:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\ASIM1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 18:27:48 2015
Response via : Initial Calibration



15-10258 0628

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA151111-01
Client ID: .
Date Received: NA
Date Extracted: 11/11/2015
Date Analyzed: 11/11/2015
Data file: B4005.D
SIM Data file: B4003.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
N-Nitrosodimethylamine	ND		1.00	0.235
Pyridine	ND		1.00	0.286
Benzaldehyde	ND		1.00	0.276
Phenol	ND		1.00	0.204
Aniline	ND		1.00	0.283
Bis(2-chloroethyl) ether	ND		1.00	0.373
2-Chlorophenol	ND		1.00	0.211
1,3-Dichlorobenzene	ND		1.00	0.293
1,4-Dichlorobenzene	ND		1.00	0.299
Benzyl alcohol	ND		1.00	0.208
1,2-Dichlorobenzene	ND		1.00	0.258
2-Methylphenol	ND		1.00	0.294
Bis(2-chloroisopropyl) ether	ND		1.00	0.253
4-Methylphenol **	ND		1.00	0.376
N-Nitrosodi-n-propylamine	ND		1.00	0.223
Acetophenone	ND		1.00	0.244
3-Methylphenol	ND		1.00	0.376
Hexachloroethane	ND		1.00	0.364
Nitrobenzene	ND		1.00	0.239
Isophorone	ND		1.00	0.233
2-Nitrophenol	ND		1.00	0.319
2,4-Dimethylphenol	ND		1.00	0.285
Bis(2-chloroethoxy) methane	ND		1.00	0.232
Benzoic acid	ND		10.0	0.330
2,4-Dimethylaniline	ND		1.00	0.234
2,4-Dichlorophenol	ND		1.00	0.253
1,2,4-Trichlorobenzene	ND		1.00	0.245
Naphthalene	ND		1.00	0.341
4-Chloroaniline	ND		1.00	0.337
4-Aminotoluene	ND		1.00	0.266
Hexachlorobutadiene	ND		1.00	0.229
Caprolactam	ND		1.00	0.366
2-Aminotoluene	ND		1.00	0.266
4-Chloro-3-methylphenol	ND		1.00	0.334
2-Methylnaphthalene	ND		1.00	0.224
Hexachlorocyclopentadiene	ND		10.0	0.362
2,4,6-Trichlorophenol	ND		1.00	0.261
2,4,5-Trichlorophenol	ND		1.00	0.306
1,1'-Biphenyl	ND		1.00	0.210
2-Chloronaphthalene	ND		1.00	0.256
2-Nitroaniline	ND		1.00	0.288
Dimethyl phthalate	ND		1.00	0.265

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Lab ID: BLKA151111-01
Client ID: .
Date Received: NA
Date Extracted: 11/11/2015
Date Analyzed: 11/11/2015
Data file: B4005.D
SIM Data file: B4003.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	RL	MDL
2,6-Dinitrotoluene	ND		1.00	0.235
Acenaphthylene	ND		1.00	0.246
3-Nitroaniline	ND		1.00	0.281
Acenaphthene	ND		1.00	0.251
2,4-Dinitrophenol	ND		10.0	0.413
4-Nitrophenol	ND		10.0	0.371
2,4-Dinitrotoluene	ND		1.00	0.263
Dibenzofuran	ND		1.00	0.298
Diethyl phthalate	ND		1.00	0.264
Fluorene	ND		1.00	0.203
4-Chlorophenyl phenyl ether	ND		1.00	0.297
4-Nitroaniline	ND		1.00	0.318
1,2,4,5-Tetrachlorobenzene	ND		2.00	0.226
2,3,4,6-Tetrachlorophenol	ND		1.00	0.275
4,6-Dinitro-2-methylphenol	ND		10.0	0.220
N-Nitrosodiphenylamine	ND		1.00	0.260
1,2-Diphenylhydrazine	ND		1.00	0.250
4-Bromophenyl phenyl ether	ND		1.00	0.248
Hexachlorobenzene *	ND		0.020	0.020
Atrazine	ND		1.00	0.259
Pentachlorophenol *	ND		0.100	0.100
Phenanthrene	ND		1.00	0.225
Anthracene	ND		1.00	0.258
Carbazole	ND		1.00	0.248
Di-n-butyl phthalate	ND		1.00	0.262
Fluoranthene	ND		1.00	0.206
Benzidine	ND		10.0	0.267
Pyrene	ND		1.00	0.256
3,3'-Dimethylbenzidine	ND		1.00	0.320
Butyl benzyl phthalate	ND		1.00	0.391
3,3'-Dichlorobenzidine	ND		1.00	0.391
Benzo[a]anthracene *	ND		0.100	0.100
Chrysene	ND		1.00	0.320
Bis(2-ethylhexyl) phthalate	ND		1.00	0.429
Di-n-octyl phthalate	ND		1.00	0.399
Benzo[b]fluoranthene *	ND		0.100	0.100
Benzo[k]fluoranthene *	ND		0.100	0.100
Benzo[a]pyrene *	ND		0.100	0.100
Indeno[1,2,3-cd]pyrene *	ND		0.100	0.100
Dibenz[a,h]anthracene *	ND		0.100	0.100
Benzo[g,h,i]perylene	ND		1.00	0.325

Total Target Compounds (83): 0

* - RL & MDL from SIM run
** - represents the total of 3- & 4-Methylphenol

D --- Dilution Performed
J --- Value Less than RL & greater than MDL
E --- Exceeds upper level of Calibration curve
B --- Compound detected in Blank
C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Lab ID: BLKA151111-01
Client ID: .
Date Received: NA
Date Extracted: 11/11/2015
Date Analyzed: 11/11/2015
Date File: B4005.D

GC/MS Column: DB-5
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Q	Retention Time
	No peaks detected			

Total TICs = 0

D --- Dilution Performed
J --- Estimated concentration for TICs
N --- Presumptive evidence of a compound from the use of GC/MS NIST library search
B --- Compound detected in Blank

Quantitation Report (QT Reviewed)

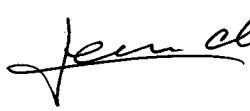
Data Path : C:\MSDCHEM\1\DATA\11-11-15\
Data File : B4005.D
Acq On : 11 Nov 2015 11:07
Operator : KIM
Sample : .,BLKA151111-01,A,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 11 12:51:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	76854	40.00	UG	0.00
23) Naphthalene-d8	4.33	136	292117	40.00	UG	-0.01
43) Acenaphthene-d10	5.35	164	171605	40.00	UG	-0.02
66) Phenanthrene-d10	6.27	188	276109	40.00	UG	-0.03
82) Chrysene-d12	7.83	240	233586	40.00	UG	-0.07
92) Perylene-d12	9.02	264	181405	40.00	UG	-0.12
System Monitoring Compounds						
4) 2-Fluorophenol	2.73	112	115357	61.11	UG	0.00
Spiked Amount 100.000	Range 10 - 100		Recovery = 61.11%			
6) Phenol-d5	3.34	99	148424	62.58	UG	0.00
Spiked Amount 100.000	Range 10 - 102		Recovery = 62.58%			
24) Nitrobenzene-d5	3.91	82	56949	32.12	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 64.24%			
47) 2-Fluorobiphenyl	4.95	172	165819	38.41	UG	-0.01
Spiked Amount 50.000	Range 26 - 101		Recovery = 76.82%			
70) 2,4,6-Tribromophenol	5.88	330	60471	62.89	UG	-0.02
Spiked Amount 100.000	Range 22 - 115		Recovery = 62.89%			
84) Terphenyl-d14	7.15	244	238280	46.31	UG	-0.05
Spiked Amount 50.000	Range 23 - 124		Recovery = 92.62%			

Target Compounds	Qvalue

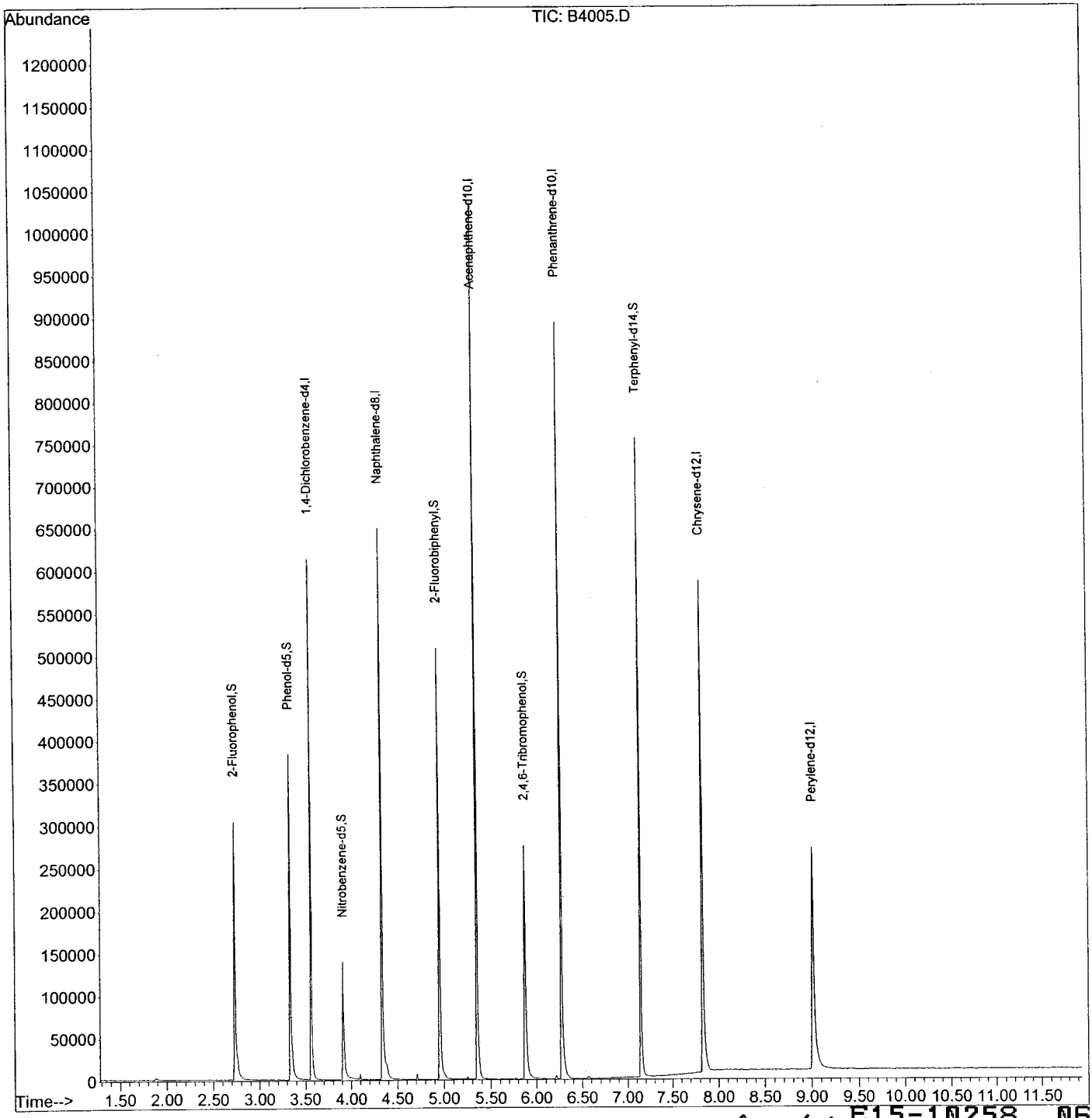
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-11-15\
Data File : B4005.D
Acq On : 11 Nov 2015 11:07
Operator : KIM
Sample : .,BLKA151111-01,A,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 11 12:51:18 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



E15-10258 0633

Library Search Compound Report

Data Path : C:\MSDCHEM\1\DATA\11-11-15\
Data File : B4005.D
Acq On : 11 Nov 2015 11:07
Operator : KIM
Sample : .,BLKA151111-01,A,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD

TIC Library : C:\DATABASE\NIST05A.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

****

BW1115.M Wed Nov 11 16:53:19 2015 MSD_B

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-11-15\
Data File : B4003.D
Acq On : 11 Nov 2015 10:35
Operator : KIM
Sample : .,BLKA151111-01,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 11 12:50:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	2.16	152	26648	1.00	UG	0.00
23) Naphthalene-d8	2.70	136	78719m	1.00	UG	0.00
43) Acenaphthene-d10	3.48	164	44264m	1.00	UG	-0.01
66) Phenanthrene-d10	4.21	188	70364m	1.00	UG	-0.03
82) Chrysene-d12	5.93	240	51691m	1.00	UG	-0.07
92) Perylene-d12	7.19	264	53239m	1.00	UG	-0.08

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
24) Nitrobenzene-d5	0.00	82	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
47) 2-Fluorobiphenyl	0.00	172	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			
70) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 1.000	Range 40 - 140		Recovery = 0.00%#			
84) Terphenyl-d14	0.00	244	0	0.00	UG	
Spiked Amount 0.500	Range 40 - 140		Recovery = 0.00%#			

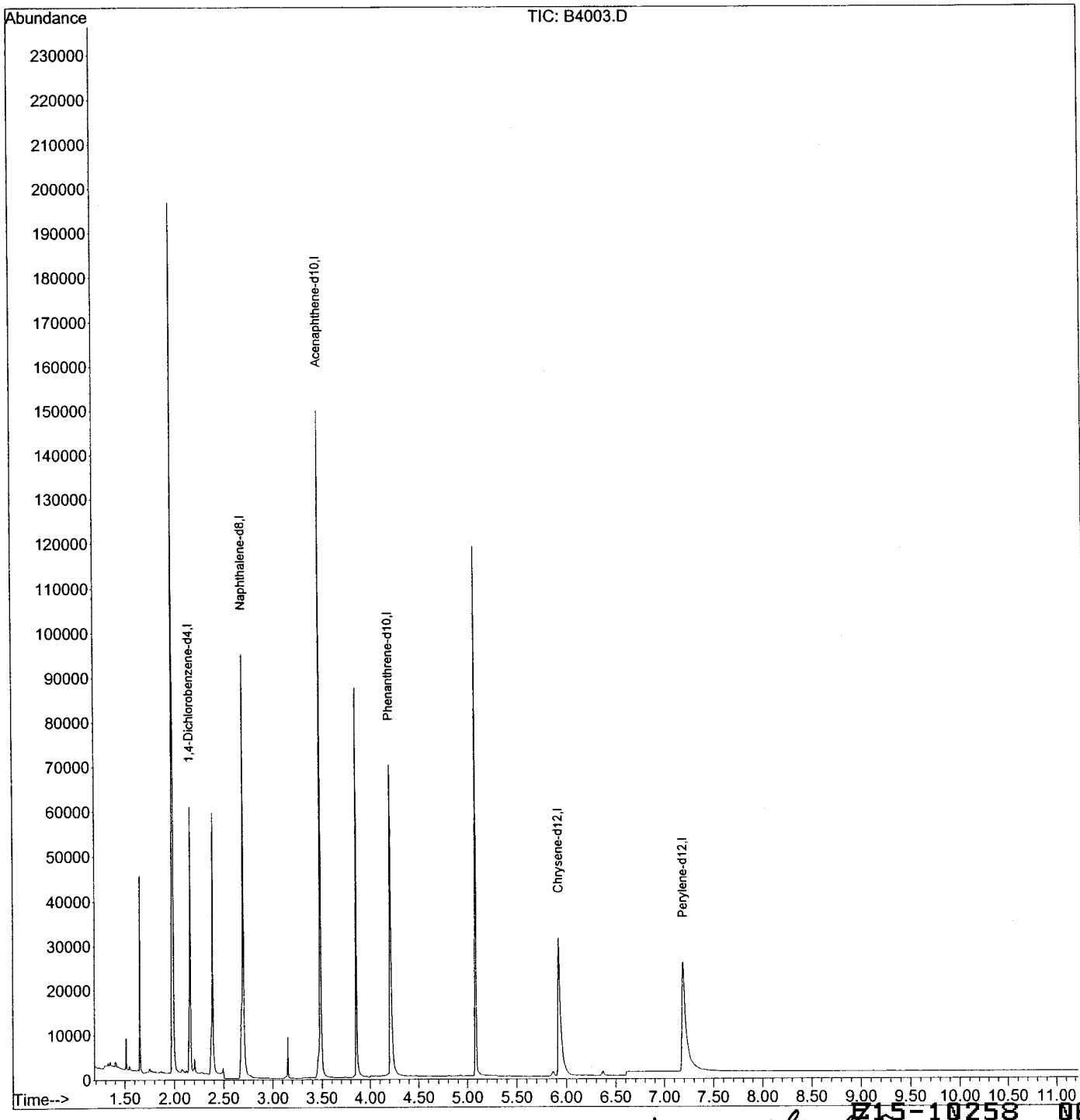
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\11-11-15\
Data File : B4003.D
Acq On : 11 Nov 2015 10:35
Operator : KIM
Sample : .,BLKA151111-01,Ia,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 11 12:50:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\BSIM1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 22 13:10:33 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5943.D
Acq On : 11 Nov 2015 20:22
Operator : JC
Sample : .,LCSA151110-05,A,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 12 08:58:37 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	60401	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	238163	40.00	UG		0.00
43) Acenaphthene-d10	5.184	164	138530	40.00	UG		0.00
66) Phenanthrene-d10	6.023	188	224728	40.00	UG		0.00
82) Chrysene-d12	7.612	240	189526	40.00	UG		-0.02
92) Perylene-d12	8.842	264	109176m	40.00	UG		-0.02
System Monitoring Compounds							
4) 2-Fluorophenol	2.632	112	66991	47.19	UG		0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 47.19%				
6) Phenol-d5	3.183	99	71605	41.64	UG		0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 41.64%				
24) Nitrobenzene-d5	3.739	82	43980	29.35	UG		0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 58.70%				
47) 2-Fluorobiphenyl	4.777	172	113286	35.77	UG		0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 71.54%				
70) 2,4,6-Tribromophenol	5.633	330	37329	83.76	UG		0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 83.76%				
84) Terphenyl-d14	6.927	244	183372	48.06	UG		0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 96.12%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.616	74	11807	13.27	UG		95
3) Pyridine	1.675	52	11581	10.33	UG		98
5) Benzaldehyde	3.146	106	3931	3.18	UG		98
7) Phenol	3.188	94	20093	10.34	UG		95
8) Aniline	3.221	66	13375	15.73	UG		98
9) Bis(2-chloroethyl) ether	3.247	63	17463	15.78	UG		96
10) 2-Chlorophenol	3.306	128	21261	13.95	UG		95
11) 1,3-Dichlorobenzene	3.397	146	28111	16.12	UG		100
12) 1,4-Dichlorobenzene	3.424	146	28560	17.55	UG		97
13) Benzyl alcohol	3.483	108	16388	16.57	UG		97
14) 1,2-Dichlorobenzene	3.536	146	27760	17.52	UG		98
15) 2-Methylphenol	3.547	108	19774	15.33	UG		98
16) Bis(2-chloroisopropyl)...	3.579	45	35993	15.02	UG		97
17) 4-Methylphenol	3.627	108	20963	15.18	UG		98
18) N-Nitrosodi-n-propylamine	3.654	70	19147	16.84	UG		95
19) Acetophenone	3.648	105	36970	18.36	UG		79
20) 3-Methylphenol	3.627	108	20963	15.18	UG		98
21) Hexachloroethane	3.729	117	9591	16.32	UG		89
25) Nitrobenzene	3.750	77	26012	16.68	UG		99
26) Isophorone	3.889	82	48284	17.06	UG		99
27) 2-Nitrophenol	3.943	139	10456	14.14	UG		92
28) 2,4-Dimethylphenol	3.943	107	22423	16.18	UG		95
29) Bis(2-chloroethoxy) me...	3.996	93	30567	18.24	UG		97
30) Benzoic acid	3.943	122	7781m	12.35	UG		
31) 2,4-Dimethylaniline	4.055	121	21646	12.52	UG		100
32) 2,4-Dichlorophenol	4.076	162	19653	17.05	UG		99
33) 1,2,4-Trichlorobenzene	4.135	180	23218	17.99	UG		98
34) Naphthalene	4.178	128	82368	19.74	UG	#	73
35) 4-Chloroaniline	4.189	127	39717	18.09	UG		93
36) 4-Aminotoluene	3.670	106	32897	12.07	UG		98
37) Hexachlorobutadiene	4.280	225	12631	17.26	UG		99
38) Caprolactam	4.354	55	8296m	13.66	UG		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5943.D
Acq On : 11 Nov 2015 20:22
Operator : JC
Sample : .,LCSA151110-05,A,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 12 08:58:37 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

