FINAL

CONSTRUCTION COMPLETION REPORT

FOR

FY16 RECYCLING OF MATERIALS AT RVAAP-50 ATLAS SCRAP YARD AREA OF CONCERN AND SETUP OF TEMPORARY STORAGE FACILITY

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

August 17, 2017

Contract No.: W912QR-12-D-0011

Delivery Order: 0017

Prepared for:

US Army Corps of Engineers®
BUILDING STRONG®

United States Army Corps of Engineers
Louisville District
600 Martin Luther King, Jr. Place
Louisville, Kentucky 40202

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This Construction Completion Report outlines the construction activities that were implemented during the removal of stockpiled debris piles from RVAAP-50.

15. SUBJECT TERMS
Recycling, RVAAP-50, Atlas Scrap Yard, concrete, rail ties, telephone poles, asphalt

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Final
Construction Completion Report
for
FY16 Recycling of Materials at RVAAP-50 Atlas Scrap Yard Area of Concern and Setup of Temporary Storage Facility

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

August 17, 2017

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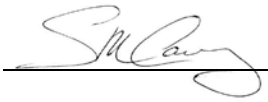

9 July 2017

Sean Carney, CHMM, PMP — Date
Project Manager



8 June 2017

Jennifer Harlan, PMP — Date
Vice President, Environmental Business Unit

COMPLETION OF SENIOR TECHNICAL REVIEW

This document has been produced within the framework of the ERT, Inc. (ERT) quality management system. As such, a senior technical review has been conducted. This included review of all elements addressed within the document, proposed or utilized technologies and alternatives and their applications with respect to project objectives and framework of U.S. Army Corps of Engineers regulatory constraints under the current project, within which this work has been completed.



8 June 2017

Thomas Bachovchin, PG Date
Senior Technical Reviewer (ERT)

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

This document has been produced within the framework of ERT, Inc. total quality management system. As such, an independent technical review, appropriate to the level of risk and complexity inherent in the project, has been conducted. This included review of assumptions (methods, procedures, and material used in analyses), alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the project objectives. Comments and concerns resulting from review of the document have been addressed and corrected as necessary.



8 June 2017

Michelle Chesnut Date
Independent Technical Reviewer (ERT)

DOCUMENT DISTRIBUTION

for the

Final Construction Completion Report

for

FY16 Recycling of Materials at RVAAP-50 Atlas Scrap Yard Area of Concern and Setup of Temporary Storage Facility

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

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Legend:
ARNG – U.S. Army National Guard
CELRL – U.S. Army Corps of Engineers, Louisville District
COR – Contracting Officer's Representative
OHARNG – Ohio Army National Guard
PM – Project Manager
REIMS – Ravenna Environmental Information Management System
RVAAP – Former Ravenna Army Ammunition Plant
TM – Technical Manager

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LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
AR	Administrative Record
ARNG	U.S. Army National Guard
CELRL	U.S. Army Corp of Engineers, Louisville District
CWP	Construction Work Plan
DO	delivery order
ERT	ERT, Inc.
OHARNG	Ohio Army National Guard
PM	Project Manager
PMP	Project Management Plan
PWS	Performance Work Statement
QSM	Quality Systems Manual
RVAAP	Former Ravenna Army Ammunition Plant
RVAAP-50	Atlas Scrap Yard
SSHO	Site Safety and Health Officer
USACE	U.S. Army Corp of Engineers
USP&FO	U.S. Property and Fiscal Officer
WWII	World War II

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1.0 INTRODUCTION

1.1 General

ERT, Inc., (ERT) was contracted to perform recycling/disposal of stockpiled material at the Atlas Scrap Yard (RVAAP-50) Area of Concern (AOC), and setup a temporary storage facility for the restoration document repository at the Former Ravenna Army Ammunition Plant (RVAAP), now known as the Camp Ravenna Joint Military Training Center (Camp Ravenna), Portage and Trumbull Counties, Ohio. The activities were performed under a Firm Fixed Price Delivery Order (DO), as outlined in the Performance Work Statement (PWS), under United States Army Corps of Engineers (USACE), Louisville District (CELRL) contract W912QR-12-D-0011, DO 0017.

1.2 Former RVAAP/Camp Ravenna Location and History

The former RVAAP was utilized as a load, assemble, and pack facility for munitions. At the onset of World War II (WWII), the RVAAP was built to produce large-caliber artillery projectiles and bombs. Although RVAAP operations downsized after WWII, plant production lines were reactivated during the Korean War and the Vietnam conflicts. Additionally, the plant conducted nearly continuous demilitarization of war stocks, refurbishment of inventoried ammunition, and minor research and development projects through 1992.

In 1992, the installation's status changed from "inactive but maintained" to that of "caretaker." Administrative control of the facility acreage was transferred from the Base Realignment and Closure Division to the U.S. Property and Fiscal Officer (USP&FO) for Ohio in a series of transfers from 1999 to 2013. As of September 2013, administrative accountability for the entire 21,683-acre facility has been transferred to the USP&FO for Ohio and subsequently licensed to the Ohio Army National Guard (OHARNG) for use as a military training site. The RVAAP restoration program involves cleanup of former production/operational areas throughout the facility related to former activities conducted under the RVAAP. The RVAAP Restoration Program, managed by the Army National Guard (ARNG) and the OHARNG, encompasses investigation and cleanup of past activities over the entire 21,683 acres of the former RVAAP (USACE, 2016).

RVAAP-50, Atlas Scrap Yard, formerly known as the construction camp, is located on approximately 73 acres in the central portion of Camp Ravenna south of Newton Falls Road and west of Paris Windham Road. The site boundary is marked with seibert stakes, and is bounded by Newton Falls Road to the north and Paris Windham Road to the east. The Atlas Scrap Yard has served many operational functions over the history of the former RVAAP, but the AOC was never used for munitions productions. From 1940-1945 the AOC operated as a construction camp to house workers and their families while the facility was being constructed. By the end of WWII, the majority of buildings and structures at the AOC had been demolished or relocated to other areas. The facilities that remained were used to support roads and grounds maintenance activities. The remaining structures were demolished after the Vietnam War, and the AOC became a stockpile storage area for bulk materials including gravel, railroad ballasts, sand, and culverts (Leidos, 2015). The AOC contained several piles of debris consisting of railroad ties, telephone poles, and concrete (USACE, 2016).

The Administrative Record (AR) contains the RVAAP restoration program records and historical maps for the former RVAAP/Camp Ravenna. It was previously stored at multiple locations at Camp Ravenna, including the Camp Ravenna Environmental Office (1438 State Route 534 SW,

Newton Falls, Ohio 44444) and Buildings 1038 and 1047 (closest address 8451 State Route 5, Ravenna Ohio 44266). During the site activities, historical records and documents were moved from Buildings 1038 and 1047, and consolidated in a temporary storage facility within the Camp Ravenna property boundary (USACE, 2016).

2.0 PROJECT OBJECTIVES

The following objectives were successfully completed as part of the construction field activities in compliance with the successful execution of the PWS:

1. Prepare, submit for approval, and respond to comments on the project planning documents which detail the construction and restoration activities at RVAAP-50;
2. Collect a representative sample and perform the waste stream characterization of rail ties and timbers necessary for the waste disposal profile requirements of the contracted disposal facility;
3. Mobilize site management, field crews, and heavy equipment to the former RVAAP on a mutually agree upon date with the ARNG, OHARNG, and CELRL;
4. Perform site preparation as necessary including placement of road aprons, performing initial site surveys, installation of temporary erosion control measures, and temporary facilities (i.e., portable toilet);
5. Remove and load-out the stockpiled material at RVAAP-50, including rail ties and timbers, and concrete and asphalt stockpiles;
6. Transport the stockpiled material to the designated local disposal facility and recycling facilities, respectively;
7. Perform the grading and stabilization via tracking necessary to flatten the areas of disturbance and restore the area;
8. Remove the temporary facilities and erosion control measures upon 70% re-vegetation coverage;
9. Mobilize and setup a temporary storage facility for restoration document repository, and move specified documents from former storage into the current temporary storage facility, and
10. Demobilize the field crew and equipment from the site.

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3.0 CONSTRUCTION ACTIVITIES

The following summarizes construction activities completed at RVAAP-50, and the setup of the temporary storage facility. Primary construction activities were completed between 9 January 2017 and 19 January 2017. Due to wet conditions at the site, restoration activities were completed between 28 March 2017 and 30 March 2017. After site inspection by the OHARNG and ARNG, an additional mobilization was conducted 1 June 2017 through 2 June 2017 to address restoration punch-list items. All activities were completed in accordance with the approved Final Construction Work Plan (CWP) (ERT, 2016).

3.1 Site Management

Site management was a team effort performed by a combination of personnel. Site management commenced upon mobilization and included, but was not limited to, oversight of site staff, subcontractors, and visitors. Site management included the preparation of Daily Reports submitted to USACE, ARNG, and OHARNG (**Appendix A**). Daily activities were documented by field personnel and the Site Superintendent in accordance with the various plans developed for this project. Administrative functions such as purchasing, directing, discussing progress with CELRL personnel, as well as the management and support of ERT team field staff was overseen by the ERT Project Manager.

Access to the site was limited to persons immediately involved with the project. A site visitors log was kept assisting in maintaining proper site security.

The Site Superintendent was responsible for the daily coordination and scheduling of trucks with the transportation subcontractor during the excavation phase. The Site Superintendent planned the fieldwork in accordance with available resources and was cognizant of current and forecasted weather conditions.

The Site Safety and Health Officer (SSHO) was responsible for providing the initial and daily health and safety briefings for all project personnel performing work at the site. An initial health and safety briefing was also provided by the SSHO for visitors when accessing the site; visitors were escorted during their visit, even after the initial health and safety brief.

3.2 Mobilization and Site Preparation

Mobilization involved the movement of personnel, equipment, and materials to RVAAP-50 at the former RVAAP. Heavy equipment mobilized to the site included an excavator and rubber-tire front loader, site trucks, and other miscellaneous hand and power tools. Site preparation involved preparing the site for execution of the work such as staging portable sanitation units at a convenient location on-site for use by site workers.

The Site Superintendent conducted a detailed and thorough inspection of the work during the mobilization and site preparation phase of the project. The inspection was made to determine if any relevant changes to the work areas, such as site access, etc., had occurred that would impact field activities.

3.3 Field Work

Site personnel conducted work with and under the direction and supervision of the Site Superintendent to complete the construction activities. Individual tasks conducted as a part of the overall field work are described below.

3.3.1 Site Preparation and Support Activities

Site controls and staging areas were established to support the project activities. Access for field crews and deliveries were coordinated with the ARNG and OHARNG.

Additional details on the site preparation and support activities are available in Appendix C of the CWP. (ERT, 2016). **Figure 1, Appendix B** presents the site boundary and location of the stockpiles that were removed.

3.3.2 Rail Ties and Timber Waste Characterization Sampling

Prior to the commencement of construction activities, waste characterization sampling was performed for stockpiled rail tie and telephone/timber material to be disposed. Samples were analyzed for Toxicity Characteristic Leaching Procedure volatile organic compounds, Toxicity Characteristic Leaching Procedure semi volatile organic compounds, Toxicity Characteristic Leaching Procedure metals and flashpoint. Based on the requirements of the disposal facility, one representative sample was collected from the rail tie stockpile and one from the telephone/timber material for waste characterization. All waste characterization samples were analyzed by CT Laboratories, LLC, who is approved to conduct sampling analysis under the DoD Quality Systems Manual (QSM) and the Louisville QSM Supplement. After sample collection, the samples were shipped overnight via UPS to CT Laboratories. The waste characterization analytical summary reports are included in **Appendix C**

Analytical data determined the waste stream to be non-hazardous and meet the requirements of the subcontracted disposal facility. All waste characterization sampling and subsequent waste shipments were coordinated with ARNG and OHARNG. Upon receipt of the waste profile from the disposal facility, ERT reported the waste profile to ARNG and OHARNG for review and approval prior to commencing with the load-out of material.