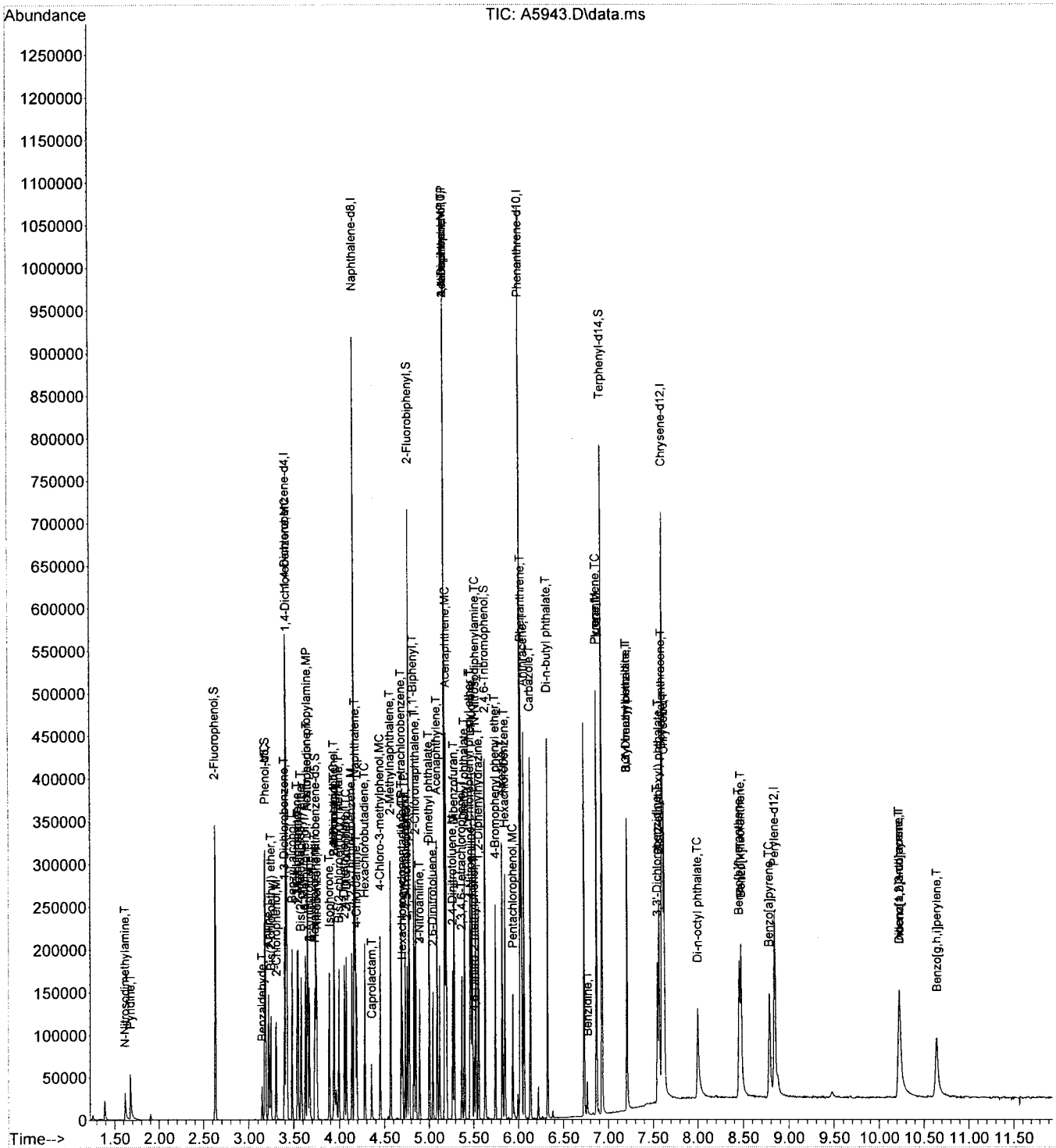
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) 2-Aminotoluene	3.670	106	32897	12.07	UG	98
40) 4-Chloro-3-methylphenol	4.451	107	20818	17.39	UG	93
41) 2-Methylnaphthalene	4.568	142	50980	18.76	UG	98
44) Hexachlorocyclopentadiene	4.702	237	9280	11.87	UG	97
45) 2,4,6-Trichlorophenol	4.734	196	13729	16.53	UG	98
46) 2,4,5-Trichlorophenol	4.756	196	15226	17.83	UG	99
48) 1,1'-Biphenyl	4.831	154	68697	19.14	UG	99
49) 2-Chloronaphthalene	4.852	162	50256	18.86	UG	99
50) 2-Nitroaniline	4.895	65	12545	18.42	UG	94
51) Dimethyl phthalate	5.002	163	62849	20.69	UG	99
52) 2,6-Dinitrotoluene	5.044	165	10898	19.24	UG	96
53) Acenaphthylene	5.093	152	78947	19.09	UG	98
54) 3-Nitroaniline	4.895	138	14258	18.50	UG	99
55) Acenaphthene	5.200	153	56323	21.22	UG	100
56) 2,4-Dinitrophenol	5.184	184	4003	16.56	UG	90
57) 4-Nitrophenol	5.189	139	7699	12.95	UG	100
58) 2,4-Dinitrotoluene	5.269	165	17008	24.14	UG	73
59) Dibenzofuran	5.285	168	77397	21.51	UG	99
60) Diethyl phthalate	5.403	149	71826	24.40	UG	100
61) Fluorene	5.483	166	65100	22.71	UG	97
62) 4-Chlorophenyl phenyl ...	5.462	204	30326	20.26	UG	93
63) 4-Nitroaniline	5.472	138	16510	23.82	UG	97
64) 1,2,4,5-Tetrachloroben...	4.691	216	27014	21.06	UG	99
65) 2,3,4,6-Tetrachlorophenol	5.371	232	12219	19.54	UG	83
67) 4,6-Dinitro-2-methylph...	5.510	198	7138	19.36	UG	89
68) N-Nitrosodiphenylamine	5.526	169	54435	25.12	UG	98
69) 1,2-Diphenylhydrazine	5.553	77	67327	22.33	UG	97
71) 4-Bromophenyl phenyl e...	5.745	248	18611	21.92	UG	93
72) Hexachlorobenzene	5.852	284	23111	24.65	UG	92
73) Atrazine	5.820	200	20604	25.85	UG	92
74) Pentachlorophenol	5.938	266	10903	21.25	UG	99
75) Phenanthrene	6.034	178	103365	25.38	UG	99
76) Anthracene	6.061	178	101484	25.36	UG	100
77) Carbazole	6.130	167	104858	27.50	UG	99
78) Di-n-butyl phthalate	6.323	149	128956	26.46	UG	100
79) Fluoranthene	6.868	202	118568	28.67	UG	90
80) Benzidine	6.767	184	14801	6.12	UG	87
83) Pyrene	6.868	202	118568	25.73	UG	96
85) 3,3'-Dimethylbenzidine	7.205	212	21393m	6.67	UG	
86) Butyl benzyl phthalate	7.205	149	49973	23.21	UG	98
87) 3,3'-Dichlorobenzidine	7.548	252	29533	22.55	UG	95
88) Benzo[a]anthracene	7.596	228	95003	24.34	UG	99
89) Chrysene	7.628	228	89770	22.74	UG	97
90) Bis(2-ethylhexyl) phth...	7.569	149	62772	21.68	UG	97
93) Di-n-octyl phthalate	7.997	149	76337	28.97	UG	99
94) Benzo[b]fluoranthene	8.457	252	59813m	29.76	UG	
95) Benzo[k]fluoranthene	8.478	252	72247m	32.16	UG	
96) Benzo[a]pyrene	8.783	252	56539m	28.25	UG	
97) Indeno[1,2,3-cd]pyrene	10.227	276	69790m	32.41	UG	
98) Dibenz[a,h]anthracene	10.227	278	55005m	31.83	UG	
99) Benzo[g,h,i]perylene	10.644	276	62800m	31.95	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5943.D
Acq On : 11 Nov 2015 20:22
Operator : JC
Sample : .,LCSA151110-05,A,1000ml,100,1
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Nov 12 08:58:37 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4006.D
Acq On : 11 Nov 2015 11:24
Operator : KIM
Sample : .,LCSA151111-01,A,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 12 09:12:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	82473	40.00	UG	0.00
23) Naphthalene-d8	4.33	136	308726	40.00	UG	-0.01
43) Acenaphthene-d10	5.36	164	190127	40.00	UG	-0.01
66) Phenanthrene-d10	6.29	188	303004	40.00	UG	0.00
82) Chrysene-d12	7.95	240	267495	40.00	UG	0.05
92) Perylene-d12	9.16	264	187543	40.00	UG	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	2.73	112	102360	50.53	UG	-0.01
Spiked Amount 100.000	Range 10 - 100		Recovery = 50.53%			
6) Phenol-d5	3.33	99	125411	49.27	UG	-0.01
Spiked Amount 100.000	Range 10 - 102		Recovery = 49.27%			
24) Nitrobenzene-d5	3.90	82	59316	31.66	UG	0.00
Spiked Amount 50.000	Range 27 - 102		Recovery = 63.32%			
47) 2-Fluorobiphenyl	4.95	172	168830	35.30	UG	-0.01
Spiked Amount 50.000	Range 26 - 101		Recovery = 70.60%			
70) 2,4,6-Tribromophenol	5.88	330	87933	83.33	UG	-0.02
Spiked Amount 100.000	Range 22 - 115		Recovery = 83.33%			
84) Terphenyl-d14	7.21	244	263426	44.71	UG	0.02
Spiked Amount 50.000	Range 23 - 124		Recovery = 89.42%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.57	74	18902	15.11	UG	62
3) Pyridine	1.62	52	16934	11.05	UG	78
5) Benzaldehyde	3.29	106	6336	4.61	UG	# 100
7) Phenol	3.34	94	34763	13.17	UG	75
8) Aniline	3.36	66	17818	15.84	UG	81
9) Bis(2-chloroethyl) ether	3.39	63	22911	16.34	UG	81
10) 2-Chlorophenol	3.45	128	35046	15.67	UG	93
11) 1,3-Dichlorobenzene	3.54	146	47760	18.66	UG	94
12) 1,4-Dichlorobenzene	3.57	146	49418	18.84	UG	96
13) Benzyl alcohol	3.64	108	26506	20.35	UG	82
14) 1,2-Dichlorobenzene	3.69	146	46756	19.29	UG	92
15) 2-Methylphenol	3.72	108	31017	15.32	UG	99
16) Bis(2-chloroisopropyl) eth	3.74	45	38480	15.14	UG	92
17) 4-Methylphenol	3.80	108	30616	15.41	UG	100
18) N-Nitrosodi-n-propylamine	3.82	70	24369	17.05	UG	88
19) Acetophenone	3.81	105	53512	19.42	UG	94
20) 3-Methylphenol	3.80	108	30616	15.41	UG	99
21) Hexachloroethane	3.88	117	16045	18.23	UG	99
25) Nitrobenzene	3.91	77	35233	18.52	UG	89
26) Isophorone	4.05	82	62930	16.74	UG	96
27) 2-Nitrophenol	4.11	139	18536	18.51	UG	80

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4006.D
Acq On : 11 Nov 2015 11:24
Operator : KIM
Sample : .,LCSA151111-01,A,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 12 09:12:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
28) 2,4-Dimethylphenol	4.12	107	31875	18.22	UG		92
29) Bis(2-chloroethoxy) methan	4.16	93	44593	19.79	UG		99
30) Benzoic acid	4.19	105	12958	15.43	UG		89
31) 2,4-Dimethylaniline	4.23	121	43063	17.09	UG	#	100
32) 2,4-Dichlorophenol	4.26	162	31911	19.25	UG		98
33) 1,2,4-Trichlorobenzene	4.30	180	41451	20.43	UG		99
34) Naphthalene	4.35	128	124325	20.60	UG	#	99
35) 4-Chloroaniline	4.37	127	47368	18.06	UG		98
36) 4-Aminotoluene	3.83	106	61220	17.75	UG		98
37) Hexachlorobutadiene	4.45	225	23148	21.11	UG		100
38) Caprolactam	4.55	55	12285	16.62	UG		82
39) 2-Aminotoluene	3.83	106	61220	17.75	UG		98
40) 4-Chloro-3-methylphenol	4.64	107	28226	18.58	UG		94
41) 2-Methylnaphthalene	4.75	142	85359	22.07	UG		99
44) Hexachlorocyclopentadiene	4.88	237	17106	20.84	UG		99
45) 2,4,6-Trichlorophenol	4.92	196	23160	18.36	UG		99
46) 2,4,5-Trichlorophenol	4.94	196	26957	19.21	UG		97
48) 1,1'-Biphenyl	5.01	154	113053	21.80	UG		99
49) 2-Chloronaphthalene	5.02	162	84412	21.26	UG		98
50) 2-Nitroaniline	5.08	65	17066	19.58	UG		76
51) Dimethyl phthalate	5.18	163	96482	21.80	UG		99
52) 2,6-Dinitrotoluene	5.23	165	21282	24.29	UG		86
53) Acenaphthylene	5.27	152	136664	21.91	UG		100
54) 3-Nitroaniline	5.31	138	23270	22.43	UG		89
55) Acenaphthene	5.37	153	87385	22.05	UG		99
56) 2,4-Dinitrophenol	5.38	184	6949	18.90	UG		7
57) 4-Nitrophenol	5.40	65	6786	11.23	UG		73
58) 2,4-Dinitrotoluene	5.46	165	30086	26.95	UG		94
59) Dibenzofuran	5.46	168	123125	20.10	UG		95
60) Diethyl phthalate	5.60	149	101114	23.80	UG		98
61) Fluorene	5.70	166	103941	21.94	UG		100
62) 4-Chlorophenyl phenyl ethe	5.68	204	53059	22.14	UG		96
63) 4-Nitroaniline	5.71	138	25422	22.87	UG		76
64) 1,2,4,5-Tetrachlorobenzene	4.86	216	48292	22.81	UG		99
65) 2,3,4,6-Tetrachlorophenol	5.57	232	23665	19.26	UG		99
67) 4,6-Dinitro-2-methylphenol	5.75	198	12484	20.25	UG		79
68) N-Nitrosodiphenylamine	5.76	169	86014	27.23	UG		99
69) 1,2-Diphenylhydrazine	5.79	77	81302	19.50	UG		84
71) 4-Bromophenyl phenyl ether	6.01	248	36379	24.90	UG		97
72) Hexachlorobenzene	6.13	284	46863	26.12	UG		98
73) Atrazine	6.10	200	30035	25.80	UG		97
74) Pentachlorophenol	6.22	266	18158	21.38	UG		98
75) Phenanthrene	6.31	178	152843	25.01	UG		100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4006.D
Acq On : 11 Nov 2015 11:24
Operator : KIM
Sample : .,LCSA151111-01,A,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 12 09:12:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

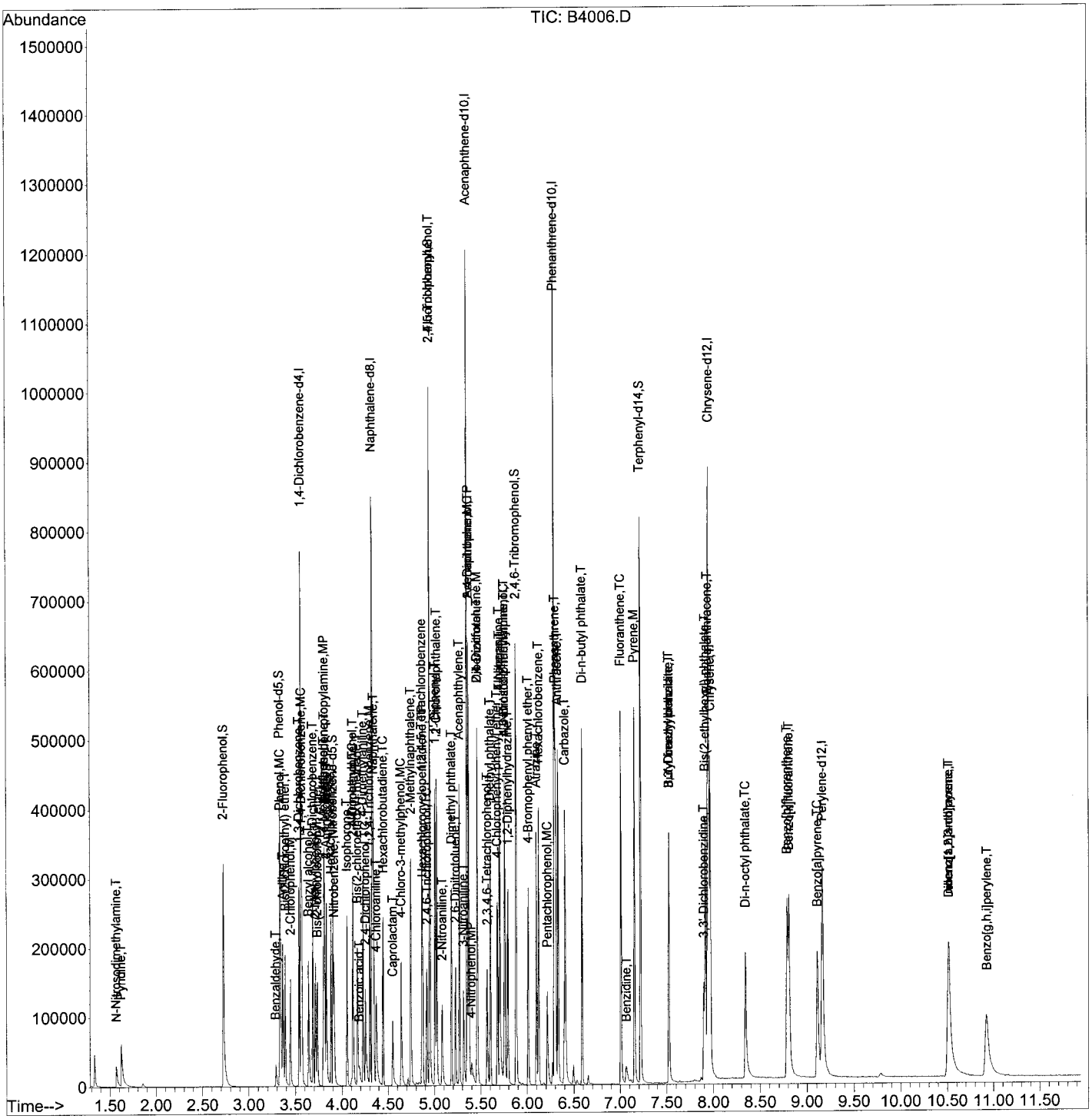
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
76) Anthracene	6.33	178	159658	26.57	UG		99
77) Carbazole	6.40	167	151555	27.77	UG		99
78) Di-n-butyl phthalate	6.59	149	175494	27.79	UG		99
79) Fluoranthene	7.01	202	165788	26.23	UG		95
80) Benzidine	7.07	184	20354	5.41	UG	#	100
83) Pyrene	7.15	202	169881	25.57	UG		96
85) 3,3'-Dimethylbenzidine	7.52	212	28861	7.23	UG	#	100
86) Butyl benzyl phthalate	7.52	149	63259	25.41	UG		94
87) 3,3'-Dichlorobenzidine	7.90	252	49572	23.69	UG		98
88) Benzo[a]anthracene	7.94	228	145545	23.57	UG		99
89) Chrysene	7.97	228	137298	24.05	UG		100
90) Bis(2-ethylhexyl) phthalat	7.91	149	86162	25.58	UG		99
93) Di-n-octyl phthalate	8.34	149	121985	32.68	UG		100
94) Benzo[b]fluoranthene	8.79	252	122797	29.07	UG		97
95) Benzo[k]fluoranthene	8.81	252	136777	32.47	UG		98
96) Benzo[a]pyrene	9.11	252	123712	32.41	UG		98
97) Indeno[1,2,3-cd]pyrene	10.52	276	147833	32.92	UG		94
98) Dibenz[a,h]anthracene	10.51	278	120782	32.73	UG		97
99) Benzo[g,h,i]perylene	10.92	276	126381	33.73	UG		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4006.D
Acq On : 11 Nov 2015 11:24
Operator : KIM
Sample : .,LCSA151111-01,A,1000ml,100,1
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 12 09:12:12 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5944.D
Acq On : 11 Nov 2015 20:38
Operator : JC
Sample : .,E15-10210-001MS,A,500ml,100,0.5
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 12 09:27:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	47867	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	243708	40.00	UG		0.00
43) Acenaphthene-d10	5.178	164	134994m	40.00	UG		0.00
66) Phenanthrene-d10	6.023	188	224928	40.00	UG		0.00
82) Chrysene-d12	7.601	240	183303	40.00	UG		-0.03
92) Perylene-d12	8.837	264	121326m	40.00	UG		-0.03
System Monitoring Compounds							
4) 2-Fluorophenol	2.632	112	83760	74.45	UG		0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 74.45%				
6) Phenol-d5	3.183	99	90067	66.09	UG		0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 66.09%				
24) Nitrobenzene-d5	3.739	82	58476	38.14	UG		0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 76.28%				
47) 2-Fluorobiphenyl	4.777	172	137402	44.52	UG		0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 89.04%				
70) 2,4,6-Tribromophenol	5.627	330	39774	89.16	UG		0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 89.16%				
84) Terphenyl-d14	6.927	244	178286	48.32	UG		0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 96.64%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.616	74	18642	26.44	UG		99
3) Pyridine	1.675	52	20955	23.59	UG		96
5) Benzaldehyde	3.146	106	25427m	25.97	UG		
7) Phenol	3.188	94	34858	22.63	UG		89
8) Aniline	3.221	66	20787m	30.84	UG		
9) Bis(2-chloroethyl) ether	3.247	63	28089	32.03	UG		96
10) 2-Chlorophenol	3.306	128	34898	28.89	UG		95
11) 1,3-Dichlorobenzene	3.397	146	42886	31.02	UG		97
12) 1,4-Dichlorobenzene	3.424	146	45754	35.49	UG		98
13) Benzyl alcohol	3.483	108	26502	33.82	UG		96
14) 1,2-Dichlorobenzene	3.536	146	43380	34.55	UG		99
15) 2-Methylphenol	3.547	108	30747	30.08	UG		98
16) Bis(2-chloroisopropyl)...	3.579	45	57090	30.05	UG		98
17) 4-Methylphenol	3.627	108	32436	29.65	UG		97
18) N-Nitrosodi-n-propylamine	3.654	70	29905	33.20	UG		95
19) Acetophenone	3.648	105	58624	36.73	UG		77
20) 3-Methylphenol	3.627	108	32436	29.64	UG		97
21) Hexachloroethane	3.729	117	15722	33.75	UG		91
25) Nitrobenzene	3.750	77	43244	27.10	UG		99
26) Isophorone	3.889	82	75814	26.17	UG		98
27) 2-Nitrophenol	3.943	139	18950	25.05	UG		97
28) 2,4-Dimethylphenol	3.943	107	23605	16.64	UG		95
29) Bis(2-chloroethoxy) me...	3.996	93	47241	27.55	UG		98
30) Benzoic acid	3.969	122	14279	22.15	UG	#	61
31) 2,4-Dimethylaniline	4.055	121	36566	20.67	UG		95
32) 2,4-Dichlorophenol	4.076	162	31826	26.98	UG		99
33) 1,2,4-Trichlorobenzene	4.135	180	37004	28.02	UG		95
34) Naphthalene	4.178	128	130199	30.49	UG	#	73
35) 4-Chloroaniline	4.189	127	65967	29.37	UG		93
36) 4-Aminotoluene	3.670	106	59399	21.30	UG		96
37) Hexachlorobutadiene	4.280	225	21193	28.30	UG		97
38) Caprolactam	4.360	55	12755	20.53	UG		86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5944.D
Acq On : 11 Nov 2015 20:38
Operator : JC
Sample : .,E15-10210-001MS,A,500ml,100,0.5
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 12 09:27:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