3.3.3 Loading of Stockpiled Materials

The ERT team marked the extents of the areas of stockpiled rail ties and timbers, and the extent of stockpiled concrete and asphalt for offsite disposal. This included the telephone poles and large block of concrete (approximately 20’ x 4’ x 4’) located on Paris Windham Road. Approximately 1,160 tons of stockpiled rail ties and telephone poles were live loaded into semi-tractor dump trailers for disposal at American Waste Management, Warren, Ohio. Approximately 1,655 tons of stockpiled concrete and asphalt were live loaded into semi-tractor dump trailers for recycling at Acme Company in North Jackson, Ohio. Waste disposal bill-of-lading information is included in **Appendix D**.

The ERT team loaded the rail ties and timbers using a hydraulic excavator, CAT 320. The excavator was equipped with a hydraulic thumb to provide better control of the loading of timbers into the semi-tractor dump trailers. Rail ties and timbers were directly loaded into semi-tractors equipped with dump trailers and capable of hauling a typical 22-ton payload. The ERT team progressed from south to north during the load-out, establishing a load-out zone that moved as the material stockpile was removed.

Similarly, the ERT team loaded the concrete and asphalt using a hydraulic excavator, CAT 320, and a rubber tire loader, CAT 900. The excavator was equipped with a hydraulic thumb to provide better control while loading of concrete into the semi-tractor dump trailers. Concrete and asphalt were directly loaded into semi-tractors equipped with dump trailers and capable of hauling a typical 22-ton payload. The ERT team progressed from north to south along the

stockpile of materials during the load-out. The ERT team established a load-out zone that moved as the material stockpiles were removed.

The ERT team removed accumulated dirt from truck tires and bodies prior to each truck leaving the site. Additionally, ERT utilized a skid steer with sweeper attachment to clean and maintain the Paris Windham Road that was used for hauling of materials offsite. The ERT team manually removed soils adhered to excavator bucket and undercarriage of the excavator to a visually clean standard. All soils removed, brushed, and scraped from the machine were collected and used during grading activities after the final stockpiled material had been removed.

3.3.4 Transportation and Off-Site Disposal/Recycling

OHARNG signed all disposal and recycling bills of lading during the offsite shipment of materials for recycling and disposal. Each load was manifested and weighed at the disposal facility. American Waste Management Services provided waste transportation services for recycled and disposed materials.

Each truck underwent a dry decontamination via brushing to remove soil from the tailgate and side-boards of the trailer that may have dropped during load-out. This occurred in the designated loading zone. The ERT team's laborer brushed the soil away from the tires of the trailer so that the excavated material did not come into contact with the tires as the truck pulled away. All spilled residues were collected so that the loading zone was clean to a visual standard before being occupied by the next trailer.

3.3.5 Compaction and Restoration

Upon attainment of the removal objectives, the ERT team compacted loose material prior to any re-vegetation. Areas were compacted and graded with material present onsite to promote positive drainage of the area and eliminate potential pooling of water. Due to the site conditions underlying the stockpiled rail ties, grading and back-blading were unable to eliminate low areas. This is further addressed in Section 3.4. Multiple passes were made over disturbed areas to compact the material into place. No compaction testing was performed since no compaction standards were specified. Tracking in place provided sufficient compaction to stabilize the soils in advance of re-vegetation.

A seed bed was prepared and the area seeded with a seed mix recommended by the Camp Ravenna Natural Resource Manager consisting of 50% Kentucky Bluegrass (Blueridge, Argyl, BlueStar, Ken Blue, Limousine, or Baron varieties), 20% Perennial Ryegrasses (Peak, Sonata, Wind Dance, Integra, Morning Star, or Shining Star varieties), 20% Buffalo Grass (Bouteloua dactyloides), and 10% Creeping Red Fescue (Lustrous or Boreal varieties. The seed mixture selected was based on timing of the restoration activities (late winter/early spring).

3.3.6 Setup of Temporary Storage Facility and Relocation of the RVAAP Restoration Document Repository

ERT mobilized and setup a 24 foot by 60-foot temporary storage facility adjacent to the Camp Ravenna Environmental Office (**Figure 2, Appendix B)**. ERT established the temporary storage facility utilities through the City of Newton Falls. A power drop and electrical meter were installed from the nearest powerline and transformer.

Upon establishment of the temporary storage facility, ERT moved restoration document repository records, documents, maps, shelving, and map cases from two current locations to the

temporary storage facility. Restoration document storage boxes were placed in numerical order on shelving units, and map cabinets were re-assembled along the east side of the temporary storage unit. New metal shelving units were assembled for storage in the temporary storage unit. Shelving units were approximately 18" deep, 48" wide, and 84" tall. ERT will maintain a contract for the temporary storage facility for a period of 12-months which began on 13 January 2017 and will end on 12 January 2018, after which time, the rental contract will be transferred to ARNG.

3.3.7 Demobilization

All temporary support facilities were removed during demobilization, including temporary erosion control measures. The ERT team removed the erosion and sediment controls in place when the vegetative cover of 70% established coverage was achieved.

3.4 Deviations from Work Plan and Corrective Actions

3.4.1 Disturbance of Wetland

While tracking equipment to access and remove the large block of concrete (approximately 20' x 4' x 4') located on Paris Windham Road, the excavator inadvertently tracked through a roughly 20-foot section of wetlands. After consultation with the ARNG, OHARNG, and the Camp Ravenna Natural Resource Manager, it was requested that the disturbed wetland area be graded with a non-tooth bucket. Straw was placed on the area to stabilize the area while vegetation naturally re-established itself during the spring months.

3.4.2 Damage to Dirt Access Road at RVAAP-50

While utilizing the dirt access road as a haul road for semi-tractor dump trailers, a series of ruts were created that damaged the dirt access road entering RVAAP-50 from Newton Falls Road and along an access road within RVAAP-50 that traverses the site from east to west. A total of two loads of #1 and #2 stone were brought to the site and used to grade the sections of dirt access road that were damaged. A skid steer was used to move and back-blade the stone into the ruts identified on the restoration punch list.

3.4.3 Grading and Restoration of Rail Tie Stockpile Area and Wooded Asphalt Pile Area

After removing the rail tie stock piles and initially grading the area for final restoration, it was determined that a series of low areas, each approximately 20' x 20'x 2', were not allowing precipitation to properly drain and the area to dry. Because the location is an AOC requiring future remediation, additional fill material was not brought to the site to support positive drainage. Rather, a skid steer was used to regrade the areas allowing for more positive drainage from south to north and to minimize the pooling of water during precipitation events. As part of the activities to regrade the low areas, any additional debris (e.g. metal ties and rail ties) that were uncovered were handpicked and disposed of offsite. Once the area was substantively graded to allow for positive drainage, the disturbed area was seeded with a mix consisting of 50% Kentucky Bluegrass (Blueridge, Argyl, BlueStar, Ken Blue, Limousine, or Baron varieties), 20% Perennial Ryegrasses (Peak, Sonata, Wind Dance, Integra, Morning Star, or Shining Star varieties), 20% Buffalo Grass (Bouteloua dactyloides), and 10% Creeping Red Fescue (Lustrous or Boreal varieties), and straw was placed.

An additional wooded area, associated with an asphalt pile that was removed during the project, also contained rutting that was allowing water to pool. Hand tools (e.g. shovels and rakes) were used to regrade rutted areas and establish positive drainage. The disturbed area was seeded with a mix consisting of 50% Kentucky Bluegrass (Blueridge, Argyl, BlueStar, Ken Blue, Limousine, or Baron varieties), 20% Perennial Ryegrasses (Peak, Sonata, Wind Dance, Integra, Morning Star, or Shining Star varieties), 20% Buffalo Grass (Bouteloua dactyloides), and 10% Creeping Red Fescue (Lustrous or Boreal varieties), and straw was placed.

3.5 Substantial Completion of Recycling and Disposal Activities

At the completion of field activities, including the addressing of punch list restoration items performed 1-2 June 2017, a site walk was performed with ARNG, OHARNG and the USACE Contracting Officer's Representative. Representatives present at the site walk concurred that all recycling and disposal activities required in the PWS had been substantially completed. Upon achieving 70% re-vegetation coverage all temporary BMPs are to be removed by ERT.

Further, it is noted that ERT will continue to maintain the lease of the temporary storage facility until 12 January 2018.

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4.0 REFERENCES

ERT, Inc. (ERT). 2016. *Final Construction Work Plan for FY16 Recycling of Materials at RVAAP-20 Atlas Scrap Yard Area of Concern and Setup of Temporary Storage Facility, Former Ravenna Army Ammunition Plant Restoration Program*. December.

Leidos, 2015. *Remedial Investigation Report for Soil, Sediment, and Surface Water at RVAAP-50 Atlas Scrap Yard, Former Ravenna Army Ammunition Plant, Portage and Trumbull Counties, Ohio*. June.

USACE, 2016. *Performance Work Statement, FY16 Recycling of Materials at the Atlas Scrap Yard Area of Concern and Setup of Temporary Storage Facility, Former Ravenna Army Ammunition Plant Restoration Program, Camp Ravenna, Portage and Trumbull Counties, Ohio*. May.

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APPENDIX A

Daily Reports and Photo Log

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DAILY LOG
Project:

Date: 1/9/2017

Prepared By: ERT

Submitted To: USACE, OHARNG, and ARNG Report No. 1

Weather: Cloudy. 12 °F in the morning, and rising to 26°F in the afternoon

Contractor	Workforce	Activities	Incidents	Planned Activities
ERT	1	Overall oversight and coordination for site start-up activities, including locating the temporary storage facility, and met with electrician.	None.	Receive components of the temporary storage facility. Oversee installation of storage facility, electrical connections, and base station.
A-Zone	4	Mobilize equipment to RVAAP-50 for loadout of stockpiled material, and begin to install erosion controls.	None.	Begin the loadout of rail ties and sort through the concrete and asphalt debris piles.
Falls Electric	1	Inspect area for the installation of the power base pole and running electricity to the trailer.	None.	Return to install electrical base pole, meter and run connections to trailer.

Activities Completed: Completed the mobilization of equipment and site setup activities at RVAAP-50. Performed inspection of are where the temporary storage facility will be placed so that electricians can finalize plan for providing power.

Planned Activities: Continue to load out rail ties from RVAAP-50 and segregate asphalt and concrete material. Complete installation of the temporary storage facility.

Issues Encountered and Resolutions: None.

DAILY LOG
Project:

Date: 1/10/2017

Prepared By: ERT

Submitted To: USACE, OHARNG, and ARNG

Report No. 2

Weather: Cloudy and rainy. 29 °F in the morning, and rising to 42°F in the afternoon

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (2) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
ERT	1	Attempted to deliver trailer components, however delivery delayed one day due to wind advisory.	None.	Receive components of the temporary storage facility. Oversee installation of storage facility, electrical connections, and base station.
A-Zone	4	Began to load out rail road ties (11 loads) and segregate concrete and asphalt debris.	None.	Continue the loadout of rail ties and sort through the concrete and asphalt debris piles.