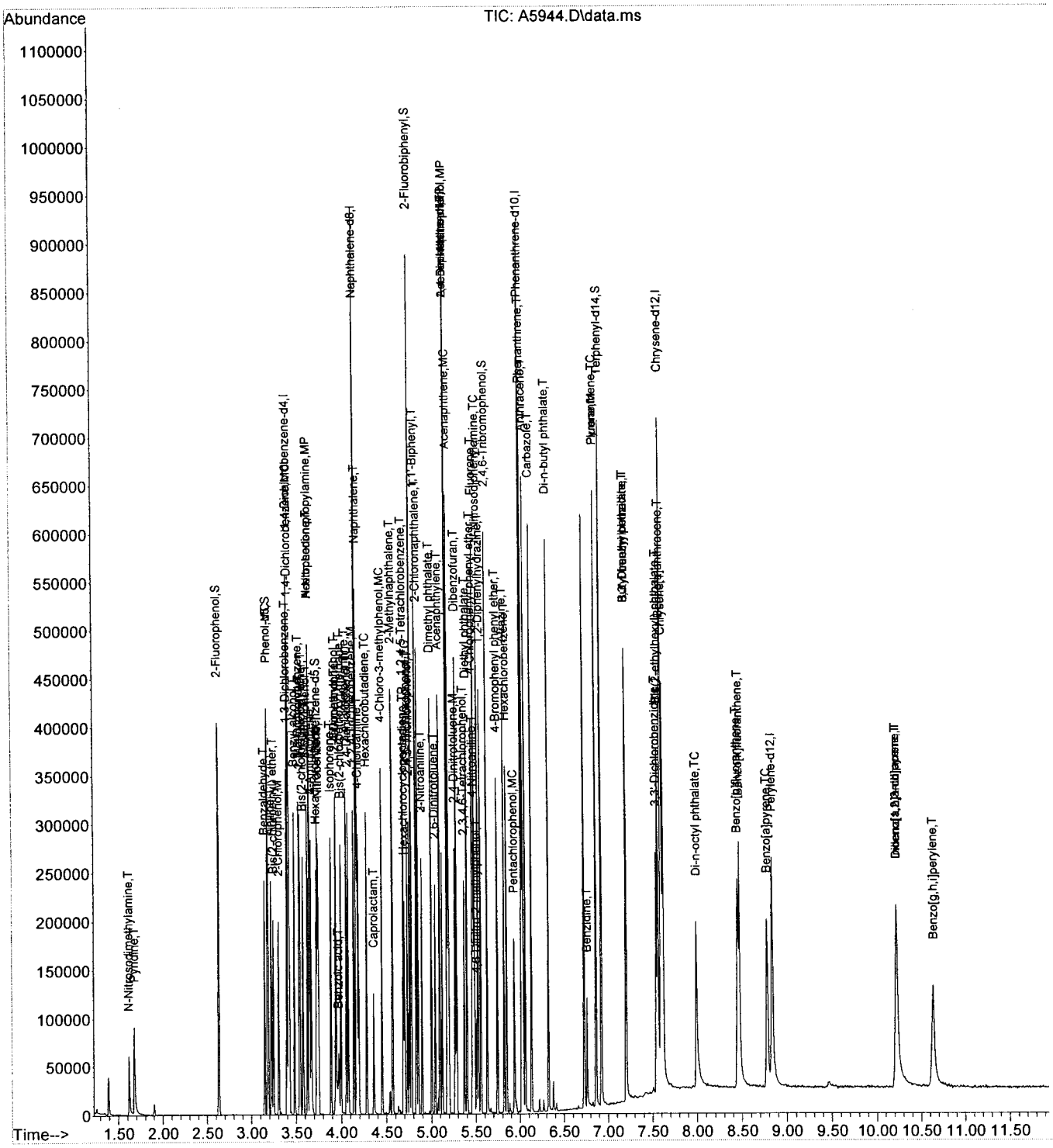
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) 2-Aminotoluene	3.670	106	59399	21.30	UG	96
40) 4-Chloro-3-methylphenol	4.451	107	34217	27.93	UG	96
41) 2-Methylnaphthalene	4.568	142	83623	30.08	UG	99
44) Hexachlorocyclopentadiene	4.702	237	15769	20.69	UG	97
45) 2,4,6-Trichlorophenol	4.734	196	18476	22.83	UG	95
46) 2,4,5-Trichlorophenol	4.756	196	19566m	23.51	UG	
48) 1,1'-Biphenyl	4.831	154	109175	31.21	UG	100
49) 2-Chloronaphthalene	4.852	162	79450	30.60	UG	98
50) 2-Nitroaniline	4.895	65	22080	33.27	UG	95
51) Dimethyl phthalate	5.002	163	97106	32.80	UG	96
52) 2,6-Dinitrotoluene	5.044	165	14886m	26.96	UG	
53) Acenaphthylene	5.093	152	135732	33.67	UG	97
54) 3-Nitroaniline	4.895	138	25390	33.80	UG	99
55) Acenaphthene	5.200	153	84417	32.64	UG	96
56) 2,4-Dinitrophenol	5.184	184	6299m	26.74	UG	
57) 4-Nitrophenol	5.189	139	12975	22.40	UG	97
58) 2,4-Dinitrotoluene	5.269	165	25257	36.78	UG	75
59) Dibenzofuran	5.285	168	98185m	28.00	UG	
60) Diethyl phthalate	5.403	149	101523	35.39	UG	89
61) Fluorene	5.483	166	98041	35.10	UG	82
62) 4-Chlorophenyl phenyl ...	5.462	204	41619	28.54	UG	81
63) 4-Nitroaniline	5.472	138	23985	35.52	UG	97
64) 1,2,4,5-Tetrachloroben...	4.691	216	40760	32.60	UG	89
65) 2,3,4,6-Tetrachlorophenol	5.371	232	19779	32.45	UG	81
67) 4,6-Dinitro-2-methylph...	5.510	198	7667m	20.78	UG	
68) N-Nitrosodiphenylamine	5.526	169	75183	34.66	UG	96
69) 1,2-Diphenylhydrazine	5.553	77	102215	33.87	UG	93
71) 4-Bromophenyl phenyl e...	5.745	248	27651	32.53	UG	94
72) Hexachlorobenzene	5.847	284	31749	33.83	UG	92
73) Atrazine	5.820	200	26633	33.38	UG	96
74) Pentachlorophenol	5.938	266	16165	31.48	UG	99
75) Phenanthrene	6.034	178	146683	35.99	UG	99
76) Anthracene	6.061	178	141688	35.38	UG	100
77) Carbazole	6.130	167	136966	35.89	UG	99
78) Di-n-butyl phthalate	6.323	149	170008	34.86	UG	100
79) Fluoranthene	6.863	202	155869	37.65	UG	91
80) Benzidine	6.761	184	31747	13.12	UG	88
83) Pyrene	6.863	202	155869	34.97	UG	96
85) 3,3'-Dimethylbenzidine	7.200	212	33193m	10.70	UG	
86) Butyl benzyl phthalate	7.205	149	68872	33.07	UG	96
87) 3,3'-Dichlorobenzidine	7.542	252	42228	33.33	UG	99
88) Benzo[a]anthracene	7.590	228	124129	32.88	UG	99
89) Chrysene	7.623	228	124569	32.63	UG	99
90) Bis(2-ethylhexyl) phth...	7.558	149	90261	32.23	UG	95
93) Di-n-octyl phthalate	7.992	149	115180	39.34	UG	100
94) Benzo[b]fluoranthene	8.452	252	99863	44.72	UG	99
95) Benzo[k]fluoranthene	8.473	252	107973	43.25	UG	95
96) Benzo[a]pyrene	8.778	252	85774m	38.56	UG	
97) Indeno[1,2,3-cd]pyrene	10.222	276	105075m	43.92	UG	
98) Dibenz[a,h]anthracene	10.222	278	81747m	42.57	UG	
99) Benzo[g,h,i]perylene	10.639	276	95118m	43.55	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5944.D
Acq On : 11 Nov 2015 20:38
Operator : JC
Sample : .,E15-10210-001MS,A,500ml,100,0.5
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Nov 12 09:27:50 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5945.D
Acq On : 11 Nov 2015 20:54
Operator : JC
Sample : .,E15-10210-001MSD,A,500ml,100,0.5
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 12 09:31:14 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.418	152	58665	40.00	UG		0.00
23) Naphthalene-d8	4.167	136	232142	40.00	UG		0.00
43) Acenaphthene-d10	5.183	164	134287m	40.00	UG		0.00
66) Phenanthrene-d10	6.023	188	216842	40.00	UG		0.00
82) Chrysene-d12	7.612	240	172493	40.00	UG		-0.02
92) Perylene-d12	8.842	264	119088m	40.00	UG		-0.02
System Monitoring Compounds							
4) 2-Fluorophenol	2.632	112	84622	61.37	UG		0.00
Spiked Amount 100.000	Range 10 - 83		Recovery = 61.37%				
6) Phenol-d5	3.183	99	91219	54.62	UG		0.00
Spiked Amount 100.000	Range 10 - 91		Recovery = 54.62%				
24) Nitrobenzene-d5	3.739	82	58542	40.09	UG		0.00
Spiked Amount 50.000	Range 25 - 94		Recovery = 80.18%				
47) 2-Fluorobiphenyl	4.777	172	140298	45.70	UG		0.00
Spiked Amount 50.000	Range 23 - 102		Recovery = 91.40%				
70) 2,4,6-Tribromophenol	5.627	330	38463	89.44	UG		0.00
Spiked Amount 100.000	Range 27 - 110		Recovery = 89.44%				
84) Terphenyl-d14	6.927	244	172203	49.59	UG		0.00
Spiked Amount 50.000	Range 33 - 113		Recovery = 99.18%				
Target Compounds							Qvalue
2) N-Nitrosodimethylamine	1.616	74	20066	23.23	UG		99
3) Pyridine	1.669	52	22359	20.53	UG		97
5) Benzaldehyde	3.146	106	26445m	22.03	UG		
7) Phenol	3.188	94	35176	18.63	UG		90
8) Aniline	3.220	66	22143	26.81	UG		99
9) Bis(2-chloroethyl) ether	3.247	63	29033	27.01	UG		94
10) 2-Chlorophenol	3.306	128	34894	23.57	UG		94
11) 1,3-Dichlorobenzene	3.397	146	45875	27.08	UG		99
12) 1,4-Dichlorobenzene	3.424	146	46374	29.35	UG		99
13) Benzyl alcohol	3.483	108	26853	27.96	UG		97
14) 1,2-Dichlorobenzene	3.536	146	43821	28.48	UG		99
15) 2-Methylphenol	3.547	108	31739	25.33	UG		98
16) Bis(2-chloroisopropyl)...	3.579	45	58865	25.28	UG		98
17) 4-Methylphenol	3.627	108	33338	24.86	UG		100
18) N-Nitrosodi-n-propylamine	3.654	70	30731	27.84	UG		94
19) Acetophenone	3.648	105	59259	30.29	UG		77
20) 3-Methylphenol	3.627	108	33338	24.86	UG		99
21) Hexachloroethane	3.729	117	15818	27.71	UG		90
25) Nitrobenzene	3.750	77	43950	28.92	UG		100
26) Isophorone	3.889	82	76813	27.84	UG		98
27) 2-Nitrophenol	3.943	139	19150	26.57	UG		98
28) 2,4-Dimethylphenol	3.943	107	23844	17.65	UG		94
29) Bis(2-chloroethoxy) me...	3.996	93	48398	29.64	UG		98
30) Benzoic acid	3.969	122	13582m	22.12	UG		
31) 2,4-Dimethylaniline	4.055	121	41518	24.64	UG		99
32) 2,4-Dichlorophenol	4.076	162	32088	28.56	UG		98
33) 1,2,4-Trichlorobenzene	4.135	180	37808	30.05	UG		96
34) Naphthalene	4.178	128	131486	32.33	UG	#	73
35) 4-Chloroaniline	4.189	127	66356	31.01	UG		94
36) 4-Aminotoluene	3.670	106	59236	22.30	UG		97
37) Hexachlorobutadiene	4.279	225	21196	29.71	UG		98
38) Caprolactam	4.360	55	12601	21.29	UG		88

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5945.D
Acq On : 11 Nov 2015 20:54
Operator : JC
Sample : .,E15-10210-001MSD,A,500ml,100,0.5
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 12 09:31:14 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration

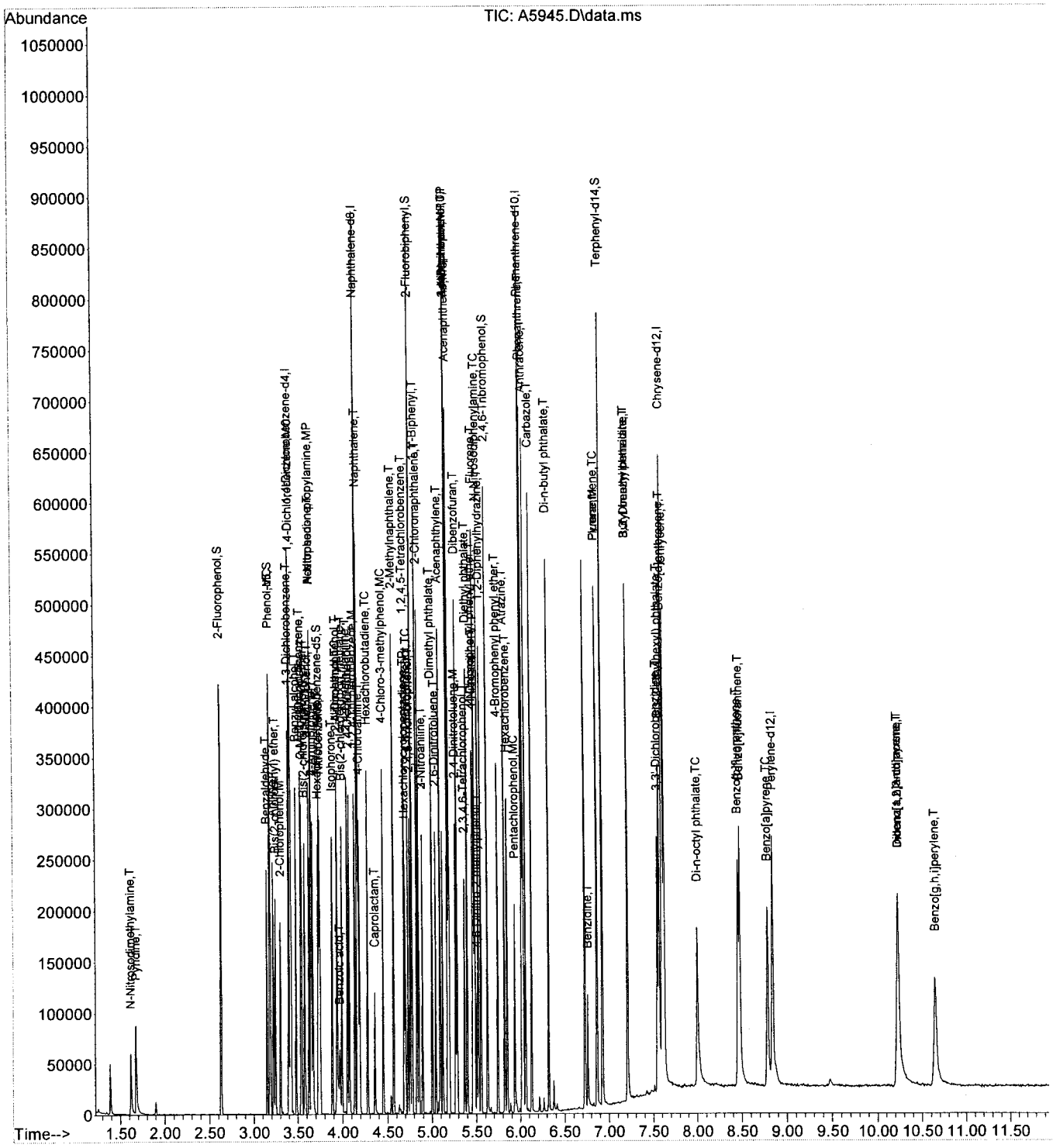
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) 2-Aminotoluene	3.670	106	59236	22.30	UG	97
40) 4-Chloro-3-methylphenol	4.451	107	32317	27.70	UG	97
41) 2-Methylnaphthalene	4.568	142	83759	31.63	UG	98
44) Hexachlorocyclopentadiene	4.702	237	16471	21.73	UG	97
45) 2,4,6-Trichlorophenol	4.734	196	22110m	27.47	UG	
46) 2,4,5-Trichlorophenol	4.756	196	22614m	27.32	UG	
48) 1,1'-Biphenyl	4.830	154	108343	31.13	UG	100
49) 2-Chloronaphthalene	4.852	162	80683	31.24	UG	100
50) 2-Nitroaniline	4.895	65	22196	33.62	UG	96
51) Dimethyl phthalate	5.002	163	94428	32.07	UG	98
52) 2,6-Dinitrotoluene	5.044	165	15575m	28.36	UG	
53) Acenaphthylene	5.093	152	129791	32.37	UG	99
54) 3-Nitroaniline	4.895	138	25361	33.94	UG	98
55) Acenaphthene	5.199	153	85651	33.29	UG	99
56) 2,4-Dinitrophenol	5.183	184	6659	28.41	UG	96
57) 4-Nitrophenol	5.189	139	12718	22.08	UG	97
58) 2,4-Dinitrotoluene	5.269	165	24669	36.11	UG	77
59) Dibenzofuran	5.285	168	113632	32.58	UG	98
60) Diethyl phthalate	5.403	149	99978	35.03	UG	99
61) Fluorene	5.483	166	96789	34.83	UG	97
62) 4-Chlorophenyl phenyl ...	5.467	204	46346	31.95	UG	95
63) 4-Nitroaniline	5.472	138	23275	34.65	UG	98
64) 1,2,4,5-Tetrachloroben...	4.691	216	41561	33.42	UG	98
65) 2,3,4,6-Tetrachlorophenol	5.371	232	19228	31.71	UG	81
67) 4,6-Dinitro-2-methylph...	5.510	198	7850m	22.07	UG	
68) N-Nitrosodiphenylamine	5.526	169	73003	34.91	UG	97
69) 1,2-Diphenylhydrazine	5.552	77	99262	34.12	UG	96
71) 4-Bromophenyl phenyl e...	5.745	248	26551	32.40	UG	93
72) Hexachlorobenzene	5.852	284	30737	33.98	UG	92
73) Atrazine	5.820	200	26006	33.81	UG	96
74) Pentachlorophenol	5.938	266	14976	30.25	UG	100
75) Phenanthrene	6.034	178	138830	35.33	UG	99
76) Anthracene	6.061	178	137726	35.67	UG	100
77) Carbazole	6.130	167	131787	35.82	UG	99
78) Di-n-butyl phthalate	6.323	149	165299	35.15	UG	100
79) Fluoranthene	6.863	202	145832	36.54	UG	90
80) Benzidine	6.761	184	30498	13.07	UG	90
83) Pyrene	6.863	202	145832	34.77	UG	95
85) 3,3'-Dimethylbenzidine	7.200	212	33087m	11.33	UG	
86) Butyl benzyl phthalate	7.205	149	67777	34.58	UG	96
87) 3,3'-Dichlorobenzidine	7.548	252	41043	34.43	UG	95
88) Benzo[a]anthracene	7.596	228	119839	33.74	UG	99
89) Chrysene	7.628	228	121345	33.78	UG	99
90) Bis(2-ethylhexyl) phth...	7.569	149	87674	33.26	UG	95
93) Di-n-octyl phthalate	7.997	149	117191	40.78	UG	98
94) Benzo[b]fluoranthene	8.457	252	98246	44.82	UG	99
95) Benzo[k]fluoranthene	8.478	252	110805	45.21	UG	95
96) Benzo[a]pyrene	8.788	252	88059m	40.34	UG	
97) Indeno[1,2,3-cd]pyrene	10.233	276	101772m	43.33	UG	
98) Dibenz[a,h]anthracene	10.233	278	80343m	42.63	UG	
99) Benzo[g,h,i]perylene	10.644	276	92359m	43.08	UG	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\11-11-15\
Data File : A5945.D
Acq On : 11 Nov 2015 20:54
Operator : JC
Sample : .,E15-10210-001MSD,A,500ml,100,0.5
Misc : 151110-05,11/10/15,NA,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Nov 12 09:31:14 2015
Quant Method : C:\msdchem\1\METHODS\AW1215.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Thu Oct 29 15:43:59 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4007.D
Acq On : 11 Nov 2015 11:41
Operator : KIM
Sample : .,E15-10305-001MS,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 11 12:56:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	74476	40.00	UG	-0.01
23) Naphthalene-d8	4.32	136	293119	40.00	UG	-0.02
43) Acenaphthene-d10	5.35	164	160885	40.00	UG	-0.02
66) Phenanthrene-d10	6.26	188	242658	40.00	UG	-0.03
82) Chrysene-d12	7.81	240	195201	40.00	UG	-0.09
92) Perylene-d12	9.00	264	163263	40.00	UG	-0.13
System Monitoring Compounds						
4) 2-Fluorophenol	2.72	112	108843	59.50	UG	-0.02
Spiked Amount 100.000	Range 10 - 100		Recovery = 59.50%			
6) Phenol-d5	3.33	99	104778	45.59	UG	-0.01
Spiked Amount 100.000	Range 10 - 102		Recovery = 45.59%			
24) Nitrobenzene-d5	3.90	82	73791m	41.48	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 82.96%			
47) 2-Fluorobiphenyl	4.94	172	197788	48.87	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery = 97.74%			
70) 2,4,6-Tribromophenol	5.87	330	84263	99.71	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 99.71%			
84) Terphenyl-d14	7.13	244	207960	48.36	UG	-0.06
Spiked Amount 50.000	Range 23 - 124		Recovery = 96.72%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.56	74	28820	25.50	UG	86
3) Pyridine	1.62	52	25647	18.54	UG	99
5) Benzaldehyde	3.28	106	15816	12.74	UG	# 100
7) Phenol	3.34	94	43953	18.43	UG	85
8) Aniline	3.36	66	36396	35.83	UG	98
9) Bis(2-chloroethyl) ether	3.38	63	51057	40.33	UG	93
10) 2-Chlorophenol	3.44	128	67633	33.49	UG	97
11) 1,3-Dichlorobenzene	3.53	146	76609	33.15	UG	96
12) 1,4-Dichlorobenzene	3.57	146	77862	32.87	UG	97
13) Benzyl alcohol	3.64	108	42727	36.32	UG	99
14) 1,2-Dichlorobenzene	3.68	146	74314	33.96	UG	93
15) 2-Methylphenol	3.71	108	56991	31.17	UG	99
16) Bis(2-chloroisopropyl) eth	3.73	45	96936	42.22	UG	99
17) 4-Methylphenol	3.79	108	58797	32.76	UG	97
18) N-Nitrosodi-n-propylamine	3.81	70	55366	42.91	UG	96
19) Acetophenone	3.80	105	99899	40.14	UG	76
20) 3-Methylphenol	3.79	108	58797	32.76	UG	97
21) Hexachloroethane	3.88	117	29619	37.27	UG	84
25) Nitrobenzene	3.91	77	74994	41.51	UG	96
26) Isophorone	4.05	82	121826	34.14	UG	96
27) 2-Nitrophenol	4.11	139	36565	38.45	UG	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4007.D
Acq On : 11 Nov 2015 11:41
Operator : KIM
Sample : .,E15-10305-001MS,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 11 12:56:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
28) 2,4-Dimethylphenol	4.11	107	64017	38.54	UG		98
29) Bis(2-chloroethoxy) methan	4.16	93	85785	40.09	UG		97
30) Benzoic acid	4.17	105	16227	20.35	UG		93
31) 2,4-Dimethylaniline	4.22	121	91204	38.13	UG	#	100
32) 2,4-Dichlorophenol	4.24	162	57403	36.46	UG		97
33) 1,2,4-Trichlorobenzene	4.30	180	62920	32.67	UG		99
34) Naphthalene	4.34	128	204217	35.64	UG	#	98
35) 4-Chloroaniline	4.36	127	87233	35.02	UG		97
36) 4-Aminotoluene	3.83	106	127520	38.95	UG		98
37) Hexachlorobutadiene	4.44	225	35893	34.47	UG		100
38) Caprolactam	4.54	55	11769m	16.77	UG		
39) 2-Aminotoluene	3.83	106	127520	38.95	UG		98
40) 4-Chloro-3-methylphenol	4.63	107	59714	41.41	UG		94
41) 2-Methylnaphthalene	4.74	142	139581	38.00	UG		100
44) Hexachlorocyclopentadiene	4.86	237	26982	38.84	UG		98
45) 2,4,6-Trichlorophenol	4.91	196	40436	37.89	UG		99
46) 2,4,5-Trichlorophenol	4.93	196	44391	37.38	UG		98
48) 1,1'-Biphenyl	5.00	154	176008	40.11	UG		99
49) 2-Chloronaphthalene	5.02	162	129654	38.59	UG		97
50) 2-Nitroaniline	5.07	65	38153	51.74	UG		94
51) Dimethyl phthalate	5.17	163	136350	36.41	UG		99
52) 2,6-Dinitrotoluene	5.22	165	30656	41.35	UG		95
53) Acenaphthylene	5.26	152	204378	38.72	UG		99
54) 3-Nitroaniline	5.31	138	33896	38.61	UG		92
55) Acenaphthene	5.36	153	131897	39.33	UG		98
56) 2,4-Dinitrophenol	5.37	184	12364	39.73	UG		25
57) 4-Nitrophenol	5.39	65	9388	18.35	UG		89
58) 2,4-Dinitrotoluene	5.45	165	42390	44.87	UG		72
59) Dibenzofuran	5.45	168	183003	35.30	UG		97
60) Diethyl phthalate	5.59	149	138362	38.49	UG		99
61) Fluorene	5.69	166	148414	37.02	UG		99
62) 4-Chlorophenyl phenyl ethe	5.67	204	75057	37.01	UG		96
63) 4-Nitroaniline	5.70	138	33453	35.57	UG		90
64) 1,2,4,5-Tetrachlorobenzene	4.85	216	66580	37.17	UG		100
65) 2,3,4,6-Tetrachlorophenol	5.55	232	37266	35.85	UG		99
67) 4,6-Dinitro-2-methylphenol	5.74	198	19984	40.49	UG		91
68) N-Nitrosodiphenylamine	5.75	169	107518	42.50	UG		99
69) 1,2-Diphenylhydrazine	5.78	77	141032	42.23	UG		95
71) 4-Bromophenyl phenyl ether	6.00	248	47542	40.64	UG		96
72) Hexachlorobenzene	6.10	284	55856	38.87	UG		92
73) Atrazine	6.08	200	36622	39.28	UG		100
74) Pentachlorophenol	6.19	266	23628	34.74	UG		99
75) Phenanthrene	6.28	178	194182	39.68	UG		98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4007.D
Acq On : 11 Nov 2015 11:41
Operator : KIM
Sample : .,E15-10305-001MS,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 11 12:56:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