Activities Completed: Completed the mobilization of equipment and site setup activities at RVAAP-50. Performed inspection of are where the temporary storage facility will be placed so that electricians can finalize plan for providing power.

Planned Activities: Continue to load out rail ties from RVAAP-50 and segregate asphalt and concrete material. Complete installation of the temporary storage facility.

Issues Encountered and Resolutions: None.

DAILY LOG
Project:

Date: 1/11/2017

Prepared By: JT Nolan

Submitted To: USACE, OHARNG, and ARNG Report No. 3

Weather: Overcast, 32-55, light precipitation in the AM

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (2) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
ERT	1	Accept delivery of temporary storage facility components.	None.	Install temp. electricity base pole and power supply to trailer.
A-Zone	3	Continued loading out railroad ties (21 loads) and segregating concrete and asphalt debris.	None.	Continue the loadout of rail ties and sort through the concrete and asphalt debris piles.

Activities Completed: Continued load out of materials from RVAAP-50 and delivered temporary storage facility components.

Planned Activities: Continue to load out rail ties from RVAAP-50 and segregate asphalt and concrete material. Complete installation of the temporary storage facility.

Issues Encountered and Resolutions: None.

DAILY LOG
Project:

Date: 1/12/2017

Prepared By: JT Nolan

Submitted To: USACE, OHARNG, and ARNG

Report No. 4

Weather: Overcast, 50-60, light to heavy precipitation throughout the day

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (2) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
ERT	1	Oversight of temporary storage facility and coordination with RVAAP-50 load-out	None.	Continue the installation of the temporary storage facility and electrical hook-up.
A-Zone	3	Continued loading out railroad ties (27 loads).	None.	Continue the loadout of rail ties and sort through the concrete and asphalt debris piles.
Falls Electric	2	Constructed temp. power base, trenched power cables to trailer location.	None.	Continue power hook-up to trailer once anchored.
Main Lite Electric	2	Auger hole and set base pole for temp. power connection.	None.	None.
CEIB	1	Inspected the electrical base station and connection and supply to trailer location.	None.	None.

Activities Completed: Activities other than loading out railroad ties were limited due to heavy rain

Planned Activities: Continue to load out rail ties from RVAAP-50 and segregate asphalt and concrete material. Complete installation of the temporary storage facility.

Issues Encountered and Resolutions: Heavy rains slowed productivity.

DAILY LOG
Project:

Date: 1/13/2017

Prepared By: JT Nolan

Submitted To: USACE, OHARNG, and ARNG Report No. 5

Weather: Partly cloudy, 30-40 degrees

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (2) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
ERT	1	Oversight of temporary storage installation and electrical hook-up.	None.	Awaiting First Energy to turn temp. power on.
A-Zone	3	Continued loading out railroad ties (25 loads). Continued sorting asphalt debris and breaking concrete.	None.	Continue the loadout of rail ties and sort through the concrete and asphalt debris piles.
Falls Electric	2	Completed electrical hook-up to trailer and the temp. power base	None.	None.
Apple Mobile Leasing	4	Completed the installation of the temporary storage unit.	None.	Stairs are to be brought and fastened to unit.

Activities Completed: Cleaned tracked dirt and mud from road where trucks exited site. Continued to load out railroad tie and telephone pole materials. Continued to sort and stage asphalt/concrete stockpile area.

Planned Activities: Continue to load out rail ties from RVAAP-50 and segregate asphalt and concrete material. Complete installation of the temporary storage facility.

Issues Encountered and Resolutions: ERT attempted to move the large concrete block on Paris Windham Rd. The concrete was too large to move and ERT will need to coordinate with Range Control to close 1 lane while the concrete is broken into smaller manageable pieces.

DAILY LOG
Project: RVAAP-50

Date: 1/17/2017

Prepared By: JT Nolan

Submitted To: USACE, OHARNG, and ARNG

Report No. 6

Weather: Overcast and rainy, 30-55 degrees

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (2) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
A-Zone	3	Completed loading out railroad ties (15 loads). Still need to clean up remaining small wood debris. Continued sorting asphalt debris and breaking concrete.	None.	Clean up small wood debris and begin restoring area. Begin loading out concrete and asphalt.

Activities Completed: Completed loading out railroad ties. Decon of grapple excavator completed and machine called off rent.

Planned Activities: Load out concrete and asphalt from RVAAP-50.

Issues Encountered and Resolutions: None.

DAILY LOG
Project:

Date: 1/18/2017

Prepared By: JT Nolan

Submitted To: USACE, OHARNG, and ARNG Report No. 7

Weather: Overcast, 30-40 degrees

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (2) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
A-Zone	3	Began loading out concrete and asphalt debris. Loaded out (11) loads of concrete and (12) loads of asphalt.	None.	Clean up small wood debris and begin restoring area. Continue loading out concrete and asphalt. Make required repairs to damaged wetland area.

Activities Completed: Loaded out debris from massive concrete section along Paris-Windham Road.

Planned Activities: Load out concrete and asphalt from RVAAP-50. Complete power drop to the temporary storage facility.

Issues Encountered and Resolutions: Damaged wetland area near truck exit along Paris-Windham Road while breaking and loading out massive concrete section. Discussion were held with ARNG, OHARNG and Camp Ravenna Natural Resources on how to repair the damages to the wetland area. Camp Ravenna Natural Resources and OHARNG provided written (email) directions on how to correct the damages. ERT will complete the restoration activities as requested. In addition, Camp Ravenna Natural Resources identified appropriate areas to track equipment in order to avoid designated wetlands while loading out the remaining asphalt and concrete piles.

DAILY LOG
Project:

Date: 1/19/2017

Prepared By: JT Nolan

Submitted To: USACE, OHARNG, and ARNG

Report No. 8

Weather: Overcast to partly cloudy, 30-40 degrees

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (1) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
A-Zone	3	Continued loading out concrete and asphalt debris. Loaded out (12) loads of concrete and (35) loads of asphalt.	None.	Clean up small wood debris and begin restoring area. Continue loading out concrete and asphalt. Make required repairs to damaged wetland area.

Activities Completed: Partial restoration of disturbed areas surrounding concrete/asphalt debris area and continued to load out asphalt/concrete.

Planned Activities: Complete loading out all remaining wood, concrete, and asphalt debris. Repair silt fence and erosion controls.

Issues Encountered and Resolutions: Trucks continue to track mud on to Paris-Windham Road. An angle sweeper will be used to clean up roads on Friday and additional rock was added to the exits form RVAAP-50.

DAILY LOG
Project:

Date: 1/19/2017

Prepared By: JT Nolan

Submitted To: USACE, OHARNG, and ARNG Report No. 8

Weather: Overcast to partly cloudy, 30-40 degrees

Equipment: (2) Utility trucks, (1) bobcat skid steer, (1) track loader, and (1) 300 excavators

Contractor	Workforce	Activities	Incidents	Planned Activities
ERT	1	Performed oversight and walk through with OHARNG. Began to move AR files to the temporary trailer	None.	Return in late March/early April to complete site restoration, and to complete movement of AR files and setup in temporary storage unit.
A-Zone	3	Completed loading out concrete and asphalt debris, and rail ties. Loaded out (2) loads of concrete, (2) loads of asphalt, and (4) loads of rail ties. Repaired silt fence and added additional hay bales to erosion controls. Demobilized from the site.	None.	Remaining equipment (1) excavator, (1) track-loader and (1) skid steer will be demobilized form the site. Return in late March/early April to complete site restoration.
Apple Mobile Leasing	1	Repaired connection to trailer fixing the faulty light switches in the main room.	None.	None.
Ohio Edison	3	Complete power drop to the temporary trailer.	None.	None.

Activities Completed: Completed the load out of all remaining materials.

Planned Activities: In late March/early April, return to complete site restoration activities and complete the moving of AR files to the temp. storage area. Remaining onsite equipment schedule for demobilization week of 1/23/17.

Issues Encountered and Resolutions: None.

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SITE CONTROL LOG

Date/Day/Time: 1/9/17

Project Name: ATLAS SCRAP

Project Location: CAMP RAVENNA

TIME IN	TIME OUT	NAME	ORGANIZATION
0700	1630	J. NOLAN	A-ZONE
0700	1630	JESSE MORGAN	A-ZONE
0700	1630	ERIC LINDBERG	A-ZONE

SITE CONTROL LOG

Date/Day/Time: 1-10-17

Project Name: ATLAS SCRAP

Project Location: CAMP RAVENNA

TIME		NAME	ORGANIZATION
IN	OUT		
0730	1630	Jesse Morgan	A-Zone
0730	1630	Emily Pindley	A-Zone
0700	1630	JT NOLAN	A-ZONE
7:00	1430	Jay Campbell	Foster
7:00	1430	DAN BARRY	FOSTER
8:00	1430	Bob Hassell	Foster

SITE CONTROL LOG

Date/Day/Time: 1/11/17 WED.

Project Name: ATLAS SCRAP

Project Location: CAMP RANEHNA

TIME IN	TIME OUT	NAME	ORGANIZATION
0630	1645	JT NOLAN	A-ZONE
0630	1645	ERIC LINDSEY	A-ZONE
0630	1645	JESSE MORGAN	A-ZONE
7:10	1400	JOE CASELL	FOSTER
7:00	1500	BILL MELLOTT	ACME
7:30	1400	GARY SCHMIDT	FOSTER
0800	1400	BOB HOWELL	FOSTER
0810	1400	DAN PARRY	FOSTER

SITE CONTROL LOG

Date/Day/Time: 1/12/17 THURSDAY

Project Name: ATLAS SCRAP

Project Location: CAMP RAVENNA

LOG IN	LOG OUT	NAME	ORGANIZATION
0630	1600	A NOLAN	A-ZONE
0700	1620	Jesse Morgan	A-Zone
0700	1620	Eric Lindsey	A-Zone

SITE CONTROL LOG

Date/Day/Time: 1/13/17 FRIDAY

Project Name: ATLAS SCRAP -

Project Location: CAMP RAVENNA

TIME IN	TIME OUT	NAME	ORGANIZATION
0630	1620	JT NOLAN	A-ZONE
0700	1620	JESSE MORGAN	A-ZONE
0700	1620	ERIC LINDBERG	A-ZONE

SITE CONTROL LOG

Date/Day/Time: TUESDAY 1/17/17

Project Name: ATLAS SCRAP

Project Location: CAMP RAVENNA

IN	OUT	NAME	ORGANIZATION
0700	1625	Jesse Morgan	A-Zone
0700	1625	J NOLAN	A-ZONE
0700	1600	ERIC LINDBERG	A-ZONE

SITE CONTROL LOG

Date/Day/Time: WEDNESDAY 1/18/17

Project Name: ATLAS SCRAP

Project Location: CAMP RAVENNA

TIME IN	TIME OUT	NAME	ORGANIZATION
0630	1615	J. NOLAN	A-ZONE
0700	1615	JESSE MORGAN	A-ZONE
0700	1615	ERIC LINDBERG	A-ZONE

ERT

SITE CONTROL LOG

Date/Day/Time: 1/19/17 THURSDAY

Project Name: ATLAS SCRAP

Project Location: CAMP RAVENNA

TIME IN	TIME OUT	[illegible]	[illegible]
0640	1625	JT NOLAN	A-ZONE
0700	1625	JESSE MORGAN	A-ZONE
0700	1545	ERIC LINDBERG	A-ZONE

SITE CONTROL LOG

Date/Day/Time: 1/20/17

Project Name: ATLAS SCRAP

Project Location: CAMP RAVENNA

TIME		NAME	ORGANIZATION
IN	OUT		
0640	1600	J. NOLAN	A-ZONE
0700	1600	JESSE MORGAN	A-ZONE
0700	1600	ERIC LINDBERG	A-ZONE

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Photograph 01
Loading of asphalt stockpiles and sorting concrete debris.