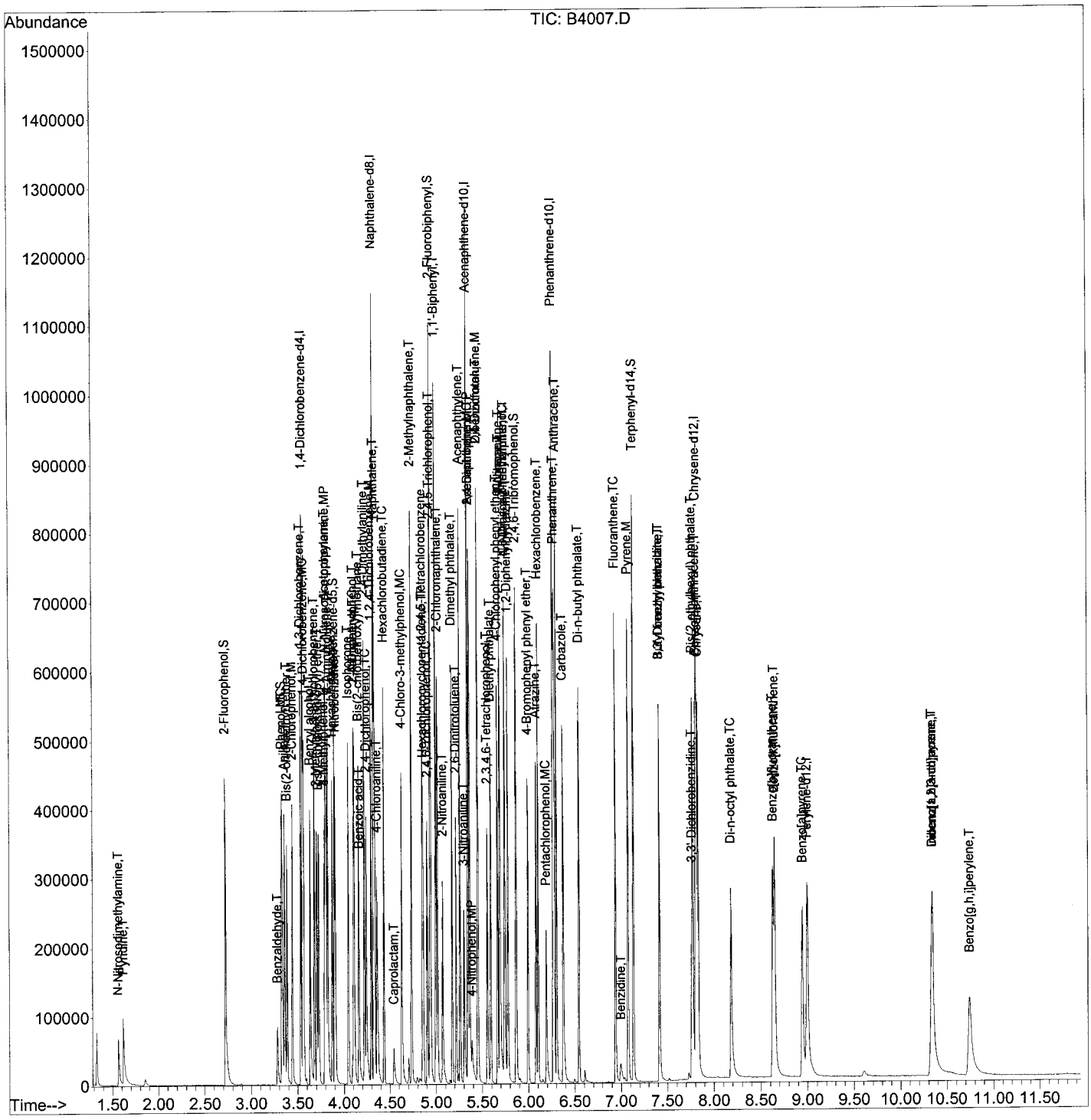
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
76) Anthracene	6.30	178	194824	40.49	UG		99
77) Carbazole	6.37	167	186409	42.64	UG		99
78) Di-n-butyl phthalate	6.55	149	218444	43.19	UG		99
79) Fluoranthene	6.94	202	192771	38.09	UG		92
80) Benzidine	7.00	184	21400	7.11	UG	#	100
83) Pyrene	7.08	202	195138	40.26	UG		91
85) 3,3'-Dimethylbenzidine	7.42	212	20762	7.13	UG	#	100
86) Butyl benzyl phthalate	7.41	149	81359	44.78	UG		94
87) 3,3'-Dichlorobenzidine	7.76	252	53104	34.78	UG		97
88) Benzo[a]anthracene	7.80	228	159923	35.49	UG		99
89) Chrysene	7.83	228	155337	37.29	UG		99
90) Bis(2-ethylhexyl) phthalat	7.77	149	107244	43.64	UG		96
93) Di-n-octyl phthalate	8.18	149	154014	47.40	UG		99
94) Benzo[b]fluoranthene	8.63	252	133311	36.25	UG		96
95) Benzo[k]fluoranthene	8.65	252	164939	44.97	UG		98
96) Benzo[a]pyrene	8.95	252	143332	43.14	UG		97
97) Indeno[1,2,3-cd]pyrene	10.34	276	173570	44.40	UG		88
98) Dibenz[a,h]anthracene	10.33	278	140461	43.73	UG		94
99) Benzo[g,h,i]perylene	10.75	276	143314	43.94	UG		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4007.D
Acq On : 11 Nov 2015 11:41
Operator : KIM
Sample : .,E15-10305-001MS,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 11 12:56:57 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4008.D
Acq On : 11 Nov 2015 11:59
Operator : KIM
Sample : .,E15-10305-001MSD,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 11 12:51:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	3.56	152	69895	40.00	UG	-0.01
23) Naphthalene-d8	4.33	136	287163	40.00	UG	-0.01
43) Acenaphthene-d10	5.35	164	161792	40.00	UG	-0.02
66) Phenanthrene-d10	6.27	188	254944	40.00	UG	-0.03
82) Chrysene-d12	7.84	240	202581	40.00	UG	-0.06
92) Perylene-d12	9.03	264	165185	40.00	UG	-0.10
System Monitoring Compounds						
4) 2-Fluorophenol	2.72	112	104572	60.91	UG	-0.02
Spiked Amount 100.000	Range 10 - 100		Recovery = 60.91%			
6) Phenol-d5	3.33	99	101181	46.91	UG	-0.01
Spiked Amount 100.000	Range 10 - 102		Recovery = 46.91%			
24) Nitrobenzene-d5	3.90	82	86772	49.79	UG	-0.01
Spiked Amount 50.000	Range 27 - 102		Recovery = 99.58%			
47) 2-Fluorobiphenyl	4.94	172	184887	45.43	UG	-0.02
Spiked Amount 50.000	Range 26 - 101		Recovery = 90.86%			
70) 2,4,6-Tribromophenol	5.87	330	85342	96.12	UG	-0.03
Spiked Amount 100.000	Range 22 - 115		Recovery = 96.12%			
84) Terphenyl-d14	7.15	244	220215	49.35	UG	-0.04
Spiked Amount 50.000	Range 23 - 124		Recovery = 98.70%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	1.56	74	27097	25.55	UG	83
3) Pyridine	1.62	52	24909	19.19	UG	98
5) Benzaldehyde	3.28	106	15007	12.89	UG	# 100
7) Phenol	3.34	94	41862	18.71	UG	84
8) Aniline	3.36	66	35201	36.93	UG	95
9) Bis(2-chloroethyl) ether	3.38	63	49921	42.01	UG	93
10) 2-Chlorophenol	3.44	128	64407	33.99	UG	98
11) 1,3-Dichlorobenzene	3.53	146	71963	33.18	UG	96
12) 1,4-Dichlorobenzene	3.57	146	73584	33.10	UG	96
13) Benzyl alcohol	3.64	108	40679	36.85	UG	99
14) 1,2-Dichlorobenzene	3.68	146	70509	34.33	UG	92
15) 2-Methylphenol	3.71	108	54983	32.04	UG	100
16) Bis(2-chloroisopropyl) eth	3.73	45	94272	43.75	UG	99
17) 4-Methylphenol	3.80	108	54956	32.63	UG	98
18) N-Nitrosodi-n-propylamine	3.81	70	53125	43.87	UG	95
19) Acetophenone	3.81	105	95926	41.07	UG	75
20) 3-Methylphenol	3.80	108	54956	32.63	UG	99
21) Hexachloroethane	3.88	117	28413	38.09	UG	82
25) Nitrobenzene	3.91	77	70691	39.94	UG	97
26) Isophorone	4.05	82	117707	33.67	UG	95
27) 2-Nitrophenol	4.11	139	34818	37.38	UG	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4008.D
Acq On : 11 Nov 2015 11:59
Operator : KIM
Sample : .,E15-10305-001MSD,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 11 12:51:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
28) 2,4-Dimethylphenol	4.11	107	61310	37.68	UG		99
29) Bis(2-chloroethoxy) methan	4.16	93	82184	39.20	UG		98
30) Benzoic acid	4.17	105	15011	19.22	UG		93
31) 2,4-Dimethylaniline	4.22	121	88688	37.85	UG	#	100
32) 2,4-Dichlorophenol	4.25	162	55473	35.97	UG		96
33) 1,2,4-Trichlorobenzene	4.30	180	59938	31.76	UG		99
34) Naphthalene	4.34	128	197241	35.13	UG	#	99
35) 4-Chloroaniline	4.36	127	86470	35.44	UG		97
36) 4-Aminotoluene	3.83	106	129863	40.49	UG		95
37) Hexachlorobutadiene	4.44	225	33429	32.77	UG		99
38) Caprolactam	4.54	55	11092m	16.13	UG		
39) 2-Aminotoluene	3.83	106	129863	40.49	UG		95
40) 4-Chloro-3-methylphenol	4.63	107	57991	41.05	UG		93
41) 2-Methylnaphthalene	4.74	142	134640	37.42	UG		99
44) Hexachlorocyclopentadiene	4.87	237	24874	35.61	UG		99
45) 2,4,6-Trichlorophenol	4.91	196	38761	36.11	UG		99
46) 2,4,5-Trichlorophenol	4.93	196	43164	36.14	UG		99
48) 1,1'-Biphenyl	5.00	154	170548	38.64	UG		99
49) 2-Chloronaphthalene	5.02	162	127336	37.69	UG		97
50) 2-Nitroaniline	5.07	65	38140	51.43	UG		93
51) Dimethyl phthalate	5.17	163	137927	36.62	UG		100
52) 2,6-Dinitrotoluene	5.22	165	30975	41.55	UG		95
53) Acenaphthylene	5.26	152	206308	38.86	UG		99
54) 3-Nitroaniline	5.31	138	35100	39.76	UG		95
55) Acenaphthene	5.37	153	133479	39.58	UG		98
56) 2,4-Dinitrophenol	5.37	184	12723	40.65	UG		23
57) 4-Nitrophenol	5.39	65	9690	18.84	UG		90
58) 2,4-Dinitrotoluene	5.45	165	43690	45.99	UG		74
59) Dibenzofuran	5.46	168	184988	35.49	UG		97
60) Diethyl phthalate	5.60	149	140645	38.91	UG		99
61) Fluorene	5.69	166	148216	36.76	UG		99
62) 4-Chlorophenyl phenyl ethe	5.67	204	74135	36.35	UG		97
63) 4-Nitroaniline	5.70	138	34082	36.03	UG		92
64) 1,2,4,5-Tetrachlorobenzene	4.86	216	63456	35.23	UG		99
65) 2,3,4,6-Tetrachlorophenol	5.56	232	37783	36.14	UG		99
67) 4,6-Dinitro-2-methylphenol	5.74	198	20725	39.96	UG		89
68) N-Nitrosodiphenylamine	5.75	169	108945	40.99	UG		99
69) 1,2-Diphenylhydrazine	5.78	77	143252	40.83	UG		94
71) 4-Bromophenyl phenyl ether	6.00	248	49407	40.20	UG		95
72) Hexachlorobenzene	6.10	284	57597	38.15	UG		92
73) Atrazine	6.08	200	36675	37.45	UG		98
74) Pentachlorophenol	6.19	266	25431	35.59	UG		98
75) Phenanthrene	6.28	178	199671	38.83	UG		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4008.D
Acq On : 11 Nov 2015 11:59
Operator : KIM
Sample : .,E15-10305-001MSD,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 11 12:51:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration

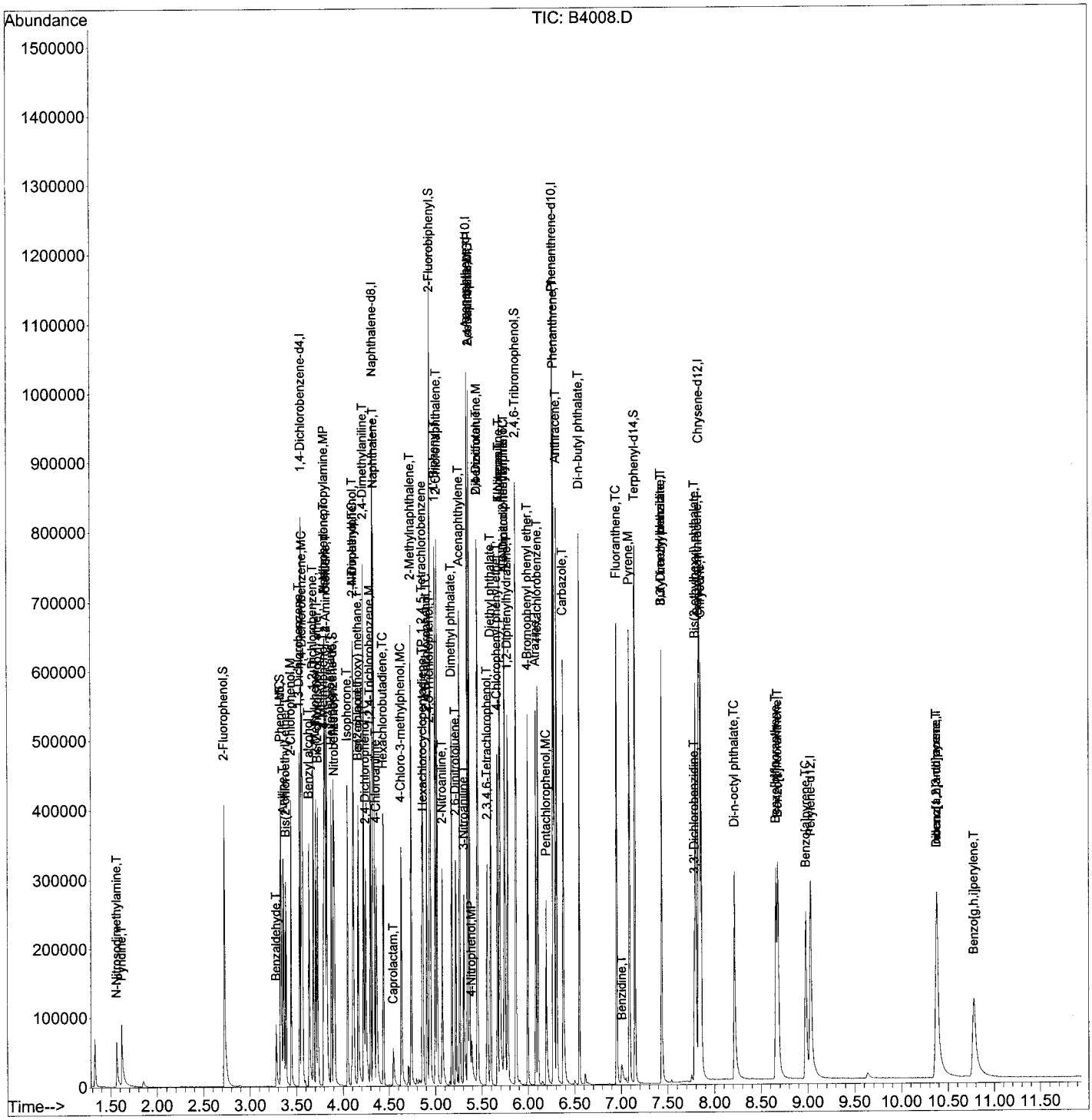
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
76) Anthracene	6.31	178	205486	40.65	UG		99
77) Carbazole	6.38	167	198669	43.26	UG		99
78) Di-n-butyl phthalate	6.55	149	236119	44.44	UG		100
79) Fluoranthene	6.95	202	203109	38.20	UG		92
80) Benzidine	7.01	184	22661	7.16	UG	#	100
83) Pyrene	7.09	202	205835	40.92	UG		91
85) 3,3'-Dimethylbenzidine	7.44	212	21951	7.26	UG	#	100
86) Butyl benzyl phthalate	7.43	149	87258	46.27	UG		94
87) 3,3'-Dichlorobenzidine	7.79	252	56227	35.48	UG		99
88) Benzo[a]anthracene	7.83	228	166857	35.68	UG		99
89) Chrysene	7.86	228	158491	36.66	UG		99
90) Bis(2-ethylhexyl) phthalat	7.80	149	116579	45.71	UG		96
93) Di-n-octyl phthalate	8.21	149	161273	49.06	UG		99
94) Benzo[b]fluoranthene	8.66	252	137782	37.03	UG		96
95) Benzo[k]fluoranthene	8.68	252	156420	42.15	UG		98
96) Benzo[a]pyrene	8.98	252	142543	42.40	UG		98
97) Indeno[1,2,3-cd]pyrene	10.38	276	172554	43.63	UG		87
98) Dibenz[a,h]anthracene	10.38	278	134109	41.27	UG		96
99) Benzo[g,h,i]perylene	10.78	276	149064	45.17	UG		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\11-11-15\
Data File : B4008.D
Acq On : 11 Nov 2015 11:59
Operator : KIM
Sample : .,E15-10305-001MSD,A,500ml,100,0.5
Misc : 151111-01,11/11/15,NA,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 11 12:51:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\BW1115.M
Quant Title : BNA CALIBRATION METHOD
QLast Update : Tue Oct 27 06:03:54 2015
Response via : Initial Calibration



SEMI-VOLATILE ORGANICS RUN LOGS
STANDARD PREP LOGS

LABORATORY CHRONICLE - GC/MS SEMI-VOA

DATE: 10/29/2015 **BATCH ID:** _____

INSTRUMENT: A

TUNE FILE: DFTPP.U

METHOD 1 AW1215/AS1215

METHOD 2 ASIM1215 INTSTD :ECS/SVIO28

METHOD 3 AD1215 P : 0.80

ANALYST: JC B :1.45

Initial D :0

#	Data File	Case #	Samp #	DF	Wt/Vol	F. Vol	MX	Samp Date	Recd Date	Ext Date	% Moist	Time	Comments	Client ID
96	A5895	ABN054-15	DFTPP											
1	A5896	ABN068-15	ICC160BNA1											
2	A5897	ABN063-15	ICC001BNA1											
3	A5898	ABN064-15	ICC010BNA1											
4	A5899	ABN065-15	ICC020BNA1											
5	A5900	ABN066-15	ICC040BNA1											
6	A5901	ABN067-15	ICC080BNA1											
7	A5902	ABN074-15	ICC160BNA2											
8	A5903	ABN073-15	ICC080BNA2											
9	A5904	ABN072-15	ICC040BNA2											
10	A5905	ABN071-15	ICC020BNA2											
11	A5906	ABN069-15	ICC010BNA2											
12	A5907	ABN068-15	ICC001BNA2											
13	A5908	ABN075-15	ICV040BNA1											
14	A5909	ABN076-15	ICV040BNA2											
15	A5910	ABN056-15	ICC000.1SIM											
16	A5911	ABN057-15	ICC000.2SIM											
17	A5912	ABN058-15	ICC000.5SIM											
18	A5913	ABN059-15	ICC001.0SIM											
19	A5914	ABN060-15	ICC002.0SIM											
20	A5915	ABN061-15	ICV000.5SIM											

LABORATORY CHRONICLE - GC/MS SEMI-VOA

DATE: 11/11/2015 **BATCH ID:** 151110-05 Aqueous

INSTRUMENT: A Aqueous

TUNE FILE: DFTPP.U

METHOD 1 ASIM1115

METHOD 2

METHOD 3 AW1115

ANALYST: JC Initial

INTSTD :ECS/TS-150427005

P: 1.39

B: 0.89

D: 0

#	Data File	Case #	Samp #	DF	Wt/Vol	F. Vol	MX	Samp Date	Recd Date	Ext Date	% Moist	Time	Comments	Client ID
96	A5918	ABN054-15	DFTPP											
97	A5919	ABN075-15	CCV040BNA1											
98	A5920	ABN076-15	CCV040BNA2											
99	A5921	ABN061-15	CCV000.5SIM											
1	A5922	BLKA151110-05		1	1000	1	la			11/10/15	100		SIM	.
2	A5923	10210	1	1	500	0.5	la	11/5/15	11/6/15	11/10/15	100		SIM	POT-1
3	A5924	10258	18	1	1000	1	la	11/3/15	11/6/15	11/10/15	100		SIM	FB-11031
4	A5925	10251	31	1	1000	1	la	11/4/15	11/6/15	11/10/15	100		SIM	TWP-E2
5	A5926	10258	1	1	1000	1	la	11/4/15	11/6/15	11/10/15	100		SIM	MW-21
6	A5927	10258	2	1	1000	1	la	11/4/15	11/6/15	11/10/15	100		SIM	FB-11042
7	A5928	10258	3	1	1000	1	la	11/4/15	11/6/15	11/10/15	100		SIM	MW-22
8	A5929	10258	4	1	1000	1	la	11/4/15	11/6/15	11/10/15	100		SIM	MW-20
9	A5930	10258	5	1	1000	1	la	11/4/15	11/6/15	11/10/15	100		SIM	MW-18
10	A5931	10225	1	1	1000	1	la	11/5/15	11/6/15	11/10/15	100		SIM	PZ-1
11	A5932	10261	1	1	1000	1	la	11/9/15	11/9/15	11/10/15	100		SIM	MW-1/19.
12	A5933	10146	1	1	1000	1	la	11/5/15	11/5/15	11/10/15	100		SIM	MW-1/9.4
13	A5934	10161	1	1	1000	1	la	11/5/15	11/5/15	11/10/15	100		SIM	MW-1
14	A5935	10161	2	1	1000	1	la	11/5/15	11/5/15	11/10/15	100		SIM	110515-F
15	A5936	10224	1	1	500	0.5	la	11/5/15	11/6/15	11/10/15	100		SIM	MW_#1
16	A5937	10251	30	1	1000	1	la	11/5/15	11/6/15	11/10/15	100		SIM	TWP-E1
17	A5938	10217	1	1	1000	1	la	11/6/15	11/6/15	11/10/15	100		SIM	ZPZ-1
18	A5939	10251	16	1	500	0.5	la	11/6/15	11/6/15	11/10/15	100		SIM	FIELD_BL
19	A5940	10251	32	1	1000	1	la	11/6/15	11/6/15	11/10/15	100		SIM	TWP-E3
20	A5941	10271	1	1	1000	1	la	11/9/15	11/9/15	11/10/15	100		SIM	MW-101
21	A5942	BLKA151110-05		1	1000	1	A			11/10/15	100			.
22	A5943	LCSA151110-05		1	1000	1	A			11/10/15	100			.
23	A5944	E15-10210-001MS		1	500	0.5	A	11/5/15	11/6/15	11/10/15	100			POT-1
24	A5945	E15-10210-001MSD		1	500	0.5	A	11/5/15	11/6/15	11/10/15	100			POT-1
25	A5946	10210	1	1	500	0.5	A	11/5/15	11/6/15	11/10/15	100			POT-1
26	A5947	10258	18	1	1000	1	A	11/3/15	11/6/15	11/10/15	100			FB-11031
27	A5948	10251	31	1	1000	1	A	11/4/15	11/6/15	11/10/15	100			TWP-E2
28	A5949	10258	1	1	1000	1	A	11/4/15	11/6/15	11/10/15	100			MW-21
29	A5950	10258	2	1	1000	1	A	11/4/15	11/6/15	11/10/15	100			FB-11042
30	A5951	10258	3	1	1000	1	A	11/4/15	11/6/15	11/10/15	100			MW-22
31	A5952	10258	4	1	1000	1	A	11/4/15	11/6/15	11/10/15	100			MW-20
32	A5953	10258	5	1	1000	1	A	11/4/15	11/6/15	11/10/15	100			MW-18
33	A5954	10225	1	1	1000	1	A	11/5/15	11/6/15	11/10/15	100			PZ-1
34	A5955	10261	1	1	1000	1	A	11/9/15	11/9/15	11/10/15	100			MW-1/19.
35	A5956	10146	1	1	1000	1	A	11/5/15	11/5/15	11/10/15	100			MW-1/9.4
36	A5957	10161	1	1	1000	1	A	11/5/15	11/5/15	11/10/15	100			MW-1
37	A5958	10161	2	1	1000	1	A	11/5/15	11/5/15	11/10/15	100			110515-F
38	A5959	10224	1	1	500	0.5	A	11/5/15	11/6/15	11/10/15	100			MW_#1
39	A5960	10251	30	1	1000	1	A	11/5/15	11/6/15	11/10/15	100			TWP-E1
40	A5961	10217	1	10	1000	1	A	11/6/15	11/6/15	11/10/15	100			ZPZ-1
41	A5962	10251	16	1	500	0.5	A	11/6/15	11/6/15	11/10/15	100			FIELD_BL
42	A5963	10251	32	1	1000	1	A	11/6/15	11/6/15	11/10/15	100			TWP-E3
43	A5964	10271	1	1	1000	1	A	11/9/15	11/9/15	11/10/15	100			MW-101
44	A5965	10251	41	1	1000	1	A	11/6/15	11/6/15	11/10/15	100			FIELD_BL

E15-10258 0660

LABORATORY CHRONICLE - GC/MS SEMI-VOA

DATE: 10/21/2015 **BATCH ID:** _____ Aqueous

INSTRUMENT: B **(yymmdd-##)** _____

TUNE FILE: DFTPP.U

METHOD 1 BW1015 P: 0.70

METHOD 2 BSIM1015 B: 1.91

METHOD 3 BD1015 D: 0.84

ANALYST: JC

JC Initial

#	Data File	Case #	Samp #	DF	Wt/ Vol	F. Vol	MX	Samp Date	Recd Date	Ext Date	% Moist	Time	Comments	Client ID
1	B3558	ABN054-15	DFTPP	1	1000	1	A				100		DFTPP	.
2	B3559	ABN066-15	ICC040BNA	1	1000	1	A				100			.
3	B3560	ABN063-15	ICC001BNA	1	1000	1	A				100			.
4	B3561	ABN064-15	ICC010BNA	1	1000	1	A				100			.
5	B3562	ABN065-15	ICC020BNA	1	1000	1	A				100			.
6	B3563	ABN067-15	ICC080BNA	1	1000	1	A				100			.
7	B3564	ABN068-15	ICC160BNA	1	1000	1	A				100			.
8	B3565	ABN074-15	ICC160BNA	1	1000	1	A				100			.
9	B3566	ABN073-15	ICC080BNA	1	1000	1	A				100			.
10	B3567	ABN072-15	ICC040BNA	1	1000	1	A				100			.
11	B3568	ABN071-15	ICC020BNA	1	1000	1	A				100			.
12	B3569	ABN070-15	ICC010BNA	1	1000	1	A				100			.
13	B3570	ABN069-15	ICC001BNA	1	1000	1	A				100			.
14	B3571	ABN058-15	ICC000.5SIM	1	1000	1	Ia				100		SIMS	.
15	B3572	ABN056-15	ICC000.1SIM	1	1000	1	Ia				100		SIMS	.
16	B3573	ABN057-15	ICC000.2SIM	1	1000	1	Ia				100		SIMS	.
17	B3574	ABN059-15	ICC001.0SIM	1	1000	1	Ia				100		SIMS	.
18	B3575	ABN060-15	ICC002.0SIM	1	1000	1	Ia				100		SIMS	.
19	B3576	ABN075-15	ICV040BNA	1	1000	1	A				100			.
20	B3577	ABN076-15	ICV040BNA	1	1000	1	A				100			.
21	B3578	ABN061-15	ICV000.5SIM	1	1000	1	Ia				100		SIMS	.