Photograph 02
Graded concrete and asphalt stockpile area.



Photograph 03
Restoration of monitoring well access road.



Photograph 04
Vegetation beginning to geminate.

APPENDIX B

Figures

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US Army Corps of Engineers
BUILDING STRONG

ERT

Legend

- Site Boundary
- Stockpiles
- Camp Ravenna Boundary
- Additional Grading and Seeding
- Concrete Block
- Construction Exit Installed
- Repair of Disturbed Wetland
- Repair to Roadway

N
W E
S

0 175 350
Feet

Figure 1
Site Location and Construction Activities
Atlas Scrap Yard Area of Concern
Former Ravenna Army Ammunition Plant/ Camp Ravenna
Portage and Trumble Counties, Ohio

Revision Date: August 2017

Data Source: RVAPP, ESRI Street Map

Document Path: N:\GIS\Midwest\Ohio\RVAAP\MXD\AfterAction\SiteLocation.mxd

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US Army Corps of Engineers
BUILDING STRONG

ERT

Legend

- Temporary Storage Facility
- Power Source/Meter Pole
- Transformer for Power Drop
- Camp Ravenna Boundary

N
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S

0 75 150
Feet

Figure 2
Temporary Storage Facility Setup Location
Former Ravenna Army Ammunition Plant/ Camp Ravenna
Portage and Trumble Counties, Ohio

Revision Date: August 2017

Data Source: RVAPP, ESRI Street Map

Document Path: N:\GIS\Midwest\Ohio\RVAAP\MXD\AfterAction\Storage Facilty Setup Location.mxd

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APPENDIX C

Waste Characterization Analytical Summary Report

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ANALYTICAL RESULTS FOR:

SEAN CARNEY
ERT
4890 UNIVERSITY SQUARE, NW
SUITE 2A
HUNTSVILLE, AL 35816

PROJECT SITE:	RVAAP FY16; Camp Ravenna, OH
DOD CONTRACT #:	
PROJECT #:	3369
SDG:	123805
PREPARED:	December 15, 2016

TOTAL # OF PAGES IN THIS DOCUMENT: 761

The data contained in the following report have been reviewed by the appropriate CT Laboratories' LLC staff members. In addition, CT Laboratories LLC certifies that to the best of our knowledge that the analyses reported herein are true, complete and correct within the limits of the methods employed and that they follow the applicable requirements as specified by the project plan, state-specific, NELAC or DOD QSM requirements. The estimated uncertainty of measurement is only available upon request. The reported results relate only to the tested samples. This report shall not be reproduced, except in full, without written approval of CT Laboratories LLC.

APPROVED BY: Brett Szymanski
PROJECT MANAGER

Certifications: IL (NELAP 200073), KS (NELAP E-10368), WI (157066030), DOD ELAP (A2LA 3806.01), VA (NELAP 4602038), MD (WI 00061), LA (NELAP ACC20160002), ISO17025 (A2LA 3806.01), GA EDP Stipulation (Accreditor: LA NELAP, ACC#: ACC20160002, Scope: Non-potable water solid and chemical materials, biological tissue, Effective: 12/10/2014, Expires: annually)

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SVOC Logbook Documents	333
Metals CLP Forms Documents	353
Metals Raw Data Documents	403
Metals Logbook Documents	524
Inorganic CLP Forms Documents	744
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Case Narrative

Client: ERT Inc.
Project: RVAAP FY16; Camp Ravenna, OH
Sample Receipt Date: 11/21/2016
SDG #: 123805

Two wood chip samples were received and analyzed for TCLP-VOCs, TCLP-SVOCs, TCLP-Metals, and Flashpoint. The assigned sample ID number, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. A breakdown of sample receipt information can be found on the Sample Condition Report located in the last section of the data package and any exceptions are noted below. The analyses were performed following DOD QSM 5.0.

Manual integrations may have been performed on the data provided with this package. If manual integrations were performed, a Reason #(s) was included on the raw data that corresponds to the "Index Key for Manual Integration Rationale." The raw data includes a "Before" and "After" manual integration illustration. The manual integrations were initialed and dated by the analyst, as well as, by the person reviewing the data.

Sample Analysis and Quality Control

Volatile Analysis:

The samples were analyzed using US EPA Method 8260C (VOC). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

All analysis results met the method specified quality control criteria with the following exceptions:

Detailed reports were provided for the 8260 data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

Compounds that may not meet the recommended minimum average response factor (ARF) criteria for 8260C (such as several of the ketones) are analyzed at concentrations 2 to 50 times higher than normal to make up for their lack of response. However, the ARF on the response factor (RF) forms do not reflect this change in concentration. These compounds may be "flagged" on RF forms as a result.

VOC (8260C) TCLP Analysis

Analytical Run # 132297

All analytical results for this run met the method/project specified quality control criteria.

Semi-Volatile Analysis:

The samples were analyzed using US EPA Method 8270D (SVOC). All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Surrogate Recovery Data
Matrix Spike/Matrix Spike Duplicate Recovery Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log
Chromatograms

All analysis results met the method specified quality control criteria with the following exceptions:

Detailed reports were provided for the 8270D data for all detected compounds, as well as, for those compounds manually integrated (if applicable). Compounds not reported on the form 1's were either not detected or did not meet identification criteria so they were reported as non-detects.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target compounds within the calibration range of the instrument.

SVOC (8270D) TCLP Analysis

Analytical Run # 133118

All analytical results for this run met the method/project specified quality control criteria.

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP Metals) and 7470A (Mercury). All samples were analyzed within the holding time except where indicated. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification
Blanks Summary
ICP Interference Check Data
Spike Sample Recovery
Duplicates Data
Laboratory Control Sample Data
Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) TCLP Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 133097

The Serial Dilution (L) for sample # 809338 was not applicable for silver, arsenic, cadmium, chromium, lead, and selenium because the parent sample raw results were less than 50 times the Limit of Quantitation (LOQ). A Post Digestion Spike (PDS) was analyzed and was unacceptable for selenium. The parent sample was reported and qualified with an "M" flag for the failing element.

The Duplicate (DUP) for sample # 809338 was not applicable for silver, arsenic, cadmium, chromium, lead, and selenium because the parent sample results were less than five times the LOQ. A Matrix Spike Duplicate (MSD) was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The Matrix Spike (MS) and MSD for sample # 809338 exceeded the recovery limit for cadmium, chromium, lead, and selenium. A Post Digestion Spike (PDS) was analyzed and was unacceptable for selenium. The parent sample was reported and qualified with an "M" flag for the failing element.

CVAA Mercury (7470A) Water Analysis

Analytical Run # 133090

The Laboratory Control Sample (LCS) was reanalyzed and was acceptable.

The DUP for sample # 809338 was not applicable for mercury because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The MS and MSD for sample # 809338 exceeded the recovery limit for mercury. The parent sample was reported and qualified with an "M" flag for mercury.

Inorganic Analysis:

The samples were analyzed using US EPA Method 1010A (Flashpoint) . All samples were analyzed within the holding time. The following summaries of quality control procedures are included:

Duplicate Analysis Data
Laboratory Control Spike Data
Method Blank Data
Initial Calibration Summary
Calibration Check Summary
Analysis Run Log
Prep Log

All analysis results met the method specified quality control criteria with the following exceptions:

Flashpoint (1010A) Analysis

Analytical Run # 132940

All analytical results for this run met the method/project specified quality control criteria.

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Data Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was not above the detection level.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

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MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: **Data system failed to select the correct peak or missed the peak entirely.**
In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: **Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.**
This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.
For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.
Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.

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1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

Sample Delivery Group

123805

ERT
SEAN CARNEY
4890 UNIVERSITY SQUARE
SUITE 2A
HUNSTVILLE, AL 35816

Project Name: RVAAP FY16
Project #: 3369

CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
809338	123805		RVAAP-50-RT	TCLP	11/18/2016	11/19/2016
809340	123805		RVAAP-50-RT	SOIL	11/18/2106	11/19/2016
809341	123805		RVAAP-50-TD	TCLP	11/18/2016	11/19/2016
809342	123805		RVAAP-50-TD	SOIL	11/18/2106	11/19/2016

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QC Batch Cross Reference Summary

ERT
SEAN CARNEY
4890 UNIVERSITY SQUARE
SUITE 2A
HUNSTVILLE, AL 35816

Project Name:	RVAAP FY16
Project #:	3369
Report Date:	12/15/2016
Date Received:	11/21/2016
SDG #:	123805

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
809340	Flashpoint	EPA 1010	SOIL		132940
809342	Flashpoint	EPA 1010	SOIL		132940

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
809338	ICP Metals QSM TCLP 5.0	EPA 6010C	TCLP	60373	133097
809341	ICP Metals QSM TCLP 5.0	EPA 6010C	TCLP	60373	133097

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
809338	Mercury QSM TCLP	EPA 7470A	TCLP	60365	133090
809341	Mercury QSM TCLP	EPA 7470A	TCLP	60365	133090

Organic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
809338	VOC's by 8260 TCLP 5.0	EPA 8260C	TCLP		133083
809341	VOC's by 8260 TCLP 5.0	EPA 8260C	TCLP		133083

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
809338	SVOC 8270 QSM TCLP	EPA 8270D	TCLP	60339	133118
809341	SVOC 8270 QSM TCLP	EPA 8270D	TCLP	60339	133118

VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

RVAAP-50-RT

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:	TCLP	SDG No.:	123805
Sample wt/vol:	(g/mL)	CTL Sample ID:	809338
% Solids:		Date Received:	11/19/2016
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	133083	Dilution Factor:	100.00
Date & Time Analyzed:	11/28/2016 / 13:36	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			11/23/2016 / 09:30
ICAL Calibration #:	W110816.	Concentration Units:	mg/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-35-4	1,1-Dichloroethene	0.050	U	0.024	0.050	0.10	0.10
107-06-2	1,2-Dichloroethane	0.050	U	0.030	0.050	0.10	0.10
78-93-3	2-Butanone	0.50	U	0.24	0.50	1.0	1.0
71-43-2	Benzene	0.050	U	0.019	0.050	0.10	0.10
56-23-5	Carbon tetrachloride	0.050	U	0.023	0.050	0.10	0.10
108-90-7	Chlorobenzene	0.050	U	0.024	0.050	0.10	0.10
67-66-3	Chloroform	0.025	U	0.015	0.025	0.050	0.050
127-18-4	Tetrachloroethene	0.050	U	0.030	0.050	0.10	0.10
79-01-6	Trichloroethene	0.050	U	0.021	0.050	0.10	0.10
75-01-4	Vinyl chloride	0.050	U	0.018	0.050	0.10	0.10

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1A

VOLATILE ORGANICS ANALYSIS

Sample Description

RVAAP-50-TD

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:	TCLP	SDG No.:	123805
Sample wt/vol:	(g/mL)	CTL Sample ID:	809341
% Solids:		Date Received:	11/19/2016
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	
Analytical Run #:	133083	Dilution Factor:	100.00
Date & Time Analyzed:	11/28/2016 / 14:05	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			11/23/2016 / 09:30
ICAL Calibration #:	W110816.	Concentration Units:	mg/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
75-35-4	1,1-Dichloroethene	0.050	U	0.024	0.050	0.10	0.10
107-06-2	1,2-Dichloroethane	0.050	U	0.030	0.050	0.10	0.10
78-93-3	2-Butanone	0.50	U	0.24	0.50	1.0	1.0
71-43-2	Benzene	0.050	U	0.019	0.050	0.10	0.10
56-23-5	Carbon tetrachloride	0.050	U	0.023	0.050	0.10	0.10
108-90-7	Chlorobenzene	0.050	U	0.024	0.050	0.10	0.10
67-66-3	Chloroform	0.025	U	0.015	0.025	0.050	0.050
127-18-4	Tetrachloroethene	0.050	U	0.030	0.050	0.10	0.10
79-01-6	Trichloroethene	0.050	U	0.021	0.050	0.10	0.10
75-01-4	Vinyl chloride	0.050	U	0.018	0.050	0.10	0.10

CT LABORATORIES
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Sample Description

METHOD BLANK

1A-2

VOLATILE ORGANICS ANALYSIS (MB or CCB)

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:		SDG No.:	123805
Sample wt/vol:	(g/mL)	CTL Sample ID:	811283
% Solids:		Date Received:	11/19/2016
Soil Extract Vol:	(mL)	Date/Time Prepared:	/
Analytical Method:	EPA 8260C	Analytical Prep Batch #	0
Analytical Run #:	133083	Dilution Factor:	100.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			11/23/2016 / 09:30
ICAL Calibration #:	W110816.	Concentration Units:	mg/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
75-35-4	1,1-Dichloroethene	11/28/2016	12:38	0.00024	U	0.00024	0.00050	***0.00025***
107-06-2	1,2-Dichloroethane	11/28/2016	12:38	0.0003	U	0.0003	0.0010	***0.0005***
78-93-3	2-Butanone	11/28/2016	12:38	0.0024	U	0.0024	0.0050	***0.0025***
71-43-2	Benzene	11/28/2016	12:38	0.00019	U	0.00019	0.00050	***0.00025***
56-23-5	Carbon tetrachloride	11/28/2016	12:38	0.00023	U	0.00023	0.00050	***0.00025***
108-90-7	Chlorobenzene	11/28/2016	12:38	0.00024	U	0.00024	0.00050	***0.00025***
67-66-3	Chloroform	11/28/2016	12:38	0.00015	U	0.00015	0.00050	***0.00025***
127-18-4	Tetrachloroethene	11/28/2016	12:38	0.0003	U	0.0003	0.0010	***0.0005***
79-01-6	Trichloroethene	11/28/2016	12:38	0.00021	U	0.00021	0.00050	***0.00025***
75-01-4	Vinyl chloride	11/28/2016	12:38	0.00018	U	0.00018	0.00050	***0.00025***

CT LABORATORIES
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2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CT Laboratories | Contract: ERT-RVAAP FY16

Analytical Method: EPA 8260C | SDG: 123805

Analytical Run #: 133083 | ICAL Calibration #: W110816.

CTLab #	809338				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	94	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	98	89	112	
Dibromofluoromethane	100	97	80	119	

CTLab #	809341				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97	81	118	
Bromofluorobenzene	100	96	85	114	
d8-Toluene	100	99	89	112	
Dibromofluoromethane	100	97	80	119	

CTLab #	811251	Sample Type:	Lab Control Spike		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	87.0	81	118	
Bromofluorobenzene	100	98.0	85	114	
d8-Toluene	100	98.0	89	112	
Dibromofluoromethane	100	96.0	80	119	

CTLab #	811283	Sample Type:	Method Blank		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	70	120	
Bromofluorobenzene	100	99.0	75	120	
d8-Toluene	100	100	85	120	
Dibromofluoromethane	100	101	85	115	

CTLab #	811384	Sample Type:	Normal Field Sample		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	97.0	80	120	
Bromofluorobenzene	100	97.0	80	120	
d8-Toluene	100	101	80	120	
Dibromofluoromethane	100	98.0	80	120	

CTLab #	811444	Sample Type:	Normal Field Sample		
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	101	50	150	
Bromofluorobenzene	100	101	50	150	
d8-Toluene	100	101	50	150	
Dibromofluoromethane	100	102	50	150	

CT LABORATORIES
delivering more than data from your environmental analyses

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Analytical Method:	EPA 8260C	SDG:	123805
Analytical Run #:	133083	ICAL Calibration #:	W110816.

CTLab #	811446	Sample Type:		Matrix Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	102	81	118	
Bromofluorobenzene	100	101	85	114	
d8-Toluene	100	100	89	112	
Dibromofluoromethane	100	102	80	119	

CTLab #	811449	Sample Type:		Matrix Spike Duplicate	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
1,2 Dichloroethane-d4	100	100	81	118	
Bromofluorobenzene	100	100	85	114	
d8-Toluene	100	99.0	89	112	
Dibromofluoromethane	100	97.0	80	119	

CT LABORATORIES
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3A

WATER VOLATILE MATRIX SPIKE RECOVERY

Sample Description

RVAAP-50-RT

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

Matrix: TCLP SDG No.: 123805

Analytical Method: EPA 8260C Concentration Units: mg/L

Analytical Run #: 133083 Sample No.: 811446 Parent Sample No.: 809338

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W110816.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1-Dichloroethene	11/28/2016	19:32	71-131	1.02	BDL	1.00	102
1,2-Dichloroethane	11/28/2016	19:32	73-128	0.965	BDL	1.00	96
2-Butanone	11/28/2016	19:32	56-143	10.2	BDL	10.0	102
Benzene	11/28/2016	19:32	79-120	1.11	BDL	1.00	111
Carbon tetrachloride	11/28/2016	19:32	72-136	1.07	BDL	1.00	107
Chlorobenzene	11/28/2016	19:32	82-118	0.993	BDL	1.00	99
Chloroform	11/28/2016	19:32	79-124	1.11	BDL	1.00	111
Tetrachloroethene	11/28/2016	19:32	74-129	1.04	BDL	1.00	104
Trichloroethene	11/28/2016	19:32	79-123	1.12	BDL	1.00	112
Vinyl chloride	11/28/2016	19:32	58-137	0.954	BDL	1.00	95

Spike Recovery: 0 out of 10 outside QC limits

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3A

Sample Description

WATER VOLATILE MATRIX SPIKE DUPLICATE RECOVERY

RVAAP-50-RT

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

Matrix: TCLP SDG No.: 123805

Analytical Method: EPA 8260C Concentration Units: mg/L

Analytical Run #: 133083 Sample No.: 811449 Parent Sample No.: 811446

Analytical Prep Batch #: 0 Analytical Preparation Date/Time:

ICAL Calibration #: W110816.

Analyte	Analysis Date/Time		Spike Result	Spike Amount	%R	%RPD	Control Limits (%R)	Control Limits (%RPD)
1,1-Dichloroethene	11/28/2016	20:02	1.05	1.00	105	2	71-131	20
1,2-Dichloroethane	11/28/2016	20:02	1.02	1.00	102	6	73-128	20
2-Butanone	11/28/2016	20:02	10.5	10.0	105	2	56-143	20
Benzene	11/28/2016	20:02	1.13	1.00	113	2	79-120	20
Carbon tetrachloride	11/28/2016	20:02	1.04	1.00	104	3	72-136	20
Chlorobenzene	11/28/2016	20:02	0.983	1.00	98	1	82-118	20
Chloroform	11/28/2016	20:02	1.10	1.00	110	0	79-124	20
Tetrachloroethene	11/28/2016	20:02	1.10	1.00	110	6	74-129	20
Trichloroethene	11/28/2016	20:02	1.10	1.00	110	2	79-123	20
Vinyl chloride	11/28/2016	20:02	0.977	1.00	98	2	58-137	20

RPD or Spike Recovery: 0 out of 10 outside QC limits

CT LABORATORIES
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3A

Sample Description

LCS

WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories
Contract: ERT-RVAAP FY16
Sample No.: 811251
SDG No.: 123805
Analytical Method: EPA 8260C
Concentration Units: mg/L

Sample No.: 811251
Parent Sample No.: 0
Analytical Prep Batch #: 0
Analytical Preparation Date/Time:
Analytical Run #: 133083
ICAL Calibration #: W110816.

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,1-Dichloroethene	11/28/2016	12:10	71-131	1.12		1.00	112
1,2-Dichloroethane	11/28/2016	12:10	73-128	1.03		1.00	103
2-Butanone	11/28/2016	12:10	56-143	9.73		10.0	97
Benzene	11/28/2016	12:10	79-120	1.15		1.00	115
Carbon tetrachloride	11/28/2016	12:10	72-136	1.08		1.00	108
Chlorobenzene	11/28/2016	12:10	82-118	1.03		1.00	103
Chloroform	11/28/2016	12:10	79-124	1.06		1.00	106
Tetrachloroethene	11/28/2016	12:10	74-129	1.09		1.00	109
Trichloroethene	11/28/2016	12:10	79-123	1.06		1.00	106
Vinyl chloride	11/28/2016	12:10	58-137	1.12		1.00	112

Spike Recovery: 0 out of 10 outside limits

CT LABORATORIES
delivering more than data from your environmental analyses

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Sample ID:	811283	SDG No.:	123805
Matrix:	LIQUID	Date Extracted:	
Date Analyzed:	11/28/2016	Time Analyzed:	12:38
Analytical Method:	EPA 8260C	Extraction Method:	NONE
Analytical Run #:	133083	Extraction Batch #:	0
		ICAL Calibration #:	W110816.

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	BFB	811387	11/28/2016 10:52	
2	CCV	811384	11/28/2016 11:41	W110816.
3	LCSW	811251	11/28/2016 12:10	W110816.
4	MBW	811283	11/28/2016 12:38	W110816.
5	RVAAP-50-RT	809338	11/28/2016 13:36	W110816.
6	RVAAP-50-TD	809341	11/28/2016 14:05	W110816.
7	RVAAP-50-RTMSW	811446	11/28/2016 19:32	W110816.
8	RVAAP-50-RTMSDW	811449	11/28/2016 20:02	W110816.
9	CCVF	811444	11/28/2016 21:33	W110816.