LABORATORY CHRONICLE - GC/MS SEMI-VOA

DATE: 11/11/2015 **BATCH ID:** 151109-02 Aqueous

INSTRUMENT: B (yymmdd-##) 151110-03 Aqueous

151111-01 Aqueous

TUNE FILE: DFTPP.U

METHOD 1 BW1115 P: 1.60

METHOD 2 BSIM1115 B: 1.42

METHOD 3 D: 1.05

ANALYST: JC

JC Initial

#	Data File	Case #	Samp #	DF	Wt/ Vol	F. Vol	MX	Samp Date	Recd Date	Ext Date	% Moist	Time	Comments	Client ID
1	B3999	ABN054-15	DFTPP	1	1000	1	A				100		DFTPP	.
2	B4000	ABN075-15	CCV040BNA1	1	1000	1	A				100			.
3	B4001	ABN076-15	CCV040BNA2	1	1000	1	A				100			.
4	B4002	ABN061-15	CCV000.5SIM	1	1000	1	la				100		SIMS	.
5	B4003	BLKA151111-01		1	1000	1	la			11/11/15	100		SIMS	.
6	B4004	10305	1	1	500	0.5	la	11/9/15	11/10/15	11/11/15	100		SIMS	MW-1
7	B4005	BLKA151111-01		1	1000	1	A			11/11/15	100			.
8	B4006	LCSA151111-01		1	1000	1	A			11/11/15	100			.
9	B4007	E15-10305-001MS		1	500	0.5	A	11/9/15	11/10/15	11/11/15	100			MW-1
10	B4008	E15-10305-001MSD		1	500	0.5	A	11/9/15	11/10/15	11/11/15	100			MW-1
11	B4009	10305	1	1	500	0.5	A	11/9/15	11/10/15	11/11/15	100			MW-1
12	B4010	BLKA151109-02		1	1000	1	A			11/9/15	100			.
13	B4011	LCSA151109-02		1	1000	1	A			11/9/15	100			.
14	B4012	E15-10132-001MS		1	500	0.5	A	11/4/15	11/4/15	11/9/15	100			POT-1
15	B4013	E15-10132-001MSD		1	500	0.5	A	11/4/15	11/4/15	11/9/15	100			POT-1
16	B4014	10209	1	1	1000	1	A	11/6/15	11/6/15	11/9/15	100			TWP-1/10
17	B4015	10132	1	1	500	0.5	A	11/4/15	11/4/15	11/9/15	100			POT-1
18	B4016	10128	1	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			MW-3
19	B4017	10128	2	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			MW-5
20	B4018	10128	3	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			MW-2
21	B4019	10128	4	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			MW-7
22	B4020	10128	5	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			MW-8
23	B4021	10128	6	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			MW-4
24	B4022	10128	7	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			FB
25	B4023	10115	1	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			MW-1
26	B4024	10115	2	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			MW-6
27	B4025	10115	3	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			MW-10
28	B4026	10115	4	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			MW-9
29	B4027	10115	5	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			MW-11
30	B4028	10115	6	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			MW-12
31	B4029	10115	7	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			FB
32	B4030	10126	1	1	1000	1	A	11/4/15	11/4/15	11/9/15	100			FPZ-1
33	B4031	10126	2	7	1000	1	A	11/4/15	11/4/15	11/9/15	100			FPZ-2
34	B4032	10135	1	1	1000	1	A	11/4/15	11/5/15	11/9/15	100			TW-1/5.6
35	B4033	10105	17	1	1000	1	A	11/3/15	11/4/15	11/9/15	100			FB110315
36	B4034	BLKA151110-03		1	1000	1	A			11/10/15	100			.
37	B4035	TCLP151106		1	50	1	T			11/10/15	100			.
38	B4036	TCLP151109		1	50	1	T			11/10/15	100			.
39	B4037	LCSA151110-03		1	1000	1	A			11/10/15	100			.
40	B4038	10147	1	1	50	1	T	11/4/15	11/5/15	11/10/15	100		BID: 151106-04; TCL	WC-1_110
41	B4039	10147	2	1	50	1	T	11/4/15	11/5/15	11/10/15	100		BID: 151106-04; TCL	WC-2_110
42	B4040	10147	3	1	50	1	T	11/4/15	11/5/15	11/10/15	100		BID: 151106-04; TCL	WC-3_110
43	B4041	10147	4	1	50	1	T	11/4/15	11/5/15	11/10/15	100		BID: 151106-04; TCL	WC-4_110
44	B4042	10147	5	1	50	1	T	11/4/15	11/5/15	11/10/15	100		BID: 151106-04; TCL	WC-5_110
45	B4043	10030	1	1	50	1	T	11/3/15	11/3/15	11/10/15	100		BID: 151106-04; TCL	WC_N1U
46	B4044	10030	2	1	50	1	T	11/3/15	11/3/15	11/10/15	100		BID: 151106-04; TCL	WC_S1U

LABORATORY CHRONICLE - GC/MS SEMI-VOA

DATE: 11/12/2015 **BATCH ID:** 151110-03 Aqueous

INSTRUMENT: B (yymmdd-##) 151111-01 Aqueous

151112-01 Aqueous

TUNE FILE: DFTPP.U

METHOD 1 BW1115

METHOD 2 BSIM1115

METHOD 3

ANALYST: JC

JC Initial

P: 0.73

B: 1.35

D: 0

#	Data File	Case #	Samp #	DF	Wt/ Vol	F. Vol	MX	Samp Date	Recd Date	Ext Date	% Moist	Time	Comments	Client ID
1	B4045	ABN054-15	DFTPP	1	1000	1	A				100		DFTPP	
2	B4046	ABN075-15	CCV040BNA1	1	1000	1	A				100			
3	B4047	ABN076-15	CCV040BNA2	1	1000	1	A				100			
4	B4048	ABN061-15	CCV000.5SIM	1	1000	1	la				100		SIMS	
44	B4049	10147	5	1	50	1	T	11/4/15	11/5/15	11/10/15	100		BID: 151106-04; TCL	WC-5_110
45	B4050	10030	1	1	50	1	T	11/3/15	11/3/15	11/10/15	100		BID: 151106-04; TCL	WC_N1U
46	B4051	10030	2	1	50	1	T	11/3/15	11/3/15	11/10/15	100		BID: 151106-04; TCL	WC_S1U
47	B4052	10258	6	1	1000	1	la	11/5/15	11/6/15	11/11/15	100		SIMS	MW-11
48	B4053	10258	7	1	1000	1	la	11/5/15	11/6/15	11/11/15	100		SIMS	MW-23
49	B4054	10258	8	1	1000	1	la	11/5/15	11/6/15	11/11/15	100		SIMS	MW-16
50	B4055	10258	9	1	1000	1	la	11/5/15	11/6/15	11/11/15	100		SIMS	MW-13
51	B4056	10258	10	1	1000	1	la	11/5/15	11/6/15	11/11/15	100		SIMS	FB-11052
52	B4057	10258	11	1	1000	1	la	11/5/15	11/6/15	11/11/15	100		SIMS	MW-25
53	B4058	10258	12	1	1000	1	la	11/6/15	11/6/15	11/11/15	100		SIMS	MW-19RR
54	B4059	10258	13	1	1000	1	la	11/6/15	11/6/15	11/11/15	100		SIMS	FB-11062
55	B4060	10258	14	1	1000	1	la	11/6/15	11/6/15	11/11/15	100		SIMS	MW-24-2
56	B4061	10258	15	1	1000	1	la	11/6/15	11/6/15	11/11/15	100		SIMS	MW-24-1
57	B4062	10258	16	1	500	0.5	la	11/6/15	11/6/15	11/11/15	100		SIMS	MW-26
58	B4063	10306	1	1	500	0.5	la	11/9/15	11/10/15	11/11/15	100		SIMS	MW-1
59	B4064	10299	1	1	1000	1	la	11/9/15	11/9/15	11/11/15	100		SIMS	MW-1
60	B4065	10299	2	1	1000	1	la	11/9/15	11/9/15	11/11/15	100		SIMS	MW-2
61	B4066	10299	4	1	1000	1	la	11/9/15	11/9/15	11/11/15	100		SIMS	MW-4
62	B4067	10299	5	1	1000	1	la	11/9/15	11/9/15	11/11/15	100		SIMS	MW-5
63	B4068	10299	6	1	1000	1	la	11/9/15	11/9/15	11/11/15	100		SIMS	MW-105
64	B4069	10299	7	1	1000	1	la	11/9/15	11/9/15	11/11/15	100		SIMS	FB-11091
65	B4070	10258	6	1	1000	1	A	11/5/15	11/6/15	11/11/15	100			MW-11
66	B4071	10258	7	1	1000	1	A	11/5/15	11/6/15	11/11/15	100			MW-23
67	B4072	10258	8	1	1000	1	A	11/5/15	11/6/15	11/11/15	100			MW-16
68	B4073	10258	9	1	1000	1	A	11/5/15	11/6/15	11/11/15	100			MW-13
69	B4074	10258	10	1	1000	1	A	11/5/15	11/6/15	11/11/15	100			FB-11052
70	B4075	10258	11	1	1000	1	A	11/5/15	11/6/15	11/11/15	100			MW-25
71	B4076	10258	12	1	1000	1	A	11/6/15	11/6/15	11/11/15	100			MW-19RR
72	B4077	10258	13	1	1000	1	A	11/6/15	11/6/15	11/11/15	100			FB-11062
73	B4078	10258	14	1	1000	1	A	11/6/15	11/6/15	11/11/15	100			MW-24-2
74	B4079	10258	15	1	1000	1	A	11/6/15	11/6/15	11/11/15	100			MW-24-1
75	B4080	10258	16	1	500	0.5	A	11/6/15	11/6/15	11/11/15	100			MW-26
76	B4081	10306	1	1	500	0.5	A	11/9/15	11/10/15	11/11/15	100			MW-1
77	B4082	10299	1	1	1000	1	A	11/9/15	11/9/15	11/11/15	100			MW-1
78	B4083	10299	2	1	1000	1	A	11/9/15	11/9/15	11/11/15	100			MW-2
79	B4084	10299	4	1	1000	1	A	11/9/15	11/9/15	11/11/15	100			MW-4
80	B4085	10299	5	1	1000	1	A	11/9/15	11/9/15	11/11/15	100			MW-5
81	B4086	10299	6	1	1000	1	A	11/9/15	11/9/15	11/11/15	100			MW-105
82	B4087	10299	7	1	1000	1	A	11/9/15	11/9/15	11/11/15	100			FB-11091
83	B4088	BLKA151112-01		1	1000	1	A			11/12/15	100			
84	B4089	LCSA151112-01		1	1000	1	A			11/12/15	100			
85	B4090	10279	1	1	1000	1	A	11/9/15	11/9/15	11/12/15	100		BID: 151103-01	B4B_EFF-
86	B4091	10302	1	1	1000	1	A	11/10/15	11/10/15	11/12/15	100		BID: 151103-01	B4B_EFF-COMP

SW-846 8270D (SHW)
Aqueous

xtraction Date/Time: 11/10/2015 12:26

Prep. Method: SW-846 351

atch ID: **151110-05**

Tray:

Sample ID	V.	F.	Test Name	Initial	Final	Color	Surrogate BN	Surrogate Acid	Spike BNA	Comments
BLKA151110-05	1	1	BNA	1000			50	50		
LCSA151110-05	2	2	BNA	1000			50	50	105	
10210-001MS	3	3	BNA	500			25	25	70	SIM
10210-001MSD	4	4	BNA	500			25	25	70	SIM

	Sample ID	V.	F.	Test Name	Initial	Final	Color	Surrogate BN	Surrogate Acid	% Sed	% Moist	Comments	QC 1
1	10210-001	5	5	BN	500			25			100	SIM, LIMITED	10210-001MS / 151110-05
2	10258-018	6	6	BN	1000			50				SIM	10210-001MS / 151110-05
3	10251-031	7	1	BN	1000			50		2		SIM	10210-001MS / 151110-05
4	10258-001	8	2	BN	1000			50			100	SIM	10210-001MS / 151110-05
5	10258-002	9	3	BN	1000			50				SIM	10210-001MS / 151110-05
6	10258-003	10	4	BN	1000			50		1		SIM	10210-001MS / 151110-05
7	10258-004	11	5	BN	1000			50				SIM	10210-001MS / 151110-05
8	10258-005	12	6	BN	1000			50		1		SIM	10210-001MS / 151110-05
9	10225-001	1	1	BN	1000			50		7	100	SIM	10210-001MS / 151110-05
0	10261-001	2	2	BN	1000			50		1	100	SIM	10210-001MS / 151110-05
1	10146-001	3	3	BN	1000			50			100	SIM	10210-001MS / 151110-05
2	10161-001	4	4	BN	1000			50			100	SIM	10210-001MS / 151110-05
3	10161-002	5	5	BN	1000			50			100	SIM	10210-001MS / 151110-05
4	10224-001	6	6	BN	500			25		1	100	SIM, LIMITED	10210-001MS / 151110-05
5	10251-030	7	1	BN	1000			50		5	100	SIM	10210-001MS / 151110-05
6	10217-001	8	2	BN	1000			50		7	100	SIM	10210-001MS / 151110-05
7	10251-016	9	3	BN	500			25			100	LIMITED	10210-001MS / 151110-05
8	10251-032	10	4	BN	1000			50		7		SIM	10210-001MS / 151110-05
9	10251-041	11	5	BNA	1000			50	50		100		10210-001MS / 151110-05
0	10271-001	12	6	BN	1000			50		5	100	SIM	10210-001MS / 151110-05

	By	Time
Batched	Frankl	11/10/2015 12:30
Weighed	Frankl	11/10/2015 12:32
Surrogated		
Filtered		
Transferred		

Standard Info	IAS #
Solvent	RA 79-14
Surrogate for BN	EN150608004
Surrogate for Acid	AES026
Spike for BNA	ABN062

. = Vap, F. = Funnel

H = non-homogeneous

Unit: Initial (ml), Final (ml), Spike (ul), Surrogate (u

Color: 1=Clear 2=Light Yellow 3=Yellow 4=Brown 5=Bla

SW-846 8270D (SHW)
Aqueous

xtraction Date/Time: 11/11/2015 07:31

Prep. Method: SW-846 351

atch ID: **151111-01**

Tray:

Sample ID	V.	F.	Test Name	Initial	Final	Color	Surrogate BN	Surrogate Acid	Spike BNA	Comments
BLKA151111-01	1	1	BNA	1000	1	1	50	50		
LCSA151111-01	2	2	BNA	1000	1	3	50	50	105	
10305-001MS	3	3	BNA	500	0.5	3	25	25	70	R-48; SIM
10305-001MSD	4	4	BNA	500	0.5	3	25	25	70	R-48; SIM

	Sample ID	V.	F.	Test Name	Initial	Final	Color	Surrogate BN	Surrogate Acid	% Sed	% Moist	Comments	QC 1
1	10305-001	5	5	BN	500	0.5	1	25		1	100	R-48; SIM, LIMITED	10305-001MS / 151111-01
2	10258-006	6	6	BN	1000	1	1	50		1		SIM	10305-001MS / 151111-01
3	10258-007	7	1	BN	1000	1	1	50		1		SIM	10305-001MS / 151111-01
4	10258-008	8	2	BN	1000	1	1	50				SIM	10305-001MS / 151111-01
5	10258-009	9	3	BN	1000	1	1	50				SIM	10305-001MS / 151111-01
6	10258-010	10	4	BN	1000	1	1	50				SIM	10305-001MS / 151111-01
7	10258-011	11	5	BN	1000	1	1	50		2		SIM	10305-001MS / 151111-01
8	10258-012	12	6	BN	1000	1	1	50				SIM	10305-001MS / 151111-01
9	10258-013	1	1	BN	1000	1	1	50				SIM	10305-001MS / 151111-01
0	10258-014	2	2	BN	1000	1	2	50		1		SIM	10305-001MS / 151111-01
1	10258-015	3	3	BN	1000	1	1	50		1		SIM	10305-001MS / 151111-01
2	10258-016	4	4	BN	500	0.5	2	50				SIM	10305-001MS / 151111-01
3	10306-001	5	5	BN	500	0.5	2	25		5	100	SIM, LIMITED	10305-001MS / 151111-01
4	10299-001	6	6	BNA	1000	1	3	50	50	5	100	SIM	10305-001MS / 151111-01
5	10299-002	7	1	BN	1000	1	1	50				SIM	10305-001MS / 151111-01
6	10299-004	8	2	BNA	1000	1	2	50	50	1		SIM	10305-001MS / 151111-01
7	10299-005	9	3	BNA	1000	1	2	50	50	1		SIM	10305-001MS / 151111-01
8	10299-006	10	4	BNA	1000	1	2	50	50	1		SIM	10305-001MS / 151111-01
9	10299-007	11	5	BNA	1000	1	1	50	50			SIM	10305-001MS / 151111-01
0	10251-008	12	6	BN	500	0.5	1	25			100	Extract & Hold	10305-001MS / 151111-01

	By	Time
Batched	Frankl	11/11/2015 07:33
Weighed	Frankl	11/11/2015 07:35
Surrogated	Frankl	11/11/2015 12:10
Filtered	Frankl	11/11/2015 12:11
Transferred	Frankl	11/11/2015 12:11

Standard Info	IAS #
Solvent	RA 79-14
Surrogate for BN	EN150608004
Surrogate for Acid	AES026
Spike for BNA	ABN062

. = Vap, F. = Funnel

H = non-homogeneous

Unit: Initial (ml), Final (ml), Spike (ul), Surrogate (u

Color:1=Clear 2=Light Yellow 3=Yellow 4=Brown 5=Bla

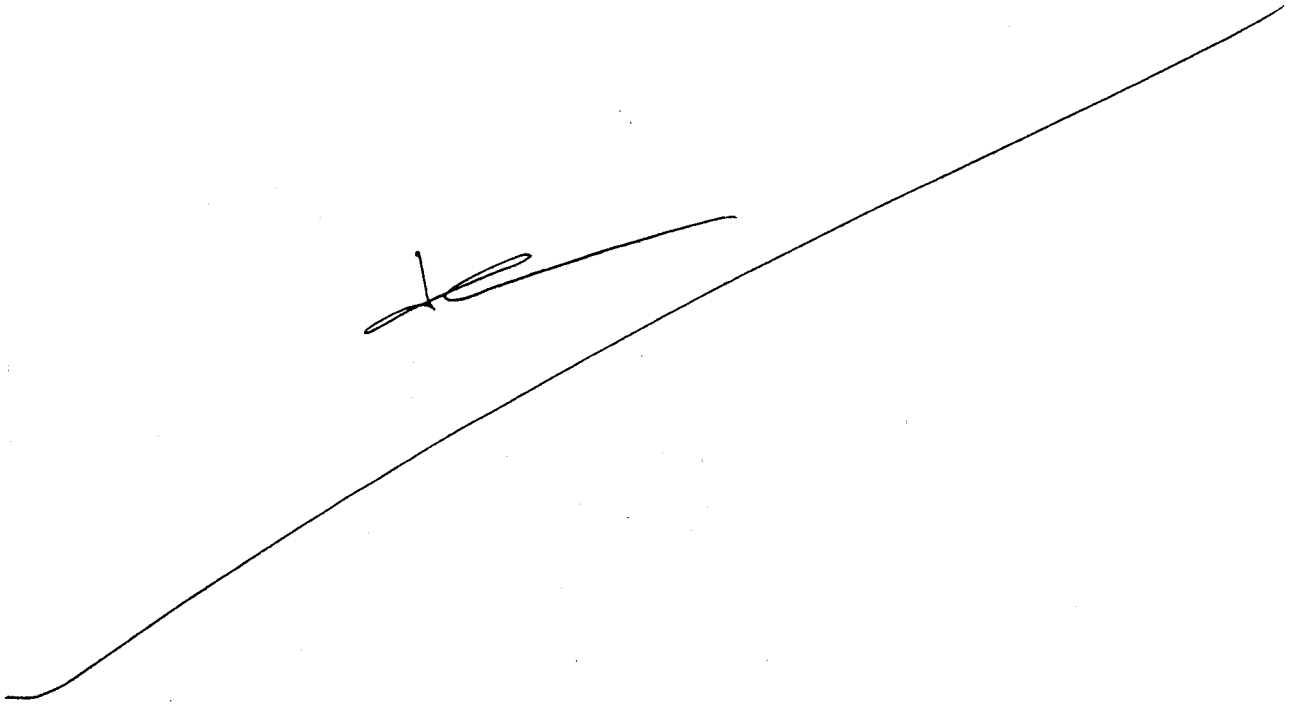
ABN054-15

DATE:07/30/15

DFTPP

		Rec. Date	EXP.Date	
Dftpp 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	1.25ml of each/25ml CH2CL2
Pentachlorophenol 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	
Benzidine 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	**final conc: 50ug/ml**
DDT 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	

EXP:1/16



E15-10258 0666

DATE: 10/01/15	Conc :	Rec/Prep		ABN063-15	ABN064-15	ABN065-15	ABN066-15	ABN067-15	ABN068-15
BNAMIX1 STD		**Date**	**Exp Date**	**1**	**10**	**20**	**40**	**80**	**160**
ISTD (ECS-SVI028)	4000ug/ml	Dec-13	Oct-16	10ul	10ul	10ul	10ul	10ul	10ul
BN surrogates (ECS-BNS025)	1000ug/ml	May-12	May-16	50ul	50ul	50ul	50ul	50ul	50ul
ACID surrogates (ECS-AES025)	2000ug/ml	Jan-13	Nov-16	50ul	50ul	50ul	50ul	50ul	50ul
DIOXANE-d8(ABN-003-15)	1000ug/ml	Jan-15	Jan-16	20ul	20ul	20ul	20ul	20ul	20ul
PAH mix (CPI-238513)	2000ug/ml	Oct-14	Oct-17	0.5ul	5ul	10ul	20ul	40ul	80ul
PHENOL mix(CPI-238668)	2000ug/ml	Oct-14	Oct-17	0.5ul	5ul	10ul	20ul	40ul	80ul
BN mix (CPI-199335)	2000ug/ml	Oct-14	Oct-16	0.5ul	5ul	10ul	20ul	40ul	80ul
ADD ON #1 mix(CPI-252098)	2000ug/ml	Sep-15	May-17	0.5ul	5ul	10ul	20ul	40ul	80ul
OLMO4 mix(CPI- 219588)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
BENZIDINES mix (CPI-238667)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
EXTRA (ABN007-15)	2000ug/ml	Jan-15	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
DIOXANE (SUPELCO-LB914570)	2000ug/ml	Dec-14	Dec-15	0.5ul	5ul	10ul	20ul	40ul	80ul
2,3,4,6-Tetrachlorophenol(RESTEK a010265)	1000ug/ml	Dec-14	Sep-22	1ul	10ul	20ul	40ul	80ul	160ul
Final Volume				1mL	1mL	1mL	1mL	1mL	1mL
EXP:04/16									

DATE: 10/01/15	Conc :	Rec/Prep		ABN069-15	ABN070-15	ABN071-15	ABN072-15	ABN073-15	ABN074-15
BNAMIX2 STD		Date	Exp Date	**1**	**10**	**20**	**40**	**80**	**160**
ISTD (ECS-SVI028)	4000ug/ml	Dec-14	Oct-16	10ul	10ul	10ul	10ul	10ul	10ul
ADD ON #1 mix(CPI-252098)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
BENZIDINES mix (CPI-238667)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
Final Volume				1mL	1mL	1mL	1mL	1mL	1mL
EXP:04/16									

ABN075-15

DATE: 10/01/15

40ng BNA - MIX1 CHECK STD	Conc :	Rec/Prep Date	Exp Date	
ISTD (ECS-SVI028)	4000ug/ml	Dec-14	Oct-16	10ul
BN surrogates (ECS-BNS025)	1000ug/ml	May-12	May-15	50ul
ACID surrogates (ECS-AES025)	2000ug/ml	Jan-13	Jan-15	50ul
DIOXANE-d8(ABN-036-15)	1000ug/ml	May-15	May-16	20ul
ABN062-15	287ug/ml	Aug-15	Feb-15	140ul
Final Volume				1ml