BFB

Data File : C:\INSTARCH\Data\NOV0816\BFB1.D Vial: 1
Acq On : 8 Nov 2016 15:49 Operator: AGK-RLD
Sample : BFB Injection Inst : VMS3
Misc : 25 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110816.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.410 to 4.435 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	31.8	17748	PASS
75	95	30	60	52.9	29505	PASS
95	95	100	100	100.0	55748	PASS
96	95	5	9	6.6	3664	PASS
173	174	0.00	2	1.5	749	PASS
174	95	50	100	89.0	49592	PASS
175	174	5	9	5.9	2937	PASS
176	174	95	101	95.5	47364	PASS
177	176	5	9	6.8	3241	PASS

W110816.M Mon Nov 21 15:35:46 2016

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0816\BFB1.D
Injection Date : 8 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 15:49 Total files within period : 15
Sample Directory : C:\INSTARCH\DATA\NOV0816\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.50/5.00 ug/L, 5.0 mL Pu	8 Nov 2016	17:04
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 2.00/20.0 ug/L, 5.0 mL Pu	8 Nov 2016	17:34
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 5.00/50.0 ug/L, 5.0 mL Pu	8 Nov 2016	18:04
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 10.00/100 ug/L, 5.0 mL Pu	8 Nov 2016	18:34
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 20.00/200 ug/L, 5.0 mL Pu	8 Nov 2016	19:04
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 30.00/300 ug/L, 5.0 mL Pu	8 Nov 2016	19:34
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 40.00/400 ug/L, 5.0 mL Pu	8 Nov 2016	20:04
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 80.00/800 ug/L, 5.0 mL Pu	8 Nov 2016	20:34
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF. 10.00/100 ug/L, 5.0 mL Pu	8 Nov 2016	21:33
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF. 30.00/300 ug/L, 5.0 mL Pu	8 Nov 2016	22:03
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK 5.0 mL DI H20 Purged + IS	8 Nov 2016	23:03

BFB

Data File : C:\INSTARCH\Data\NOV2816\BFB1.D Vial: 1
Acq On : 28 Nov 2016 10:52 Operator: AGK-RLD
Sample : 133065,BFB, Inst : VMS3
Misc : 25 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110816.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.423 to 4.441 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	28.7	28316	PASS
75	95	30	60	56.8	55984	PASS
95	95	100	100	100.0	98610	PASS
96	95	5	9	8.2	8052	PASS
173	174	0.00	2	1.0	857	PASS
174	95	50	100	84.6	83428	PASS
175	174	5	9	7.6	6321	PASS
176	174	95	101	96.6	80572	PASS
177	176	5	9	6.2	5008	PASS

W110816.M Wed Nov 30 15:31:41 2016

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV2816\BFB1.D
Injection Date : 28 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 10:52 Total files within period : 28
Sample Directory : C:\INSTARCH\DATA\NOV2816\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
CCV1	1.00	1.00	1.00	133065,CCV, 10.00/100 ug/L, 5.0 mL Pu	28 Nov 2016	11:41
TLCS1	1.00	1.00	1.00	133065,LCSW,100 pH5, 10.00/100 ug/L, 5.0	28 Nov 2016	12:10
TMB1	1.00	1.00	1.00	133065,MBW,100 pH5, 5.0 mL DI H20 Purged	28 Nov 2016	12:38
809338	1.00	1.00	1.00	133083,809338,100 pH5, 5.0 mL DI H20 Purged	28 Nov 2016	13:36
809341	1.00	1.00	1.00	133083,809341,100 pH5, 5.0 mL DI H20 Purged	28 Nov 2016	14:05
809338MS	1.00	1.00	1.00	133083,MSW809338,100 pH5, 10.0/100 ug/L, 5.0 m	28 Nov 2016	19:32
809338SD	1.00	1.00	1.00	133083,MSDW809338,100 pH5, 10.0/100 ug/L, 5.0 m	28 Nov 2016	20:02
CCVF2	1.00	1.00	1.00	132949,CCVF, 10.00/100 ug/L, 5.0 mL Pu	28 Nov 2016	21:33
CCVF2	1.00	1.00	1.00	132949,CCVF, 10.00/100 ug/L, 5.0 mL Pu	28 Nov 2016	21:33

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : CT Laboratories, LLC Contract :
Project : Site : Location : Group :
Lab File ID (Standard): WCAL4.D Date Analyzed : 8 Nov 2016
Instrument ID : VMS3 Time Analyzed : 18:34
GC Column : DB-624UI ID : VMS3(mm) Heated Purge (Y:N) : N

	IS1		IS2		IS3	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1340986	7.51	996724	11.41	496672	14.70
UPPER LIMIT	2681972	8.01	1993448	11.91	993344	15.20
LOWER LIMIT	670493	7.01	498362	10.91	248336	14.20
File ID Sample						
809338 133083,80	1154881	7.51	875158	11.41	431910	14.70
809338MS 133083,MS	2136457	7.51	1626115	11.41	899440	14.70
809338SD 133083,MS	2190989	7.51	1684406	11.41	914642	14.70
809341 133083,80	1128701	7.51	833910	11.41	450593	14.70
CCV1 133065,CC	1219227	7.51	926796	11.41	523095	14.70
CCVF2 132949,CC	2163038	7.51	1682911	11.41	921417	14.70
TLCS1 133065,LC	1193572	7.51	915603	11.41	494920	14.69
TMB1 133065,MB	1170163	7.50	917289	11.41	471137	14.70

IS1 = FLUOROBENZENE**ISTD**
IS2 = d5-CHLOROBENZENE**ISTD**
IS3 = d4-1,4-DICHLOROBENZENE**IS

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809338.D Vial: 7
Acq On : 28 Nov 2016 13:36 Operator: AGK-RLD
Sample : 133083,809338,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 13:56:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1154881	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	875158	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	431910	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	279659	19.319	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 97 %			
45) SURR12DCAd4	7.07	102	73284	18.875	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 94 %			
61) SURRd8Tolule	9.51	98	1140806	19.500	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 98 %			
83) SURR4BrFBenz	13.04	95	403774	20.275	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	2.00	50	5653	Below	Cal #	41
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	3.88	58	8743	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	3.89	43	21932	Below	Cal	88
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.10	76	7107	N.D.		
18) allylchloride	4.24	41	5632	N.D.		
19) methylacetate	4.37	74	4041	0.4314	ug/L #	30
20) Methylchlorid	4.45	84	62301	4.1650	ug/L	97
21) tbutylalcohol	0.00	59	0	N.D.		
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.45	42	9455	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809338.D Vial: 7
Acq On : 28 Nov 2016 13:36 Operator: AGK-RLD
Sample : 133083,809338,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 13:56:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39) Chloroform	0.00	83	0	N.D.	
40) 111trichlota	0.00	97	0	N.D.	
42) Cyclohexane	0.00	56	0	N.D.	
43) Carbtetraclo	0.00	119	0	N.D.	
44) 11dicloprope	0.00	110	0	N.D.	
46) Benzene	0.00	78	0	N.D.	
47) 12dichlorota	0.00	62	0	N.D.	
48) TAME	0.00	73	0	N.D.	
49) trichloroete	0.00	95	0	N.D.	
50) methylcyclohexane	0.00	83	0	N.D.	
51) 12dicloropra	0.00	63	0	N.D.	
52) 23Dicl1propene	0.00	75	0	N.D.	
53) Dibromometha	0.00	93	0	N.D.	
54) methylmethacrylate	0.00	69	0	N.D.	
55) 14dioxane	0.00	88	0	N.D.	
56) Bromodiclrma	0.00	83	0	N.D.	
57) 2Nitropropane	0.00	43	0	N.D.	
58) 2CLEVE	0.00	63	0	N.D.	
59) c13dicloproe	0.00	75	0	N.D.	
60) 4Meth2Pentan	0.00	43	0	N.D.	
62) Toluene	0.00	92	0	N.D.	
63) t13Dicloprop	0.00	75	0	N.D.	
64) ethylmethacrylate	0.00	69	0	N.D.	
65) 112Triclotha	0.00	83	0	N.D.	
66) Tetrachlorte	0.00	166	0	N.D.	
67) 13Diclorpropa	0.00	76	0	N.D.	
69) 2Hexanone	10.43	43	4142	Below Cal #	31
70) Clorodibrmta	0.00	129	0	N.D.	
71) 12Dibrometha	0.00	107	0	N.D.	
72) Chlorobenzen	0.00	112	0	N.D.	
73) 1Clhexane	0.00	91	0	N.D.	
74) 1112Tetclota	0.00	131	0	N.D.	
75) Ethylbenzene	0.00	91	0	N.D.	
76) m p-Xylene	0.00	106	0	N.D.	
77) o-Xylene	0.00	106	0	N.D.	
78) Styrene	0.00	104	0	N.D.	
79) Bromoform	0.00	173	0	N.D.	
80) Isopropylben	0.00	105	0	N.D.	
81) cyclohexanone	0.00	55	0	N.D.	
84) Bromobenzene	0.00	156	0	N.D.	
85) 1122Tetrclta	0.00	83	0	N.D.	
86) 123Triclproa	0.00	75	0	N.D.	
87) 14dichloro2butene	0.00	53	0	N.D.	
88) n-Propylbenz	0.00	91	0	N.D.	
89) 2chlorotolue	0.00	91	0	N.D.	
90) 4chlorotolue	0.00	91	0	N.D.	
91) 135Trimebenz	0.00	105	0	N.D.	
92) tbutylbenzen	0.00	119	0	N.D.	
93) 124Trimetben	0.00	105	0	N.D.	
94) sbutylbenzen	0.00	105	0	N.D.	
95) 13Diclorbenz	0.00	146	0	N.D.	
96) pIsopropylto	0.00	119	0	N.D.	
97) 14dichlorobe	0.00	146	0	N.D.	
98) 12dichlorobe	0.00	146	0	N.D.	
99) nButylbenzen	0.00	91	0	N.D.	
100) 12dibromo3cl	0.00	157	0	N.D.	
101) 135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809338.D Vial: 7
Acq On : 28 Nov 2016 13:36 Operator: AGK-RLD
Sample : 133083,809338,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 13:56:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

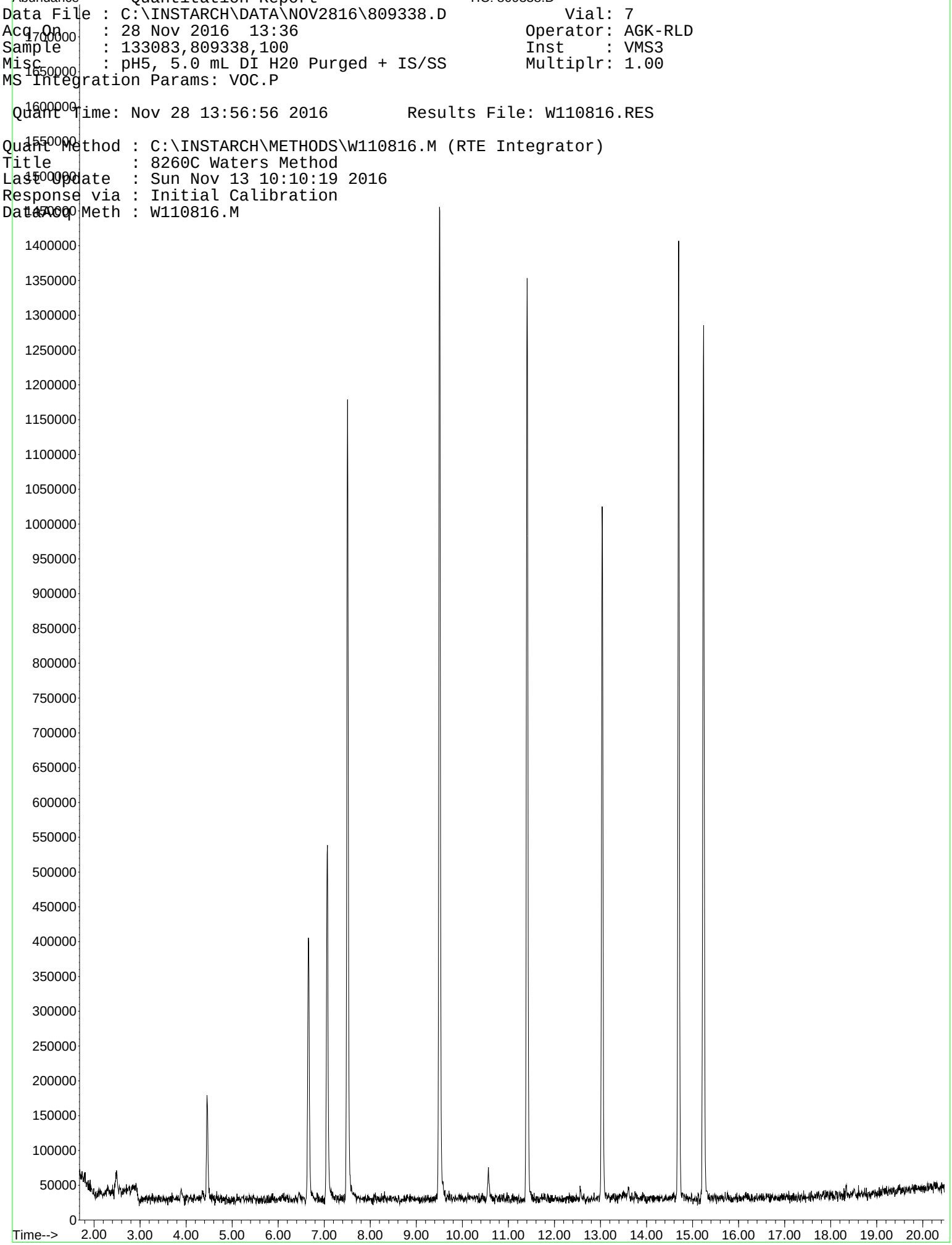
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 809338.D

Data File : C:\INSTARCH\DATA\NOV2816\809338.D Vial: 7
Acq On : 28 Nov 2016 13:36 Operator: AGK-RLD
Sample : 133083,809338,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 13:56:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809341.D Vial: 8
Acq On : 28 Nov 2016 14:05 Operator: AGK-RLD
Sample : 133083,809341,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 14:25:54 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1128701	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	833910	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	450593	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	274393	19.395	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 97 %			
45) SURR12DCAd4	7.08	102	73303	19.318	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 97 %			
61) SURRd8Tolule	9.51	98	1132733	19.811	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 99 %			
83) SURR4BrFBenz	13.04	95	398925	19.201	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 96 %			
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	1.99	50	6681	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	3.89	58	6109	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	3.89	43	21449	Below	Cal	92
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.09	76	6793	N.D.		
18) allylchloride	4.23	41	5810	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.45	84	49608	3.3934	ug/L	97
21) tbutylalcohol	4.67	59	2802	Below	Cal #	53
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	0.00	43	0	N.D.		
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.47	42	10117	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809341.D Vial: 8
Acq On : 28 Nov 2016 14:05 Operator: AGK-RLD
Sample : 133083,809341,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 14:25:54 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	Chloroform	0.00	83	0	N.D.	
40)	111trichlota	0.00	97	0	N.D.	
42)	Cyclohexane	0.00	56	0	N.D.	
43)	Carbtetraclo	0.00	119	0	N.D.	
44)	11dicloprope	0.00	110	0	N.D.	
46)	Benzene	0.00	78	0	N.D.	
47)	12dichlorota	0.00	62	0	N.D.	
48)	TAME	0.00	73	0	N.D.	
49)	trichloroete	0.00	95	0	N.D.	
50)	methylcyclohexane	0.00	83	0	N.D.	
51)	12dicloropra	0.00	63	0	N.D.	
52)	23Dicl1propene	0.00	75	0	N.D.	
53)	Dibromometha	0.00	93	0	N.D.	
54)	methylmethacrylate	0.00	69	0	N.D.	
55)	14dioxane	0.00	88	0	N.D.	
56)	Bromodiclrma	0.00	83	0	N.D.	
57)	2Nitropropane	0.00	43	0	N.D.	
58)	2CLEVE	0.00	63	0	N.D.	
59)	c13dicloproe	0.00	75	0	N.D.	
60)	4Meth2Pentan	0.00	43	0	N.D.	
62)	Toluene	0.00	92	0	N.D.	
63)	t13Dicloprop	0.00	75	0	N.D.	
64)	ethylmethacrylate	0.00	69	0	N.D.	
65)	112Triclotha	0.00	83	0	N.D.	
66)	Tetrachlorte	0.00	166	0	N.D.	
67)	13Diclorpropa	0.00	76	0	N.D.	
69)	2Hexanone	0.00	43	0	N.D.	
70)	Clorodibrmta	0.00	129	0	N.D.	
71)	12Dibrometha	0.00	107	0	N.D.	
72)	Chlorobenzen	0.00	112	0	N.D.	
73)	1Clhexane	11.41	91	2567	N.D.	
74)	1112Tetclota	0.00	131	0	N.D.	
75)	Ethylbenzene	0.00	91	0	N.D.	
76)	m p-Xylene	0.00	106	0	N.D.	
77)	o-Xylene	0.00	106	0	N.D.	
78)	Styrene	0.00	104	0	N.D.	
79)	Bromoform	0.00	173	0	N.D.	
80)	Isopropylben	0.00	105	0	N.D.	
81)	cyclohexanone	0.00	55	0	N.D.	
84)	Bromobenzene	0.00	156	0	N.D.	
85)	1122Tetrclta	0.00	83	0	N.D.	
86)	123Triclproa	0.00	75	0	N.D.	
87)	14dichloro2butene	0.00	53	0	N.D.	
88)	n-Propylbenz	0.00	91	0	N.D.	
89)	2chlorotolue	0.00	91	0	N.D.	
90)	4chlorotolue	0.00	91	0	N.D.	
91)	135Trimebenz	0.00	105	0	N.D.	
92)	tbutylbenzen	0.00	119	0	N.D.	
93)	124Trimetben	0.00	105	0	N.D.	
94)	sbutylbenzen	0.00	105	0	N.D.	
95)	13Diclorbenz	0.00	146	0	N.D.	
96)	pIsopropylto	0.00	119	0	N.D.	
97)	14dichlorobe	0.00	146	0	N.D.	
98)	12dichlorobe	0.00	146	0	N.D.	
99)	nButylbenzen	15.24	91	2569	N.D.	
100)	12dibromo3cl	0.00	157	0	N.D.	
101)	135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809341.D Vial: 8
Acq On : 28 Nov 2016 14:05 Operator: AGK-RLD
Sample : 133083,809341,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 14:25:54 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	0.00	128	0	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

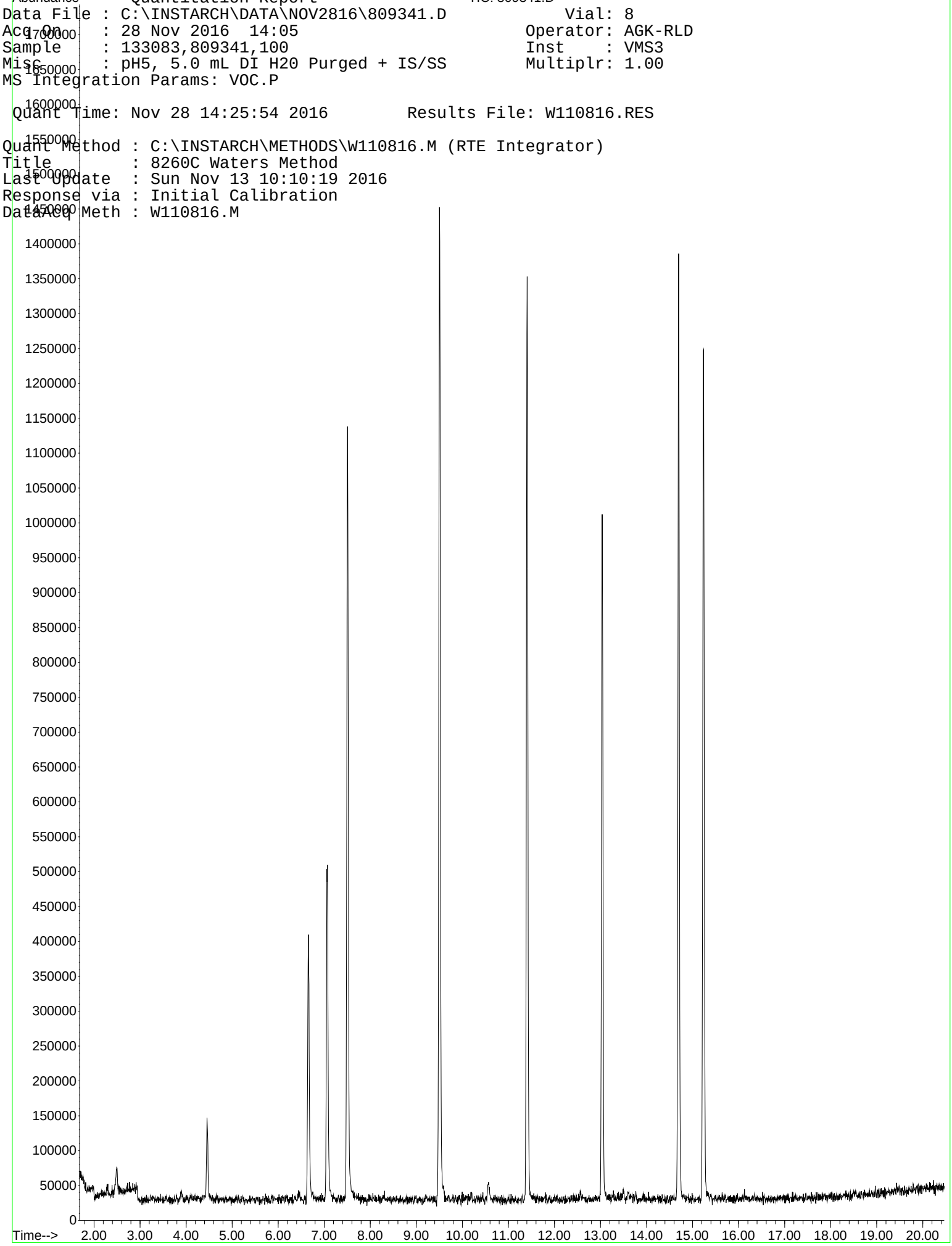
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: 809341.D

Data File : C:\INSTARCH\DATA\NOV2816\809341.D Vial: 8
Acq On : 28 Nov 2016 14:05 Operator: AGK-RLD
Sample : 133083,809341,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 14:25:54 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Method Path : C:\INSTARCH\METHODS\
Method File : W110816.M
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response Via : Initial Calibration