EXP:04/16

ABN076-15

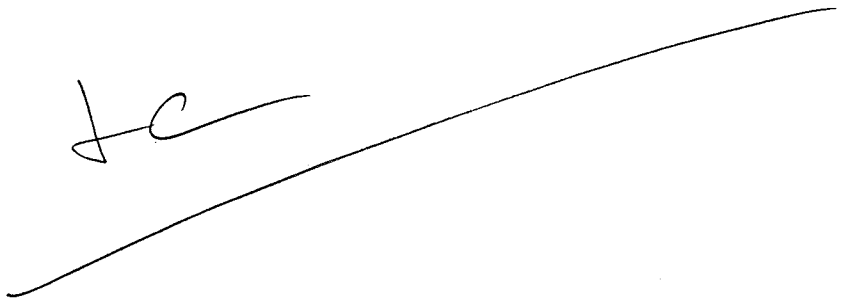
DATE: 10/01/15

40ng BNA - MIX2 CHECK STD	Conc :	Rec/Prep Date	Exp Date	
ISTD (ECS-SVI027)	4000ug/ml	May-12	May-15	10ul
ADD ON #2 mix(ECS-8270A203)	2000ug/mL	Jan-15	Nov-16	20ul
BENZIDINES mix (SUPELCO-LC00780)	2000ug/mL	Jan-15	May-16	20ul
Final Volume				1ml

EXP:04/16

				ABN056-15	ABN057-15	ABN058-15	ABN059-15	ABN060-15
DATE : 08/21/15	Conc :	Rec/Prep Date	Exp Date					
SIM STD				0.02/0.1	0.04/0.2	0.1/0.5	0.2/1	0.5/2
ISTD (ABN055-15)	200ug/ml	08/21/15	8/16	5ul	5ul	5ul	5ul	5ul
Hexachlorobenzene(ABN022-15)	10ug/ml	01/23/15	1/16	2ul	4ul	10ul	20ul	50ul
BNA Mix (ABN021-15)	20ug/ml	01/23/15	1/16	5ul	10ul	25ul	50ul	100ul
Final Volume				1mL	1mL	1mL	1mL	1mL
EXP:02/16								

ABN-061-15		Rec/Prep		
DATE : 08/21/15	Conc :	Date	Exp Date	
0.5ng SIM check STD				0.1/0.5
ISTD (ABN055-15)	200ug/ml	08/21/15	8/16	5ul
Hexachlorobenzene(ABN024-15)	10ug/ml	01/23/15	1/16	10ul
BNA Mix (ABN023-15)	20ug/ml	01/23/15	1/16	25ul
Final Volume				1ml
EXP:02/16				



ABN075-15

DATE: 10/01/15

40ng BNA - MIX1 CHECK STD	Conc :	Rec/Prep Date	Exp Date	
ISTD (ECS-SVI028)	4000ug/ml	Dec-14	Oct-16	10ul
BN surrogates (ECS-BNS025)	1000ug/ml	May-12	May-15	50ul
ACID surrogates (ECS-AES025)	2000ug/ml	Jan-13	Jan-15	50ul
DIOXANE-d8(ABN-036-15)	1000ug/ml	May-15	May-16	20ul
ABN062-15	287ug/ml	Aug-15	Feb-15	140ul
Final Volume				1ml

EXP:04/16

ABN076-15

DATE: 10/01/15

40ng BNA - MIX2 CHECK STD	Conc :	Rec/Prep Date	Exp Date	
ISTD (ECS-SVI027)	4000ug/ml	May-12	May-15	10ul
ADD ON #2 mix(ECS-8270A203)	2000ug/mL	Jan-15	Nov-16	20ul
BENZIDINES mix (SUPELCO-LC00780)	2000ug/mL	Jan-15	May-16	20ul
Final Volume				1ml

EXP:04/16

E15-10258 0670

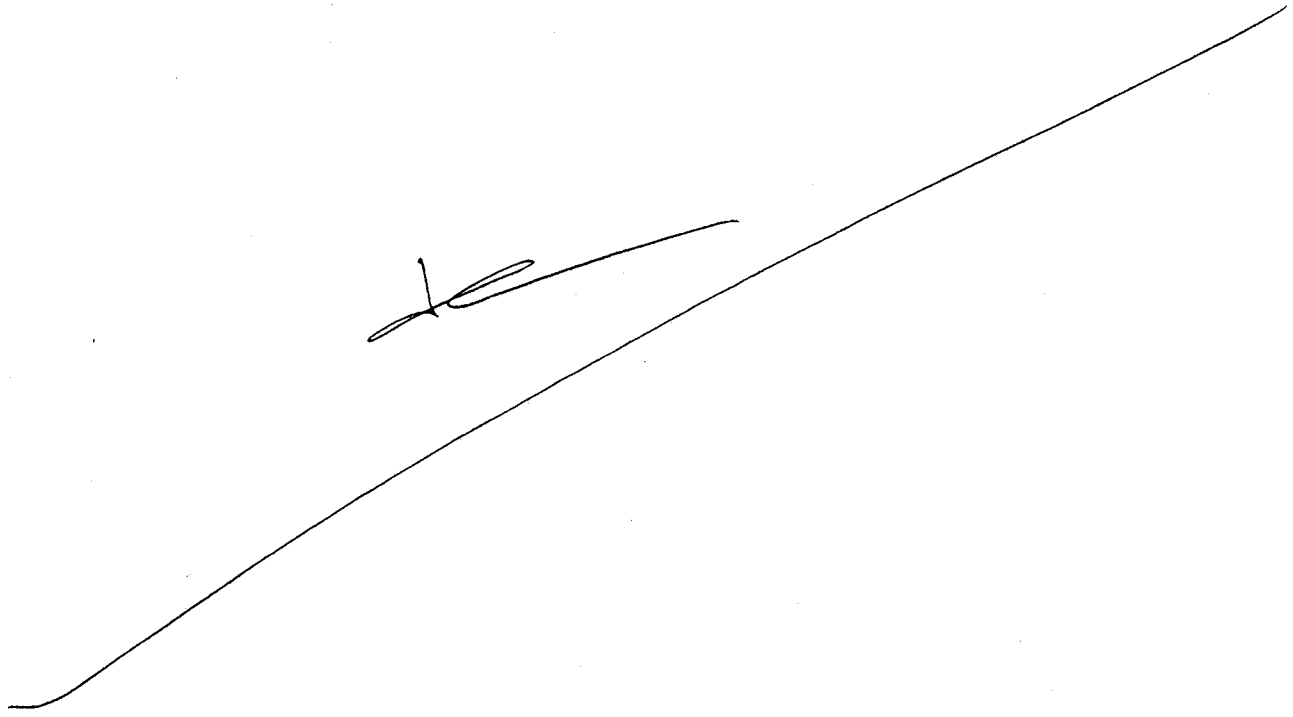
ABN054-15

DATE:07/30/15

DFTPP

		Rec. Date	EXP.Date	
Dftpp 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	1.25ml of each/25ml CH2CL2
Pentachlorophenol 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	**final conc: 50ug/ml**
Benzidine 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	
DDT 1000ug/ml	ECS-KTUNE011	11/28/2012	12/12/2014	

EXP:1/16

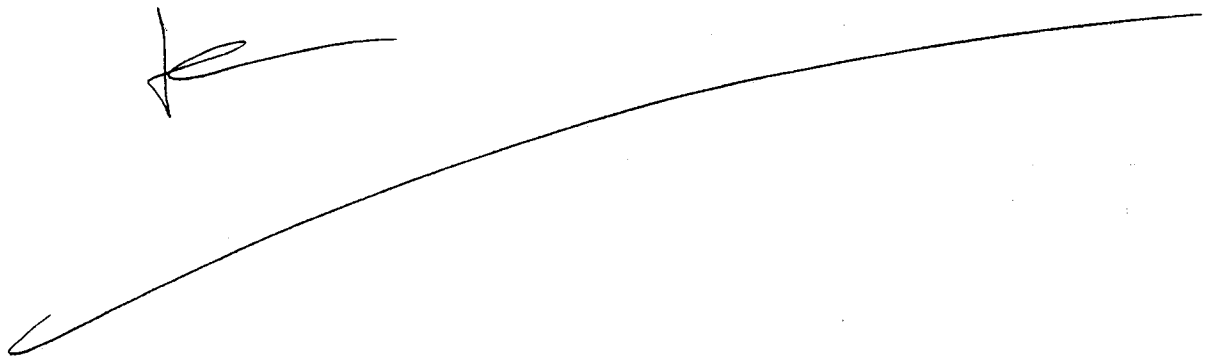


DATE: 10/01/15	Conc :	Rec/Prep		ABN063-15	ABN064-15	ABN065-15	ABN066-15	ABN067-15	ABN068-15
BNAMIX1 STD		**Date**	**Exp Date**	**1**	**10**	**20**	**40**	**80**	**160**
ISTD (ECS-SVI028)	4000ug/ml	Dec-13	Oct-16	10ul	10ul	10ul	10ul	10ul	10ul
BN surrogates (ECS-BNS025)	1000ug/ml	May-12	May-16	50ul	50ul	50ul	50ul	50ul	50ul
ACID surrogates (ECS-AES025)	2000ug/ml	Jan-13	Nov-16	50ul	50ul	50ul	50ul	50ul	50ul
DIOXANE-d8(ABN-003-15)	1000ug/ml	Jan-15	Jan-16	20ul	20ul	20ul	20ul	20ul	20ul
PAH mix (CPI-238513)	2000ug/ml	Oct-14	Oct-17	0.5ul	5ul	10ul	20ul	40ul	80ul
PHENOL mix(CPI-238668)	2000ug/ml	Oct-14	Oct-17	0.5ul	5ul	10ul	20ul	40ul	80ul
BN mix (CPI-199335)	2000ug/ml	Oct-14	Oct-16	0.5ul	5ul	10ul	20ul	40ul	80ul
ADD ON #1 mix(CPI-252098)	2000ug/ml	Sep-15	May-17	0.5ul	5ul	10ul	20ul	40ul	80ul
OLMO4 mix(CPI- 219588)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
BENZIDINES mix (CPI-238667)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
EXTRA (ABN007-15)	2000ug/ml	Jan-15	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
DIOXANE (SUPELCO-LB914570)	2000ug/ml	Dec-14	Dec-15	0.5ul	5ul	10ul	20ul	40ul	80ul
2,3,4,6-Tetrachlorophenol(RESTEK a010265)	1000ug/ml	Dec-14	Sep-22	1ul	10ul	20ul	40ul	80ul	160ul
Final Volume				1mL	1mL	1mL	1mL	1mL	1mL
EXP:04/16									

DATE: 10/01/15	Conc :	Rec/Prep		ABN069-15	ABN070-15	ABN071-15	ABN072-15	ABN073-15	ABN074-15
BNAMIX2 STD		Date	Exp Date	**1**	**10**	**20**	**40**	**80**	**160**
ISTD (ECS-SVI028)	4000ug/ml	Dec-14	Oct-16	10ul	10ul	10ul	10ul	10ul	10ul
ADD ON #1 mix(CPI-252098)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
BENZIDINES mix (CPI-238667)	2000ug/ml	Oct-14	Jan-16	0.5ul	5ul	10ul	20ul	40ul	80ul
Final Volume				1mL	1mL	1mL	1mL	1mL	1mL
EXP:04/16									

				ABN056-15	ABN057-15	ABN058-15	ABN059-15	ABN060-15
DATE : 08/21/15	Conc :	Rec/Prep						
SIM STD		Date	Exp Date	0.02/0.1	0.04/0.2	0.1/0.5	0.2/1	0.5/2
ISTD (ABN055-15)	200ug/ml	08/21/15	8/16	5ul	5ul	5ul	5ul	5ul
Hexachlorobenzene(ABN022-15)	10ug/ml	01/23/15	1/16	2ul	4ul	10ul	20ul	50ul
BNA Mix (ABN021-15)	20ug/ml	01/23/15	1/16	5ul	10ul	25ul	50ul	100ul
Final Volume				1mL	1mL	1mL	1mL	1mL
EXP:02/16								

ABN-061-15		Rec/Prep		
DATE : 08/21/15	Conc :	Date	Exp Date	
0.5ng SIM check STD				0.1/0.5
ISTD (ABN055-15)	200ug/ml	08/21/15	8/16	5ul
Hexachlorobenzene(ABN024-15)	10ug/ml	01/23/15	1/16	10ul
BNA Mix (ABN023-15)	20ug/ml	01/23/15	1/16	25ul
Final Volume				1ml
EXP:02/16				



SAMPLE TRACKING

Integrated Analytical Laboratories LLC

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

Customer Information

Company: GEI Consultants
Address: 18000 Horizon Way Suite 200 Mt. Laurel NJ
Telephone #: 856-608-6860
Fax #: 856-608-6864
Project Manager: Chris Bailey
EMAIL Address: CBailey@geiconsultants
Project Name: SIC
Project Location (State): NJ
Bottle Order #:
☑ "Report to"/"Invoice To" same as above
Sampled by:

COMPLETED BY IAL:
___ Field Sampling ___ Equipment Rental

Reporting Information

REPORT TO:
Address: SAME
Attn:
FAX #
INVOICE TO:
Address: SAME
Attn:
PO #
Quote #

Sample Matrix

DW - Drinking Water
WW - Waste Water
GW - Groundwater
SW - Surface Water
LIQ - Liquid (Specify)
OI - Oil
S - Soil
SOL - Solid
SL - Sludge
W - Wipe
B - Biphasic

****Rush TAT Charge**

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables

NJ, CT, PA
☐ Results Only
☑ Reduced
☐ Regulatory/ Full*

NY
☐ ASP Category A
☐ ASP Category B*

EDDs

☑ NJ SRP
☐ NYSDEC EQuIS
☑ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected:

(Low) Med High

These samples have been previously analyzed by IAL
☐ YES ☑ NO

Turn-Around Time (TAT)

(Standard (10 business days) Verbal
Rush/date needed (*only* if pre-approved)**
Hard Copy: Std 3 week
Other - call for price

Regulatory Requirement

New Jersey	New York
☑ GWQS	☐ AWQS (TOGS Table 1)
☐ IGW	☐ GWEL (TOGS Table 5)
☐ SRS	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	OTHER Reg. Req. (specify)

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015

TAT for PHC (if other than 2 weeks):

SAMPLE INFORMATION

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	VOC	PAH+SIM	ANALYTICAL PARAMETERS (please note if contingent)	Sample Specific Notes:
MW-21	—	11/4/15	11:00	GW	4	1	✓	✓		
FB-11042015	—	11/4/15	12:30	GW	4	2	✓	✓		
MW-22	—	11/4/15	12:55	GW	4	3	✓	✓		
MW-20	—	11/4/15	14:25	GW	4	4	✓	✓		
MW-18	—	11/4/15	14:55	GW	4	5	✓	✓		
Trip Blanks	—	—	—	—	4		✓	✓		
MW-11	—	11/5/15	10:25	GW	4	6	✓	✓		
MW-23	—	11/5/15	11:55	GW	4	7	✓	✓		

Known Hazard: YES / NO
Describe:

Preservative Code: 1 = None, 2 = HCl, 3 = HNO3, 4 = MeOH, 5 = NaOH, 6 = H2SO4, 7 = Other
Container Code: A = Amber Glass, B = Plastic, C = Vial, D = Glass, E = EnCore, T = Terracore
Preservative (use code)
Container Type (use code)

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Carrier (check one :
☑ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Special Instructions/QC Requirements & Comments:

FOR LAB USE ONLY
SDG #: 10258
Cooler Temp: 4 °C

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
[signature]	11/6/15	15:55	[signature]	11/6/15	15:55
[signature]	11/6/15	18:32		11/6/15	18:32

IAL Rev 2/2014

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

PAGE: 1 of 2

10258 BS 15

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

Customer Information

Company: GEI Consultants
Address: 18000 Horizon way
Suite 200 Mt. Laurel NJ
Telephone #: 856-608-6860
Fax #: 856-608-6864
Project Manager: Chris Dailey
EMAIL Address: Cdailey@geiconsultants
Project Name: SIC
Project Location (State): NJ
Bottle Order #:
☑ "Report to"/"Invoice To" same as above
Sampled by:

COMPLETED BY IAL: ___ Field Sampling ___ Equipment Rental

Reporting Information

REPORT TO:
Address: SAME
Attn:
FAX #
INVOICE TO:
Address: SAME
Attn:
PO #
Quote #

Sample Matrix

DW - Drinking Water
WW - Waste Water
GW - Groundwater
SW - Surface Water
LIQ - Liquid (Specify)
OI - Oil
S - Soil
SOL - Solid
SL - Sludge
W - Wipe
B - Biphasic

****Rush TAT Charge**

24 hr - 100%...
48 hr - 75%....
72 hr - 50%....
96 hr - 35%....
5 day - 25%....
6-9 day - 10%

Deliverables

NJ, CT, PA
☐ Results Only
☒ Reduced
☑ Regulatory/ Full*

NY
☐ ASP Category A
☐ ASP Category B*

EDDs

☑ NJ SRP
☐ NYSDEC EQuIS
☑ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected: (Low) Med High

These samples have been previously analyzed by IAL
☐ YES ☑ NO

Turn-Around Time (TAT)

Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Std 3 week — Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
TAT for PHC (if other than 2 weeks):
☐ DRO-8015

Regulatory Requirement

New Jersey	New York
☑ GWQS	☐ AWQS (TOGS Table 1)
☐ IGW	☐ GWEL (TOGS Table 5)
☐ SRS	☐ Part 375-6.8(a) - Unrestricted
☐ Ecological	☐ Part 375-6.8(b) - Restricted
☐ DW	☐ CP-51 Table 2 or 3 (selection required)
☐ SPLP	OTHER Reg. Req. (specify)

SAMPLE INFORMATION

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	VOC	PAH+SIM	ANALYTICAL PARAMETERS (please note if contingent)	Sample Specific Notes:
MW-16	—	11/5/15	13:20	GW	4	8	✓	✓		
MW-13	—	11/5/15	13:45	GW	4	9	✓	✓		
FB-11052015	—	11/5/15	15:40	GW	4	10	✓	✓		
MW-25	—	11/5/15	16:45	GW	4	11	✓	✓		
MW-19RR	—	11/6/15	900	GW	4	12	✓	✓		
~~MW-~~FB-11062015	—	11/6/15	10:45	GW	4	13	✓	✓		
MW-24-2	—	11/6/15	10:10	GW	4	14	✓	✓		
MW-24-1	—	11/6/15	11:45	GW	4	15	✓	✓		

Known Hazard: YES / NO
Describe:

Preservative Code: 1 = None, 2 = HCl, 3 = HNO3, 4 = MeOH, 5 = NaOH, 6 = H2SO4, 7 = Other
Container Code: A = Amber Glass, B = Plastic, C = Vial, D = Glass, E = EnCore, T = Terracore

Preservative (use code):
Container Type (use code):

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

IAL Rev 2/2014

Special Instructions/QC Requirements & Comments:

FOR LAB USE ONLY
SDG #: 10258
Cooler Temp: 4 °C

Carrier (check one :
☒ IAL Courier
☐ Client Courier
☐ FedEx/UPS***
***Tracking #:

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
[signature]	11/6/15	15:55	[signature] IAL	11/6/15	15:55
[signature] IAL	11/6/15	18:32	[signature]	11/6/15	18:32

4B COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

PAGE: 2 of 3

E15102589

IAL Integrated Analytical Laboratories LLC

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Fax: 973-989-5288
Web: www.ialonline.com

Customer Information

Company: GEI Consultants
Address: 18000 Horizon Way Suite 200 Mt. Laurel NJ
Telephone #: 856-608-6860
Fax #: 856-608-6864
Project Manager: Chris Dailey
EMAIL Address: Cdailey@geiconsultants
Project Name: SIC
Project Location (State): NJ
Bottle Order #:
☑ "Report to"/"Invoice To" same as above
Sampled by:

COMPLETED BY IAL: ___ Field Sampling ___ Equipment Rental

Reporting Information

REPORT TO:
Address: SAME
Attn:
FAX #
INVOICE TO:
Address: SAME
Attn:
PO #
Quote #

**Rush TAT Charge: 24 hr - 100%; 48 hr - 75%; 72 hr - 50%; 96 hr - 35%; 5 day - 25%; 6-9 day - 10%

Deliverables

NJ, CT, PA: ☐ Results Only; ☑ Reduced; ☒ Regulatory/Full*
NY: ☐ ASP Category A; ☐ ASP Category B*

EDDs

☑ NJ SRP
☐ NYSDEC EQuIS
☑ lab approved custom EDD
☐ NO EDD REQ'D

Concentrations Expected:

(Low) Med High
These samples have been previously analyzed by IAL: ☐ YES ☑ NO

Turn-Around Time (TAT)

(Standard (10 business days) Verbal) — circled
Rush/date needed (only if pre-approved)** ________
Hard Copy: Std 3 week — Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

☐ NJ EPH-DRO - Category 1
☐ NJ EPH-C40 - Category 2
☐ NJ EPH-Fractionated - Cat 2
☐ DRO-8015
TAT for PHC (if other than 2 weeks):

Regulatory Requirement

New Jersey: ☑ GWQS; ☐ IGW; ☐ SRS; ☐ Ecological; ☐ DW; ☐ SPLP
New York: ☐ AWQS (TOGS Table 1); ☐ GWEL (TOGS Table 5); ☐ Part 375-6.8(a) - Unrestricted; ☐ Part 375-6.8(b) - Restricted; ☐ CP-51 Table 2 or 3 (selection required)
OTHER Reg. Req. (specify)

Sample Matrix

DW - Drinking Water; WW - Waste Water; GW - Groundwater; SW - Surface Water; LIQ - Liquid (Specify)
OI - Oil; S - Soil; SOL - Solid; SL - Sludge; W - Wipe; B - Biphasic

SAMPLE INFORMATION

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling Date	Sampling Time	Matrix	# containers	IAL #	VOC	PAH+SIMS	Sample Specific Notes
MW-26	—	11/6/15	13:45	GW	4	16	✓	✓	
Trip blank	—	11/6/15	—	GW	1	17	✓	✓	

Preservative (use code)
Container Type (use code)

Known Hazard: YES / NO
Describe:

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).

Preservative Code: 1 = None; 2 = HCl; 3 = HNO3; 4 = MeOH; 5 = NaOH; 6 = H2SO4; 7 = Other
Container Code: A = Amber Glass; B = Plastic; C = Vial; D = Glass; E = EnCore; T = Terracore

Carrier (check one): ☒ IAL Courier; ☐ Client Courier; ☐ FedEx/UPS***
***Tracking #:

Special Instructions/QC Requirements & Comments: Only sent 45 Vials. MW-26 has 1 Vial w/ HCL & 3 Ambers. Hope it will be enough.

Relinquished by (Signature and Company)	Date	Time	Received by (Signature and Company)	Date	Time
[signature]	11/6/15	15:55	[signature] IAL	11/6/15	15:55
[signature] IAL	11/6/15	18:32	[signature]	11/6/15	18:32

FOR LAB USE ONLY
SDG #: 10258
Cooler Temp: 4 °C

IAL Rev 2/2014
LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK
Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

E15-10258 0677

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-10258: SIC

To: Chris Dailey
GEI Consultants, Inc.
Fax: 1(856) 608-6864
EMail: cdailey@geiconsultants.com;datagr

Report To

GEI Consultants, Inc.
18000 Horizon Way
Suite 200
Mount Laurel, NJ 08054
Attn: Chris Dailey

Bill To

GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801
Attn: Accounts Payable

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Regulatory		Nov 06, 2015 @ 18:32	NA	Nov 23, 2015	Dec 01, 2015 *

* Any ***Conditional or Hold*** status will delay final hardcopy report sent date.

Diskette Req. Equis GEI

**** QC Requirement (must meet):** NJ GWQS

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
10258-001	MW-21	NA	11/04/15@11:00	Aqueous	ug/L (ppb)	
10258-002	FB-11042015	NA	11/04/15@12:30	Aqueous	ug/L (ppb)	
10258-003	MW-22	NA	11/04/15@12:55	Aqueous	ug/L (ppb)	
10258-004	MW-20	NA	11/04/15@14:25	Aqueous	ug/L (ppb)	
10258-005	MW-18	NA	11/04/15@14:55	Aqueous	ug/L (ppb)	
10258-006	MW-11	NA	11/05/15@10:25	Aqueous	ug/L (ppb)	
10258-007	MW-23	NA	11/05/15@11:55	Aqueous	ug/L (ppb)	
10258-008	MW-16	NA	11/05/15@13:20	Aqueous	ug/L (ppb)	
10258-009	MW-13	NA	11/05/15@13:45	Aqueous	ug/L (ppb)	
10258-010	FB-11052015	NA	11/05/15@15:40	Aqueous	ug/L (ppb)	
10258-011	MW-25	NA	11/05/15@16:45	Aqueous	ug/L (ppb)	
10258-012	MW-19RR	NA	11/06/15@09:00	Aqueous	ug/L (ppb)	
10258-013	FB-11062015	NA	11/06/15@10:45	Aqueous	ug/L (ppb)	
10258-014	MW-24-2	NA	11/06/15@11:10	Aqueous	ug/L (ppb)	
10258-015	MW-24-1	NA	11/06/15@11:45	Aqueous	ug/L (ppb)	
10258-016	MW-26	NA	11/06/15@13:45	Aqueous	ug/L (ppb)	
10258-017	TRIP BLANK	NA	11/06/15	Aqueous	ug/L (ppb)	
10258-018	FB-110315	NA	11/03/15	Aqueous	ug/L (ppb)	
10258-019	TRIP BLANK	NA	11/04/15	Aqueous	ug/L (ppb)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/18/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/11/2015
002	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/18/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/11/2015
003	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/18/2015

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

IAL
Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-10258: SIC

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/11/2015
004	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/18/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/11/2015
005	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/18/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/11/2015
006	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/19/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/12/2015
007	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/19/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/12/2015
008	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/19/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/12/2015
009	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/19/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/12/2015
010	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/19/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/12/2015
011	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/19/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/12/2015
012	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/20/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/13/2015
013	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/20/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/13/2015
014	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/20/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/13/2015
015	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/20/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/13/2015
016	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/20/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/13/2015
017	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/20/2015
018	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/17/2015
	TCL/PAH + SIMS	Analyze	8270D SIM	STD/2 WKS	11/10/2015
019	TCL VO + 15	Analyze	8260C	STD/2 WKS	11/18/2015

Project Notes:

NOTE 1 taken by Ellen on 11/09/2015 02:08

ANY E QUALIFIED RESULTS NEED A COMBINED FORM 1.

NOTE 4 taken by Ellen on 11/09/2015 02:14

TRIP BLANK LISTED ON THE COC TWICE. AS PER CHRIS D., NEEDS TWO TRIP BLANKS RUN. AS PER CHRIS D., SPLIT TRIP VIALS RECEIVED INTO TWO SAMPLES FOR ANALYSIS. LABELED AS SAMPLES #17 & #19.

RECEIVED EXTRA FIELD BLANK LABELED FB-11032015 NOT LISTED ON COC. NO OTHER SAMPLES ON COC TAKEN ON 11/3/2015. AS PER CHRIS D., PLEASE ANALYZE. LABELED AS SAMPLE #18.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

Integrated Analytical Laboratories LLC

PROJECT INFORMATION

E15-10258: SIC

REV 1 taken by kim on 11/12/2015 02:31

CORRECT SAMPLE ID FOR SAMPLE 013 TO FB-11062015, PER LUKE CUCCURULLO.

273 Franklin Road
Randolph, NJ 07869
Phone: 973 361 4252
Fax: 973 989 5288

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 15** **10258** CLIENT: ERT consultants

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

COC: (COMPLETE) / INCOMPLETE

Comments

KEY

✓ = YES/NA

✗ = NO

VOA received: ☐ Encore ☐ IGW - Methanol

(check one) ☐ Terra Core ☐ No Preservative

✓	Bottles Intact	
✓	no-Missing Bottles	
✗	no-Extra Bottles	Received Set of Field blank containers labeled FB-110315 @16:30 11/3/15. Labeled these field blanks as FB# 18
✓	Sufficient Sample Volume	
✓	no-headspace/bubbles in VOs	
✓	Labels intact/correct	
✓	pH Check (exclude VOs)[1]	
✓	Correct bottles/preservative	
✓	Sufficient Holding/Prep Time[1]	
☐	Multiphasic Sample	
☐	Sample to be Subcontracted	
✗	**Chain of Custody is Clear**	trip blanks listed twice on C.O.C. labeled all five trip blanks received as #17, labeled 2 blanks as ~~#17~~ 3 as #19

[1] All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS: for #16, 3 unpreserved containers and one hcl voa received. (MW-26)

SAMPLE(S) VERIFIED BY: INITIAL [initials] DATE 11/4/15

CORRECTIVE ACTION REQUIRED: **YES** ☐ (SEE BELOW) **NO** ✓

If COC is **NOT** clear, ***STOP*** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES ☐ Date/ Time: _____ NO ☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL [initials] DATE 11/4/15

Laboratory Custody Chronicle

IAL Case No.

E15-10258

Client GEI Consultants, Inc.

Project SIC

Received On 11/ 6/2015@18:32

Department: Volatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL VO + 15	10258-001	Aqueous	n/a	n/a	11/14/15	Sylvia
"	-002	"	n/a	n/a	11/14/15	Sylvia
"	-003	"	n/a	n/a	11/14/15	Sylvia
"	-004	"	n/a	n/a	11/14/15	Sylvia
"	-005	"	n/a	n/a	11/14/15	Sylvia
"	-006	"	n/a	n/a	11/14/15	Sylvia
"	-007	"	n/a	n/a	11/14/15	Sylvia
"	-008	"	n/a	n/a	11/14/15	Sylvia
"	-009	"	n/a	n/a	11/14/15	Sylvia
"	-010	"	n/a	n/a	11/14/15	Sylvia
"	-011	"	n/a	n/a	11/14/15	Sylvia
"	-012	"	n/a	n/a	11/14/15	Sylvia
"	-013	"	n/a	n/a	11/14/15	Sylvia
"	-014	"	n/a	n/a	11/14/15	Sylvia
"	-015	"	n/a	n/a	11/14/15	Sylvia
"	-016	"	n/a	n/a	11/14/15	Sylvia
"	-017	"	n/a	n/a	11/14/15	Sylvia
"	-018	"	n/a	n/a	11/14/15	Sylvia
"	-019	"	n/a	n/a	11/14/15	Sylvia

Department: Semivolatiles			***Prep. Date***	***Analyst***	***Analysis Date***	***Analyst***
TCL/PAH + SIMS	-001	Aqueous	11/10/15	Frank L.	11/ 1/15	JC
"	-002	"	11/10/15	Frank L.	11/ 1/15	JC
"	-003	"	11/10/15	Frank L.	11/ 1/15	JC
"	-004	"	11/10/15	Frank L.	11/ 1/15	JC
"	-005	"	11/10/15	Frank L.	11/ 1/15	JC
"	-006	"	11/11/15	Frank L.	11/12/15	JC
"	-007	"	11/11/15	Frank L.	11/12/15	JC
"	-008	"	11/11/15	Frank L.	11/12/15	JC
"	-009	"	11/11/15	Frank L.	11/12/15	JC
"	-010	"	11/11/15	Frank L.	11/12/15	JC
"	-011	"	11/11/15	Frank L.	11/12/15	JC
"	-012	"	11/11/15	Frank L.	11/12/15	JC
"	-013	"	11/11/15	Frank L.	11/12/15	JC
"	-014	"	11/11/15	Frank L.	11/12/15	JC
"	-015	"	11/11/15	Frank L.	11/12/15	JC
"	-016	"	11/11/15	Frank L.	11/12/15	JC
"	-018	"	11/10/15	Frank L.	11/ 1/15	JC

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

Appendix E

EDD Submission Emails

Poinsett, Andrea

From: DEP SRPEDD <SRPEDD@dep.nj.gov>
Sent: Tuesday, January 14, 2020 5:08 PM
To: Xu, Shu
Subject: [EXT] G000006130, LSR120001, NJD982187460, HB249579, (Directory: 14-12132) - Passed
Attachments: DTST.TXT; EDSA_Error_Log.html; erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; HZRESULT.TXT; HZSAMPLE.TXT; SampleLoc-7-1-8.KML

The EDD submission via email from (SXu@geiconsultants.com) on (1/14/2020 1:41:05 PM) with the subjectline "[EXTERNAL] G000006130"

The following identifiers were in the DTST file:

- Directory: 14-12132
- DESC: SIC Former MGP Site
- SRPID: G000006130
- Submit Date: 01/14/2020

This submission has been issued an SRP Catalog ID: HB249579

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_41252
Sub ID:SUB_392447

Poinsett, Andrea

From: DEP SRPEDD <SRPEDD@dep.nj.gov>
Sent: Tuesday, January 14, 2020 5:12 PM
To: Xu, Shu
Subject: [EXT] G000006130, LSR120001, NJD982187460, HB249583, (Directory: 15-08356) - Passed
Attachments: DTST.TXT; EDSA_Error_Log.html; erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; HZRESULT.TXT; HZSAMPLE.TXT; rstp-7-1-8.txt; SampleLoc-7-1-8.KML

The EDD submission via email from (SXu@geiconsultants.com) on (1/14/2020 1:18:35 PM) with the subjectline "[EXTERNAL] G000006130"

The following identifiers were in the DTST file:

- Directory: 15-08356
- DESC: SIC Former MGP Site
- SRPID: G000006130
- Submit Date: 1/14/2020

This submission has been issued an SRP Catalog ID: HB249583

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_41256
Sub ID:SUB_392475

Poinsett, Andrea

From: DEP SRPEDD <SRPEDD@dep.nj.gov>
Sent: Tuesday, January 14, 2020 5:13 PM
To: Xu, Shu
Subject: [EXT] G000006130, LSR120001, NJD982187460, HB249584, (Directory: 15-04681) - Passed
Attachments: DTST.TXT; EDSA_Error_Log.html; erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; HZRESULT.TXT; HZSAMPLE.TXT; rstp-7-1-8.txt; SampleLoc-7-1-8.KML

The EDD submission via email from (SXu@geiconsultants.com) on (1/14/2020 1:17:44 PM) with the subjectline "[EXTERNAL] G000006130"

The following identifiers were in the DTST file:

- Directory: 15-04681
- DESC: SIC Former MGP Site
- SRPID: G000006130
- Submit Date: 1/14/2020

This submission has been issued an SRP Catalog ID: HB249584

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_41257
Sub ID:SUB_392479

Poinsett, Andrea

From: DEP SRPEDD <SRPEDD@dep.nj.gov>
Sent: Tuesday, January 14, 2020 5:14 PM
To: Xu, Shu
Subject: [EXT] G000006130, LSR120001, NJD982187460, HB249585, (Directory: 15-04181) - Passed
Attachments: DTST.TXT; EDSA_Error_Log.html; erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; HZRESULT.TXT; HZSAMPLE.TXT; SampleLoc-7-1-8.KML

The EDD submission via email from (SXu@geiconsultants.com) on (1/14/2020 1:16:17 PM) with the subjectline "[EXTERNAL] G000006130"

The following identifiers were in the DTST file:

- Directory: 15-04181
- DESC: SIC Former MGP Site
- SRPID: G000006130
- Submit Date: 1/14/2020

This submission has been issued an SRP Catalog ID: HB249585

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_41258
Sub ID:SUB_392483

Poinsett, Andrea

From: DEP SRPEDD <SRPEDD@dep.nj.gov>
Sent: Tuesday, March 3, 2020 1:11 AM
To: Xu, Shu
Subject: [EXT] G000006130, LSR120001, NJD982187460, HB251674, (Directory: 14-02636) - Passed
Attachments: DTST.TXT; EDSA_Error_Log.html; erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; HZRESULT.TXT; HZSAMPLE.TXT; SampleLoc-7-1-8.KML

The EDD submission via email from (SXu@geiconsultants.com) on (3/2/2020 10:48:26) with the subjectline "[EXTERNAL] G000006130"

The following identifiers were in the DTST file:

- Directory: 14-02636
- DESC: SIC Former MGP Site
- SRPID: G000006130
- Submit Date: 03/2/2020

This submission has been issued an SRP Catalog ID: HB251674

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_43756
Sub ID:SUB_411487

Poinsett, Andrea

From: DEP SRPEDD <SRPEDD@dep.nj.gov>
Sent: Tuesday, March 3, 2020 1:15 AM
To: Xu, Shu
Subject: [EXT] G000006130, LSR120001, NJD982187460, HB251677, (Directory: 14-02878) - Passed
Attachments: DTST.TXT; EDSA_Error_Log.html; erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; HZRESULT.TXT; HZSAMPLE.TXT; SampleLoc-7-1-8.KML

The EDD submission via email from (SXu@geiconsultants.com) on (3/2/2020 10:47:15) with the subjectline "[EXTERNAL] G000006130"

The following identifiers were in the DTST file:

- Directory: 14-02878
- DESC: SIC Former MGP Site
- SRPID: G000006130
- Submit Date: 03/02/2020

This submission has been issued an SRP Catalog ID: HB251677

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_43759
Sub ID:SUB_411500

Poinsett, Andrea

From: DEP SRPEDD <SRPEDD@dep.nj.gov>
Sent: Tuesday, March 3, 2020 1:16 AM
To: Xu, Shu
Subject: [EXT] G000006130, LSR120001, NJD982187460, HB251678, (Directory: 15-10258) - Passed
Attachments: DTST.TXT; EDSA_Error_Log.html; erdtst-7-1-8.txt; erresult-7-1-8.txt; ersample-7-1-8.txt; HZRESULT.TXT; HZSAMPLE.TXT; rstp-7-1-8.txt; SampleLoc-7-1-8.KML

The EDD submission via email from (SXu@geiconsultants.com) on (3/2/2020 10:46:05) with the subjectline "[EXTERNAL] G000006130"

The following identifiers were in the DTST file:

- Directory: 15-10258
- DESC: SIC Former MGP Site
- SRPID: G000006130
- Submit Date: 03/02/2020

This submission has been issued an SRP Catalog ID: HB251678

Submission status: Passed.

Please do **not** resubmit.

EDD data deliverable must be submitted only once.
- To fulfill Key Document requirements attach only a copy of this email as an appendix to the document.
- Do **not** resubmit any approved EDD deliverable as part of a portal submission.

Email ID: OEM_43760
Sub ID:SUB_411504

Appendix F

Well Documents

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201213677

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: JERSEY CENTRAL POWER & LIGHT CO JERSEY CENTRAL POWER & LIGHT CO

Company/Organization: Jersey Central Power & Light Co

Address: 800 Cabin Hill Drive Greensburg, Pennsylvania 15601

WELL LOCATION: Jersey central power & light co

Address: 220 40th st

County: Cape May Municipality: Sea Isle City Lot: 21 Block: 40.04

Easting (X): 437245 Northing (Y): 118150
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL DECOMMISSIONED: May 17, 2016

WELL USE: MONITORING

Other Use(s):

Local ID: mw21

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 12

Was a New Well Drilled? N

Formation Type: Unconsolidated

New Well Permit Number:

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	2	2	PVC	sch 40
Screen	2	12	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	12	2	0	5	94	8
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No

Authorization Official:

Obstruction Type:

Authorization Number:

Alternative Decomm. Method? No

Authorization Date:

Method Used

ATTACHMENTS:

Robert Wintersteen
MONITORING
Sealing Driller: LICENSE # 602265

AMERIDRILL INC
1201 EDGELY RD
Company: <NO DATA FOUND>, PA 19057

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Sea Isle City Former Manufactured Gas Plant Site

List all AKAs:

Street Address: 210 39th Street

Municipality: City of Sea Isle City (Township, Borough or City)

County: Cape May Zip Code: 09243

Program Interest (PI) Number(s): G000006130 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Jersey Central Power & Light Company
2. Well Location (Street Address): 220 40th Street
3. Well Location (Municipal Block and Lot) Block# 40.04 Lot # 20

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201213677
2. Site Well Number as shown on application or plans):	MW-21
3. Well Completion Date:	09/14/2012
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	0.25
5. Total Depth of Well to the nearest ½ foot:	12.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.00
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hour

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Sea Isle City Former MGP Site
List all AKAs:
Street Address: 220 40th Street
Municipality: Sea Isle City (Township, Borough or City)
County: Cape May Zip Code: 08243
Program Interest (PI) Number(s): G000006130 Case Tracking Number(s): NJD 982187460

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Jersey Central Power & Light Company
2. Well Location (Street Address): 220 40th Street
3. Well Location (Municipal Block and Lot) Block# 40.04 Lot # 20

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201213677
2. Site Well Number As shown on application or plans): ..... MW 21
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:

   Longitude: West 74° 41' 36.7" Latitude: North 39° 09' 27.3"

4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

   North: 118,147 feet East: 437,250 feet

5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 4.74
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   Elevations are referenced to N.A.V.D. 1988, Horizontal datum is referenced to N.J.S.P.C.S.–N.A.D. 1983 based on GPS observations by Vargo Associates in May 2004 of N.J.G.C.S. monument G101 (PID KV3414).

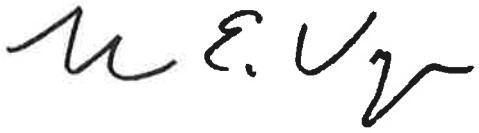
7. Significant observations and notes:

   Outer Casing Elevation = 4.99

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date: October 5, 2012

Surveyor's Name: Robert E. Vargo License Number: GS43261

Mailing Address: 2771 Delsea Drive

City/Town: Franklinville State: NJ Zip Code: 08322

Phone Number: 856-694-1716 Ext.: Fax: 856-694-3102

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201504977

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: MUHLBAIER, GARY M & MUHLBAIER, RONALD MUHLBAIER, GARY M & MUHLBAIER, RONALD

Company/Organization: Muhlbaier, Gary M & Muhlbaier, Ronald

Address: 5 Hollybrook Court Sewell, New Jersey 08080

WELL LOCATION: Single-Family Residence

Address: 218 40th Street

County: Cape May Municipality: Sea Isle City Lot: 21 Block: 40.04

Easting (X): 437324 Northing (Y): 118109
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL DECOMMISSIONED: May 17, 2016

WELL USE: MONITORING

Other Use(s):

Local ID: MW-22

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 12

Was a New Well Drilled? N

Formation Type: Unconsolidated

New Well Permit Number:

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	2	2	PVC	sch 40
Screen	2	12	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	12	2	0	5	94	8
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No

Authorization Official:

Obstruction Type:

Authorization Number:

Alternative Decomm. Method? No

Authorization Date:

Method Used

ATTACHMENTS:

Robert Wintersteen
MONITORING
Sealing Driller: LICENSE # 602265

AMERIDRILL INC
1201 EDGELY RD
Company: <NO DATA FOUND>, PA 19057

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Sea Isle City Former Manufactured Gas Plant Site

List all AKAs:

Street Address: 210 39th Street

Municipality: City of Sea Isle City (Township, Borough or City)

County: Cape May Zip Code: 09243

Program Interest (PI) Number(s): G000006130 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Jersey Central Power & Light Company
2. Well Location (Street Address): 220 40th Street
3. Well Location (Municipal Block and Lot) Block# 40.04 Lot # 20

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201213677
2. Site Well Number as shown on application or plans):	MW-21
3. Well Completion Date:	09/14/2012
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	0.25
5. Total Depth of Well to the nearest ½ foot:	12.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.00
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hour

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Sea Isle City Former MGP Site
List all AKAs:
Street Address: 218 40th Street
Municipality: Sea Isle City (Township, Borough or City)
County: Cape May Zip Code: 08243
Program Interest (PI) Number(s): G000006130 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Gary M. and Ronald Muhlbaier
2. Well Location (Street Address) 218 40TH Street
3. Well Location (Municipal Block and Lot) Block# 40.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201504977
2. Site Well Number (As shown on application or plans): MW 22
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 39° 09' 26.90" Longitude: West 74° 41' 35.70"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 118,105 feet East 437,329 feet
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 4.21
   Elevation Top of Outer casing: 4.58 Elevation of ground: 4.6
   Check One: ☒ NAVD 88 ☐ NGVD 29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   Elevations are referenced to N.A.V.D. 1988, Horizontal datum is referenced to N.J.S.P.C.S.–N.A.D. 1983 based on GPS observations by Vargo Associates in May 2004 of N.J.G.C.S. monument G101 (PID KV3414).
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 06-11-15
Surveyor's Name: Robert E. Vargo License Number: GS43261
Firm Name: Vargo Associates Certificate Authorization #: 24GA28021200
Mailing Address: 2771 Delsea Drive
City/Town: Franklinville State: NJ Zip Code: 08322
Phone Number: 856-694-1716 Ext.: 110 Fax: 856-694-3102

Appendix G

Receptor Evaluation

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE

Site Name: Sea Isle City Coal Gas (JCP&L and NJNG)

Program Interest (PI) Number(s): G000006130

Communication Center Number(s) and/or ISRA number(s) for this submission: (as *many as will fit in the space provided)*

This form must be attached to the Cover/Certification Form if not submitted through a Remedial Phase Online Service

Indicate the type of submission:

☐ Initial RE Submission

☒ Updated RE Submission

Indicate the reason for submission of an updated RE form

- ☐ Submission of an Immediate Environmental Concern (IEC) source control report;
- ☐ Submission of a Remedial Investigation Report;
- ☒ Submission of a Remedial Action Report;

Check if included in updated RE

- ☐ The known concentration or extent of contamination in any medium has increased;
- ☐ A new AOC has been identified;
- ☐ A new receptor is identified;
- ☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site property boundary (*check all that apply*):

	On-site	Off-site
None of the following	☐	☐
Residences or residential property	☒	☒
Public or Private Schools Grades K-12	☐	☐
Child care centers	☐	☐
Public parks, playgrounds or other recreation areas	☐	☐
Other sensitive population use(s) Explain _____	☐	☐

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site. See Figure 1 and Attachment A.

2. Current site uses (*check all that apply*):

☐ Industrial	☒ Residential	☐ Commercial
☐ School or child care	☐ Government	☐ Park or recreational use
☒ Vacant	☐ Agricultural	☐ Other: _____

3. Planned future on-site uses and off-site uses within 200 feet of the site boundary (*check all that apply*):

On-Site	Off-Site		On-Site	Off-Site		On-Site	Off-Site	
☐	☐	Industrial	☒	☒	Residential	☐	☐	Commercial
☐	☐	School or child care	☐	☒	Government	☐	☐	Park or recreational use
☒	☒	Vacant	☐	☐	Agricultural	☐	☒	Other: Public Parking Lot

Provide a map depicting the location of the proposed changes in land use.

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site:

Yes	No	
☐	☒	Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**.
		Date identified: _____
☐	☒	Residual product [N.J.A.C. 7:26E-1.8]
☐	☒	Other primary source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos). See form instructions for additional information.
		Explain: _____

* LNAPL – measured thickness of .01 feet or more

**DNAPL – See *Ground Water Technical Guidance* and *USEPA Assessment and Delineation of DNAPL Source Zones at Hazardous Waste Sites* (attached as Appendix A of the NJDEP GW Guidance) available at: http://www.nj.gov/dep/srp/guidance/#pa_si_ri_gw. Also, see US EPA DNAPL Overview available at: http://cluin.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_(DNAPLS)/cat/Overview

2. Soil Migration Pathway

Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard pursuant to N.J.A.C. 7:26E-4.2? ..... ☒ Yes ☐ No

Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ..... ☒ Yes ☐ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise, attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Have all potentially contaminated areas of concern been evaluated to determine if there is a potential that ground water is contaminated pursuant to N.J.A.C. 7:26E-3.5? ..... ☒ Yes ☐ No

If "**No**," proceed to Section E.

2. Is a ground water investigation required? ..... ☒ Yes ☐ No

If "**No**," proceed to Section E.

3. Has a groundwater investigation been conducted? ..... ☒ Yes ☐ No

If "**Yes**":
Has the laboratory data package been received? ..... ☒ Yes ☐ No

If the laboratory data package has not been received, provide the expected due date for data: _____ and proceed to Section E.

If "**No**":
Proceed to Section E.

4. Is ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ..... ☒ Yes ☐ No

If "**Yes**": Provide the date that the laboratory data package was available and confirmed contamination was identified above the Ground Water Remediation Standards. Date: 03/10/2014

If "**No**": Proceed to Section E.

5. Has ground water contamination been delineated to the applicable Remediation Standard pursuant to N.J.A.C 7:26E-4.3? ..... ☒ Yes ☐ No

6. What is the ground water classification for this site as per N.J.A.C. 7:9C? (*check all that apply*)

☐ Class I-A	☒ Class II-A
☐ Class I-PL Pinelands Protection Area	☐ Class III-A
☐ Class I-PL Pinelands Preservation Area	☒ Class III-B

7. Has a well search been completed? ☒ Yes ☐ No

Date of most recent or updated well search: 04/01/2020

8. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.nj.gov. ☒ Yes ☐ No

Note: Redacted wells must be excluded from all non-confidential documents including maps, tables, etc. (see RE Instructions).

If "**No**," explain: _____

9. Are any potable or irrigation wells located within ½ mile of the currently known extent of contamination? ☒ Yes ☐ No

If "**Yes**,":

- A door to door survey is required in accordance with [N.J.A.C.7:26E-1.14(a)ii]. Attach results of the door to door survey. See Attachment D for explanation of door to door search
- Identify if any of the following conditions exist based on the well search and door to door survey [N.J.A.C.7:26E-1.14(a)]:

Yes	No	
☒	☐	Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
☒	☐	Potable wells located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
☐	☒	Ground water contamination from the discharge is located within a Tier 1 wellhead protection area (WHPA).

10. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)? ☐ Yes ☒ No

If "No," provide justification then proceed to Question 12.

No potable or non-potable well use within horizontal and vertical extents of impacts

11. Has contamination been identified in potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards or State Safe Drinking Water levels, N.J.A.C 7:1E, whichever is applicable? ☐ Yes ☐ No

If "**Yes**":

- Provide the date laboratory data package was received: _____
- Follow the **IEC** Guidance Document at http://www.nj.gov/dep/srp/guidance/IEC/index.html for required actions and answer the following:
- Has an engineered system response action been completed on all impacted receptors? ☐ Yes ☐ No
  Provide a brief narrative description:

Date completed: _____ NJDEP Case Manager: _____

12. Has contamination been identified in non-potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards? ☐ Yes ☒ No

If "**Yes**," provide the date laboratory data package was received: _____

13. Has the ground water use evaluation been completed pursuant to N.J.A.C. 7:26E-1.14? ☒ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI)

1. Indicate if any of the following conditions exist that trigger a Vapor Intrusion investigation. For each condition checked "Yes", provide the date the condition was first identified (e.g. date laboratory data package was available). (*see NJDEP Vapor Intrusion Technical Guidance*)

Yes	No		Date Condition First Identified
☐	☒	Ground water contamination in excess of the NJDEP Vapor Intrusion Ground Water Screening Levels (VIGWSL) and within 30 feet of a building for Petroleum Hydrocarbon Compounds (PHC) or 100 feet for non-PHC compounds ..	_____
☐	☒	Free product within 30 feet of a building for PHC or 100 feet for non-PHC compounds	_____
☐	☒	Soil gas contamination detected at concentrations that exceed the Soil Gas Screening Levels (SGSL).....	_____
☐	☒	Indoor air contamination that exceeds the Indoor Air Screening Levels.....	_____
☐	☒	Wet basement or sump containing free product or ground water containing detectable concentration of volatile organic contaminants.....	_____
☐	☒	Methane generating conditions causing oxygen deficient or explosion concern	_____
☐	☒	Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated soil contamination), *explain below:*	_____

If you checked "No" to <u>all</u> boxes in Question 1., proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

2. Has ground water contamination been delineated to the applicable Vapor Intrusion Ground Water Screening Levels pursuant to N.J.A.C 7:26E-4.3? ..... ☐ Yes ☐ No

3. Was a site-specific screening level, modeling or other alternative approach employed for the VI pathway? ..... ☐ Yes ☐ No

4. Identify and locate, on a scaled map, any buildings/sensitive populations that exist within the following distances from ground water contaminant concentrations above the Vapor Intrusion Ground Water Screening Levels or other specific triggers noted in Question 1 above.:

Yes	No	
☐	☐	30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
☐	☐	100 feet of any non-petroleum free product (e.g. chlorinated hydrocarbons) or any non-petroleum dissolved volatile organic ground water contamination
☐	☐	Other specific triggers
☐	☐	No buildings exist within the specified distances or other specific triggers

5. Is the vapor intrusion pathway a concern at or adjacent to the site? (if "No," attach justification) ..... ☐ Yes ☐ No

6. Has soil gas sampling of the building(s) been conducted? ..... ☐ Yes ☐ No

   If "**Yes**," has the laboratory data package been received? ..... ☐ Yes ☐ No

      If the data package was received, did constituents exceed the Soil Gas Screening Levels? ..... ☐ Yes ☐ No

   If "**No**," attach technical justification consistent with the NJDEP Vapor Intrusion Technical Guidance.

7. Has indoor air sampling been conducted at the identified building(s)? ..... ☐ Yes ☐ No

   If "**Yes**," has the laboratory data package been received? ..... ☐ Yes ☐ No

      If the data package has been received, did constituents exceed the Indoor Air Screening Levels? .. ☐ Yes ☐ No

   If "**No**," or awaiting indoor air laboratory data package, proceed to Question 12.

8 Has indoor air contamination been identified but not suspected to be from a discharge? (if "**Yes**," attach justification) ☐ Yes ☐ No

9. Were indoor air results above the NJDEP's Rapid Action Levels? ☐ Yes ☐ No

If "**Yes**":

- Provide the date laboratory data package was received: _____
- Follow the **IEC** Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec for required actions and answer the following:
- Was the IEC engineering system response for control implemented for all impacted structures? ☐ Yes ☐ No

  Date implemented: _____ NJDEP Case Manager: _____

10. Were the results of indoor air sampling above the NJDEP's Indoor Air Screening Levels but at, or below, the Rapid Action Levels ☐ Yes ☐ No

If "**Yes**," answer the following:

- Provide the date laboratory data package was received: _____
- Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances been submitted? ☐ Yes ☐ No

  Date: _____
- Has a plan to mitigate and monitor the exposure been submitted? ☐ Yes ☐ No

  Date: _____
- Has the Mitigation Response Action Report been submitted? ☐ Yes ☐ No

  Date: _____

11. Do one or more buildings have an Indeterminate VI Pathway status? ☐ Yes ☐ No

If "**Yes**," attach a list of the building(s) with address(s) and block/lot(s)

12. Has the vapor intrusion investigation been completed? ☐ Yes ☐ No

If "**No**", is the vapor intrusion investigation stepping out as part of the site investigation or remedial investigation. (If "No," attach justification) ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) been conducted? [N.J.A.C. 7:26E-1.16] ☒ Yes ☐ No

   Date conducted: 04/28/2004

2. Are any site-related contaminants above any Ecological Screening Criteria? ☒ Yes ☐ No
3. Are there any Environmentally Sensitive Natural Resources (ESNRs) on or adjacent to the site, or potentially impacted by site related contamination? [N.J.A.C. 7:26E-1.16] ☐ Yes ☒ No
4. Do any potential or complete migration pathways exist between Contaminant of Potential Ecological Concern (COPECs) and ESNRs, or did historic migration pathways exist? ☐ Yes ☒ No

If You answered "No" to Questions 2, 3, or 4, above <u>Stop Here</u> (form is complete).

5. If site-related free or residual product is/was present, does/did a potential or complete migration pathway exist to an ESNR? ☐ Yes ☐ No
6. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ☐ Yes ☐ No

   If "**Yes**", has a remedial investigation of ecological receptors been conducted? ☐ Yes ☐ No

   Date conducted: _____

7. Do available data indicate an impact (COPECs above Ecological Screening Criteria in ESNRs) to Ecological Receptor(s), Surface water, or Sediment? ☐ Yes ☐ No

   If "**Yes**,"

   a) Check all ESNRs or media that apply:

   ☐ Surface water ☐ Sediment ☐ Soil ☐ Wetlands

   b) If this information is not submitted with an ecological evaluation that includes contaminant summary information, attach a brief summary of all currently available data and a description of all actions to be taken to mitigate exposure.

8. Have COPECs been fully delineated to the Ecological Screening Criteria [N.J.A.C. 7:26E-4.8(a)] in:

   a) Migration pathways ☐ Yes ☐ No

   b) ESNR ☐ Yes ☐ No

9. Has an Ecological Risk Assessment been conducted? ☐ Yes ☐ No

10. Provide the following information for any on-site and/or off-site surface water body, which is potentially impacted by the site related discharges:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐

11. Has a Program Interest (PI) or Permit number been issued for any regulated areas by the Division of Land Use Regulation? (e.g. wetlands, transition areas, flood hazard areas, coastal areas, tidelands, etc.). ☐ Yes ☐ No

    If "**Yes**,":

    Identify the type(s) of regulated areas: _____

    Provide the Land Use Regulation Program (LURP) PI or Permit number(s) for the site:

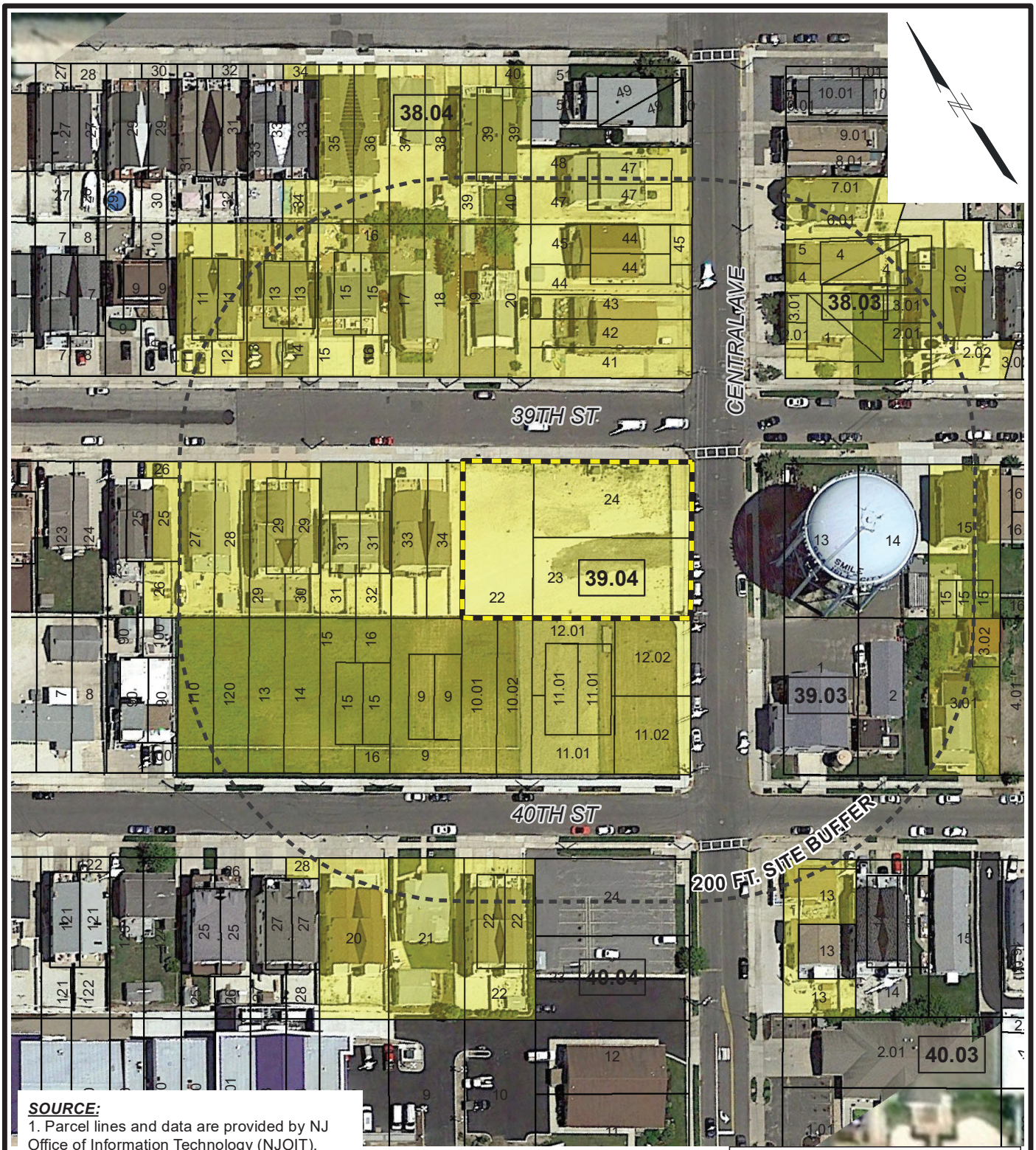
    _____

12 Are there any **pending** applications for LURP jurisdiction letters or approvals under review by the NJDEP for the remediation? ☐ Yes ☐ No

13. Are there any **valid** LURP jurisdiction letters or approvals issued for the remediation? ☐ Yes ☐ No

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420



SOURCE:

1. Parcel lines and data are provided by NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), and are shown for graphical purposes only. This map is not to be considered a legal tax map
2. 2014 Google Earth Pro Image accessed 8/20/2015.

0 100 200

SCALE: 1" = 100'

LEGEND

- Approximate Site Boundary
- Residential Properties

Remedial Action Report
Sea Isle City Former MGP Site
Sea Isle City, New Jersey

Jersey Central Power & Light Company
Morristown, New Jersey

GEI Consultants

SENSITIVE RECEPTORS FIGURE

Project 1610583 | December 2019 | Fig. 1

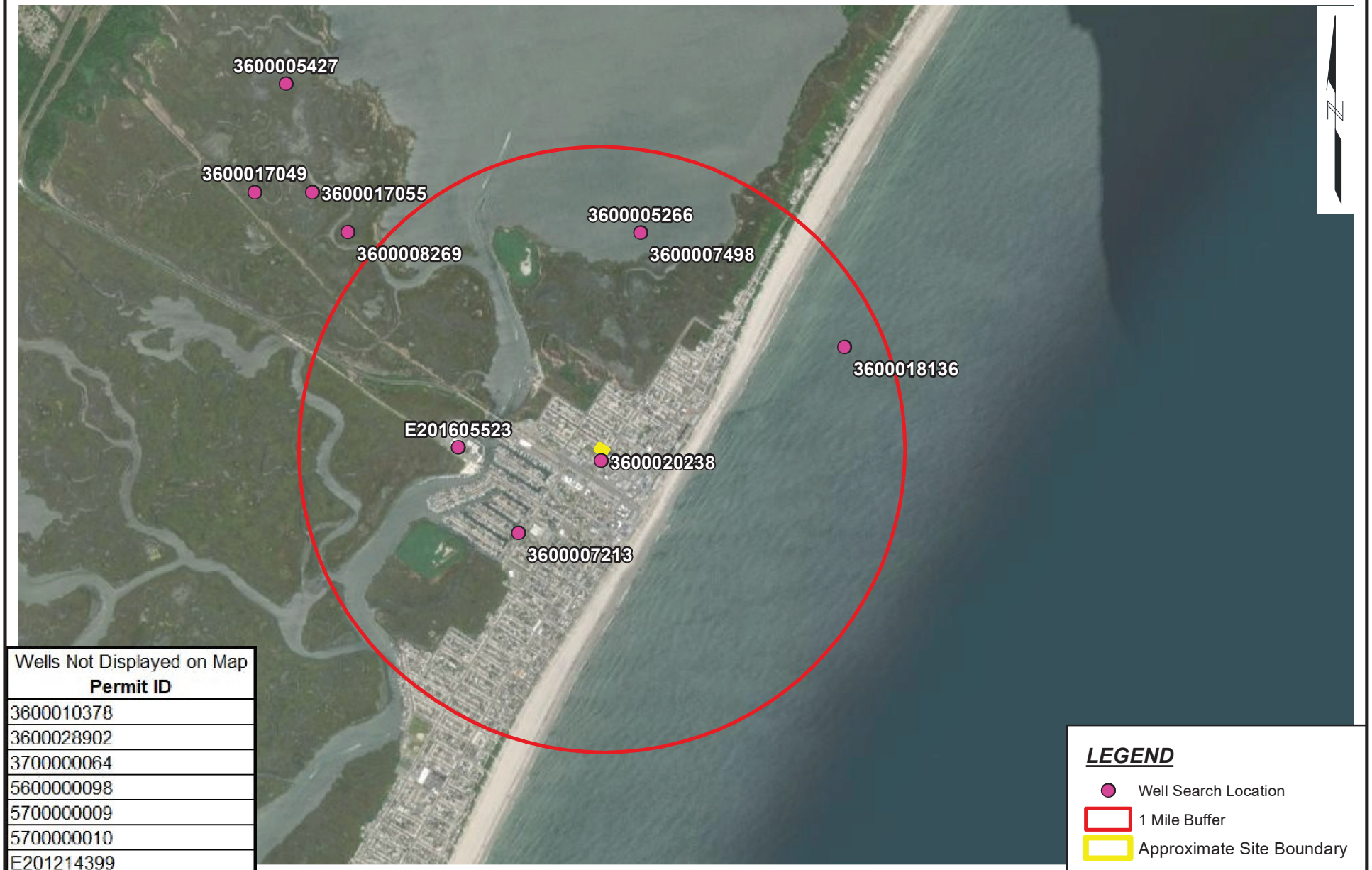
J:\Projects\JCP&L\Sea Isle City\Sensitive Receptors.mxd

mitting XY Well Search - 17 wells found within One Mile of Easting = 437497 Northing = 118239

Click here to visit the report information page

Permit Number	Well Use	Potentially Potable	Document	Date (permitted /drilled /sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting (X)	Northing (Y)	Distance (Feet)	Depth (ft)	Capacity (gal/min)
E201605523	Irrigation	Yes	Permit	5/16/2016	14 Old Sea Isle City Blvd sea Isle NJ 08	Cape May	Dennis Twp	275	4	Digital Image	434976	118292	2,521.56	40	25
E201214399	Public Community Replacement	Yes	Permit	10/11/2012	REDACTED	Cape May	Sea Isle City	50.03	REDACTED	Digital Image	0	0	REDACTED	830	880
E201214399	Public Community Replacement	Yes	Record	2/5/2013	REDACTED	Cape May	Sea Isle City	50.03	REDACTED	GPS	0	0	REDACTED	845	790
E201214399	Public Community Replacement	Yes	Record	2/5/2013	REDACTED	Cape May	Sea Isle City	50.03	REDACTED	GPS	0	0	REDACTED	845	
3600028902	Public Community	Yes	Permit	3/16/2005	REDACTED	Cape May	Sea Isle City	54.03	REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	830	800
3600028902	Public Community	Yes	Record	5/19/2005	REDACTED	Cape May	Sea Isle City	54.03	REDACTED	Hard Copy Map	0	0	REDACTED	820	790
3600005266	Domestic	Yes	Permit	5/5/1985		Cape May	Dennis Twp	256	2907	Prop Loc - Hard Copy	438214	122101		50	15
3600005427	Domestic	Yes	Permit	5/5/1985		Cape May	Dennis Twp	245	1401	Prop Loc - Hard Copy	431920	124745		50	15
3600007213	Domestic	Yes	Record	5/17/1987	4303 PARK ROAD	Cape May	Dennis Twp	273	2	Prop Loc - Dig Image	436050	116777	2,057.09	78	17
3600007498	Domestic	Yes	Permit	9/5/1986		Cape May	Dennis Twp	256	2919	Prop Loc - Hard Copy	438214	122101		50	15
3600008269	Domestic Replacement	Yes	Permit	3/26/1987	ROUTE 9	Cape May	Dennis Twp	251	8	Prop Loc - Hard Copy	433016	122112		50	10
3600017055	Domestic	Yes	Permit	8/17/1993	1342 STAGECOACH ROAD	Cape May	Dennis Twp	256.05	36.20	Prop Loc - Hard Copy	432388	122822		55	10
3600017055	Domestic	Yes	Record	4/28/1993	1342 STAGECOACH ROAD	Cape May	Dennis Twp	256.05	36.20	Prop Loc - Hard Copy	432388	122822		53	15
3600017049	Domestic	Yes	Permit	8/11/1993	4 ALEXANDRIA WAY	Cape May	Dennis Twp	256.05	36.01	Prop Loc - Hard Copy	431364	122824		60	15
3600017049	Domestic	Yes	Record	8/16/1993	4 ALEXANDRIA WAY	Cape May	Dennis Twp	256.05	36.01	Prop Loc - Hard Copy	431364	122824		60	10
3600018136	Irrigation	Yes	Permit	8/4/1994	8005 CENTRAL AVENUE	Cape May	Sea Isle City	80.03	257	Prop Loc - Hard Copy	441832	120070		20	12
3600018136	Irrigation	Yes	Record	8/16/1994	8005 CENTRAL AVENUE	Cape May	Sea Isle City	80.03	257	Prop Loc - Hard Copy	441832	120070		18	0
5700000010	Public Community	Yes	Decommissioning	2/17/2013	REDACTED	Cape May	Sea Isle City	50.03	REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	871	400
5700000010	Public Community	Yes	Permit	10/29/1930	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	871	400
5700000010	Public Community	Yes	Record	10/30/1930	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	871	400

5700000009	Public Community	Yes	Permit	1/1/1926	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	864	0
5700000009	Public Community	Yes	Record	1/2/1926	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	864	0
3700000064	Public Community	Yes	Decommissioning	1/11/2008	REDACTED	Cape May	Sea Isle City	54.03	REDACTED	Prop Loc - Hard Copy	0	0	REDACTED		
3700000064	Public Community	Yes	Permit	3/29/1954	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	750	700
3700000064	Public Community	Yes	Record	5/28/1954	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Dig Image	0	0	REDACTED	830	0
3600020238	Public Community Replacement	Yes	Permit	4/22/1996	REDACTED	Cape May	Sea Isle City	39.03	REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	877	700
3600020238	Public Community Replacement	Yes	Record	5/27/1996	REDACTED	Cape May	Sea Isle City	39.03	REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	889	700
3600010378	Public Community	Yes	Permit	7/22/1988	REDACTED	Cape May	Sea Isle City	80.04	REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	875	700
5600000098	Public Community	Yes	Permit	1/2/1996	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	854	
5600000098	Public Community	Yes	Record	1/2/1996	REDACTED	Cape May	Sea Isle City		REDACTED	Prop Loc - Hard Copy	0	0	REDACTED	854	



Wells Not Displayed on Map
Permit ID
3600010378
3600028902
3700000064
5600000098
5700000009
5700000010
E201214399

LEGEND

- Well Search Location
- 1 Mile Buffer
- Approximate Site Boundary

0 2,500 5,000

SCALE: 1" = 2500'

SOURCE:

1. AERIAL IMAGERY VIA ESRI WORLD IMAGERY SERVICES.

Receptor Evaluation
Sea Isle City Former MGP Site
Sea Isle City, New Jersey

Jersey Central Power & Light Company
Morristown, New Jersey

GEI Consultants

Project 1610583

WELL SEARCH FIGURE

November 2020 Fig. 1

Q:\Project\JCP&L\Sea Isle City\Well Search.mxd

Receptor Evaluation Form
Sea Isle Former Manufactured Gas Plant Site
PI No. G000006130
Attachment C
Description of Contamination

Several phases of Remedial Investigation (RI) conducted at the Sea Isle City Former Manufactured Gas Plant (MGP) and the adjacent properties which included 218 and 220 40th Street have identified the MGP related impact in the soil. The contaminants of concern (COCs) at 218 and 220 40th Street parcels are polycyclic aromatic hydrocarbons (PAHs). The soil impacted are limited to soil at below five feet. Groundwater sampling conducted at 218 and 220 40th Street and at downgradient did not report exceedances. The NJDEP has established that a 5-foot cap of clean fill material can represent a presumptive remedy to soil contamination. Based on this existing clean cap and the lack of groundwater contamination, GEI recommends that no active remediation be conducted at the properties.

Receptor Evaluation Form
Sea Isle Former Manufactured Gas Plant Site
PI No. G000006130
Attachment D
Ground Water Use

GEI obtained a radius well search from the NJDEP for wells located within a ½ mile radius of the site. The only potable water well identified within the ½ mile search radius is the Sea Isle City municipal well located to the east of the site across Central Avenue. This well is screened in the Atlantic City Formation, which is significantly below (minimum of 700 feet) and separated by two regional aquicludes from the shallow groundwater zone where MGP-related impacts have been identified. The well is screened between 724 to 884 feet below ground surface. GEI has not sampled water from this well; however, Sea Isle City performs regular sampling of the potable water and the water meets the standards for use as a potable water supply. No new potable well was identified in the well search conducted on October 31, 2019. As such, door to door survey determined to be not necessary. An in-person survey of the area was conducted on October 13, 2020 to visually identify any potable wells in the area. No potable wells were observed. A copy of the well search spreadsheet is included with this submittal.

Receptor Evaluation Form
Sea Isle Former Manufactured Gas Plant Site
PI No. G000006130
Attachment E
Vapor Intrusion

In 2007 a Vapor Intrusion (VI) investigation was conducted at 214 39th Street, 205 40th Street, and 209 40th Street. These dwellings were located adjacent to the site and could potentially be impacted by vapors associated with MGP contamination. The VI investigation was conducted by Haley & Aldrich, of Parsippany, New Jersey. The initial investigation involved the installation of temporary well points at each parcel and the collection of groundwater samples, to determine whether an exceedance of the VI Groundwater Screening Level was present. Review of the groundwater analytical results revealed exceedances of the 15 µg/L benzene screening level in samples collected at 214 39th Street and 209 40th Street. No exceedances were reported in the groundwater sample collected from 205 40th Street.

Based on the results of the groundwater screening, air samples were collected from the crawl spaces of the 214 39th Street and 209 40th Street dwellings, with an ambient air sample collected from the MGP site. The samples were collected using 6-liter stainless steel Summa canisters with 8-hour flow regulators. No exceedances of the Indoor Air Screening Levels were reported. Based on the results of the VI investigation, Haley & Aldrich concluded that vapor intrusion was not an environmental concern. The NJDEP responded by sending letters to the occupants of the properties tested stating that vapors from the former MGP site were not a concern inside their dwellings.

The groundwater samples collected after remedial action soil excavation are the MGP parcel did not report any groundwater samples in excess of NJDEP Vapor Intrusion Ground Water Screen Level. Therefore, no VI investigation is proposed at this time.

Receptor Evaluation Form
Sea Isle Former Manufactured Gas Plant Site
PI No. G000006130
Attachment F

Ecological Receptors

GEI conducted a Baseline Ecological Evaluation (BEE) of the site in 2004. The BEE noted that while contaminants of ecological concern were present on the site, the soil and groundwater contamination was limited to residential lots and city streets, with no environmentally sensitive natural resources at or adjacent to the site. Based on this information, no further ecological evaluation was recommended. In a letter dated May 24, 2004, the NJDEP concurred with GEI's recommendation that no further ecological evaluation is needed.