RJ 11/21/2016

Calibration Files ug/L
1 0.5/5.00 =WCAL1.D 2 2.0/20.0 =WCAL2.D 3 5.0/50.0 =WCAL3.D
4 10.0/100 =WCAL4.D 5 20.0/200 =WCAL5.D 6 30.0/300 =WCAL6.D
7 40.0/400 =WCAL7.D 8 80.0/800 =WCAL8.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	FLUOROBENZENE**ISTD**	----------ISTD----------									
2)	PT	Dichlorodi	0.315	0.316	0.253	0.318	0.300	0.293	0.294	0.260	0.294	8.57
3)	PT	Chloromethan	0.992	0.522	0.544	0.537	0.514	0.511	0.477	0.428	-----	
								Q	A= -0.028 R=1.000 B= 0.537 C= 0.006			
4)	PT	VinylChlorid	0.506	0.492	0.388	0.461	0.452	0.450	0.448	0.388	0.448	9.46
5)	PT	Bromomethane	0.129	0.134	0.102	0.109	0.115	0.110	0.114	0.120	0.117	9.12
6)	PT	Chloroethane	0.330	0.295	0.257	0.256	0.250	0.252	0.250	0.231	0.265	12.02
7)	T	Dichloroflmetha	0.601	0.517	0.461	0.465	0.479	0.461	0.452	0.404	0.480	12.09
8)	PT	Trichlorofma	0.393	0.340	0.303	0.341	0.330	0.329	0.312	0.293	0.330	9.29
9)	T	Ethylether	0.367	0.308	0.280	0.279	0.281	0.278	0.279	0.258	0.291	11.49
10)	T	dichlorotfluoro	0.345	0.316	0.289	0.306	0.287	0.294	0.278	0.259	0.297	8.70
11)	T	propyleneoxide	0.069	0.083	0.075	0.070	0.068	0.061	0.063	0.054	0.068	13.08
12)	T	Acrolein	0.177	0.133	0.129	0.128	0.132	0.128	0.130	0.113	0.134	13.86
13)	PT	11dichlorthe	0.286	0.252	0.219	0.230	0.222	0.226	0.212	0.199	0.231	11.70
14)	PT	Trichlorotfluor	0.224	0.214	0.183	0.211	0.217	0.210	0.192	0.184	0.204	7.66
15)	PT	Acetone	0.327	0.227	0.241	0.212	0.199	0.178	0.176	0.127	-----	
								Q	A= -0.002 R=0.999 B= 0.216 C= 0.035			
16)	T	Iodomethane	0.058	0.069	0.069	0.073	0.105	0.132	0.152	0.147	-----	
								Q	A= 0.001 R=0.994 B= 0.141 C= -0.033			
17)	PT	Carbon Dislf	0.747	0.707	0.607	0.637	0.612	0.593	0.550	0.636	10.78	
18)	T	allylchloride	0.557	0.544	0.487	0.516	0.496	0.489	0.459	0.354	0.488	12.84
19)	PT	methylacetate	0.170	0.188	0.175	0.153	0.153	0.153	0.158	0.147	0.162	8.68
20)	PT	Methylchlorid	0.301	0.270	0.282	0.256	0.253	0.240	0.245	0.225	0.259	9.43
21)	T	tbutylalcohol	0.134	0.119	0.113	0.093	0.088	0.071	0.067	0.046	-----	
								Q	A= -0.000 R=0.997 B= 0.086			

									C= 0.239		
22)	T	Acrylonitrile	0.261	0.256	0.258	0.236	0.238	0.217	0.217	0.232	12.40
			0.175								
23)	PT	t12dichlorte	0.252	0.229	0.216	0.229	0.238	0.227	0.230	0.229	5.82
			0.208								
24)	PT	MtBE	0.872	0.771	0.723	0.706	0.729	0.716	0.708	0.730	9.89
			0.615								
25)	T	Hexane	0.568	0.519	0.454	0.534	0.516	0.494	0.471	0.494	10.86
			0.395								
26)	PT	11dichlorota	0.656	0.591	0.563	0.560	0.559	0.562	0.539	0.563	9.14
			0.471								
27)	T	Vinylacetate	0.994	0.887	0.804	0.645	0.596	0.490	0.404	-----	
									Q A= -0.017 R=0.999		
									B= 0.747		
									C= 0.119		
28)	T	chloroprene	0.553	0.592	0.550	0.594	0.579	0.565	0.531	0.550	9.55
			0.431								
29)	T	Diisopether	1.386	1.303	1.242	1.254	1.238	1.125	1.150	1.205	11.20
			0.939								
30)	T	ETBE	1.165	0.998	0.996	0.972	0.972	0.952	0.919	0.970	10.75
			0.786								
31)	T	22dichloropr	0.383	0.396	0.342	0.375	0.395	0.383	0.369	0.373	6.02
			0.337								
32)	PT	c12dichlorte	0.363	0.295	0.295	0.281	0.285	0.270	0.277	0.290	11.34
			0.252								
33)	PT	2Butanone	0.086	0.073	0.069	0.067	0.071	0.062	0.067	0.069#	11.85
			0.059								
34)	T	propionitrile	0.123	0.111	0.114	0.104	0.110	0.099	0.102	0.106	10.36
			0.087								
35)	T	Ethylacetate	0.020	0.020	0.017	0.015	0.018	0.017	0.018	0.018#	9.24
			0.017								
36)	T	methacrylonitri	0.201	0.199	0.180	0.191	0.199	0.183	0.190	0.189	5.38
			0.173								
37)	T	Bromochlorma	0.128	0.125	0.108	0.113	0.110	0.110	0.109	0.113	8.29
			0.099								
38)	T	Tetrahydofur	0.245	0.273	0.266	0.237	0.244	0.207	0.198	0.239	11.69
39)	PT	Chloroform	0.523	0.472	0.414	0.442	0.432	0.425	0.426	0.440	9.43
			0.385								
40)	PT	111trichlota	0.435	0.411	0.357	0.386	0.392	0.395	0.393	0.391	6.53
			0.359								
41)	S	SURRDibrflma	0.253	0.251	0.247	0.244	0.249	0.257	0.248	0.251	1.84
			0.256								
42)	PT	Cyclohexane	0.662	0.690	0.557	0.675	0.671	0.652	0.624	0.638	7.83
			0.570								
43)	PT	Carbtetraclo	0.347	0.308	0.265	0.303	0.314	0.317	0.318	0.309	7.37
			0.299								
44)	T	11dicloprope	0.121	0.129	0.112	0.132	0.119	0.120	0.122	0.122	4.95
			0.121								
45)	S	SURR12DCAd4	0.070	0.064	0.067	0.068	0.065	0.067	0.064	0.067	4.30
			0.072								
46)	PT	Benzene	1.209	1.121	1.014	1.073	1.027	0.993	0.951	1.023	12.01
			0.794								
47)	PT	12dichlorota	0.530	0.497	0.442	0.426	0.435	0.418	0.413	0.443	10.76
			0.384								
48)	T	TAME	0.804	0.765	0.719	0.728	0.734	0.724	0.725	0.728	6.82
			0.628								
49)	PT	trichloroete	0.297	0.250	0.237	0.260	0.254	0.255	0.251	0.255	7.50
			0.234								
50)	PT	methylcyclohexa	0.544	0.459	0.360	0.449	0.447	0.435	0.431	0.441	11.94
			0.401								
51)	PT	12dicloropra	0.351	0.377	0.355	0.367	0.360	0.355	0.351	0.355	3.97
			0.328								
52)	T	23Dicl1propene	0.429	0.397	0.394	0.410	0.408	0.393	0.401	0.400	4.59
			0.364								
53)	T	Dibromometha	0.197	0.181	0.176	0.164	0.164	0.163	0.168	0.172	7.21
			0.160								
54)	T	methylmethacryl	0.281	0.293	0.261	0.272	0.279	0.274	0.281	0.276	3.73
			0.263								

```
55) T   14dioxane       0.005 0.005 0.005 0.004 0.004 0.004 0.004 0.005# 12.22
                        0.004
56) PT  Bromodiclrma    0.324 0.335 0.299 0.326 0.328 0.325 0.329 0.321   4.06
                        0.303
57) T   2Nitropropane   0.229 0.201 0.202 0.191 0.196 0.176 0.170 -----
                        0.125
                                                    Q  A= -0.002 R=1.000
                                                       B=  0.213
                                                       C= -0.013
58) T   2CLEVE          0.021 0.024 0.015 0.026 0.032 0.033 0.031 ----- #
                        0.023
                                                    Q  A= -0.001 R=0.996
                                                       B=  0.040
                                                       C= -0.016
59) PT  c13dicloproe    0.536 0.423 0.443 0.426 0.450 0.442 0.436 0.444   9.32
                        0.393
60) PT  4Meth2Pentan    0.724 0.693 0.647 0.575 0.485 0.396 0.333 -----

                                                    Q  A= -0.015 R=0.999
                                                       B=  0.617
                                                       C=  0.101
61) S   SURRd8Tolule    1.016 1.016 0.973 1.014 1.023 1.021 1.029 1.013   1.69
                        1.014
62) PT  Toluene         0.708 0.637 0.638 0.642 0.636 0.620 0.623 0.631   7.15
                        0.542
63) PT  t13Dicloprop    0.447 0.385 0.381 0.378 0.407 0.390 0.393 0.393   6.53
                        0.361
64) T   ethylmethacryla 0.451 0.424 0.400 0.401 0.410 0.405 0.397 0.404   7.47
                        0.344
65) PT  112Triclotha    0.264 0.222 0.189 0.204 0.220 0.207 0.213 0.215  10.63
                        0.196
66) PT  Tetrachlorte    0.292 0.250 0.225 0.267 0.258 0.250 0.254 0.254   7.83
                        0.237
67) T   13Diclorpropa   0.484 0.462 0.417 0.452 0.444 0.437 0.437 0.442   5.86
                        0.400

68) I   d5-CHLOROBENZENE**IST ----------------ISTD--------------------
69) PT  2Hexanone       0.825 0.788 0.730 0.647 0.575 0.470 0.399 -----

                                                    Q  A= -0.016 R=0.999
                                                       B=  0.720
                                                       C=  0.075
70) PT  Clorodibrmta    0.385 0.320 0.314 0.290 0.341 0.339 0.324 0.328   8.55
                        0.311
71) PT  12Dibrometha    0.466 0.337 0.335 0.338 0.355 0.349 0.352 0.356  12.83
                        0.319
72) PT  Chlorobenzen    1.108 1.012 0.943 0.896 0.904 0.899 0.873 0.923  11.37
                        0.749
73) T   1Clhexane       0.595 0.549 0.427 0.483 0.507 0.492 0.484 0.498  10.76
                        0.447
74) T   1112Tetclota    0.366 0.319 0.298 0.290 0.313 0.319 0.314 0.314   7.63
                        0.292
75) PT  Ethylbenzene    1.975 1.746 1.561 1.614 1.608 1.549 1.465 1.587  14.34
                        1.177
76) PT  m p-Xylene      0.730 0.671 0.589 0.616 0.619 0.609 0.573 0.612  11.34
                        0.493
77) PT  o-Xylene        0.670 0.550 0.574 0.585 0.616 0.597 0.598 0.591   6.87
                        0.539
78) PT  Styrene         1.101 0.942 0.897 0.916 0.983 0.985 0.946 0.949   8.43
                        0.825
79) PT  Bromoform       0.270 0.221 0.240 0.250 0.255 0.257 0.256 0.250   5.78
                        0.253
80) PT  Isopropylben    1.585 1.584 1.411 1.455 1.484 1.453 1.372 1.433  10.33
                        1.117
81) T   cyclohexanone   0.044 0.034 0.036 0.035 0.039 0.034 0.035 0.036  10.21
                        0.033

82) I   d4-1,4-DICHLOROBENZEN ----------------ISTD--------------------
83) S   SURR4BrFBenz     0.896 0.947 0.917 0.962 0.915 0.898 0.885 0.922   3.21
                        0.957
```

84)	T	Bromobenzene	0.741	0.781	0.701	0.707	0.678	0.674	0.639	0.696	6.75
			0.650								
85)	PT	1122Tetrclta	1.485	1.140	1.140	1.128	1.083	1.057	0.982	1.125	14.11
			0.987								
86)	T	123Triclproa	1.469	1.469	1.421	1.445	1.415	1.365	1.314	1.402	4.45
			1.320								
87)	T	14dichloro2bute	0.434	0.445	0.375	0.397	0.433	0.391	0.401	0.412	5.93
			0.420								
88)	T	n-Propylbenz	3.654	3.680	3.395	3.657	3.361	3.176	2.815	3.269	13.84
			2.416								
89)	T	2chlorotolue	2.527	2.179	2.021	2.073	1.932	1.877	1.753	1.998	13.86
			1.625								
90)	T	4chlorotolue	2.553	2.374	2.215	2.354	2.241	2.180	1.968	2.213	10.50
			1.819								
91)	T	135Trimebenz	2.358	2.385	2.266	2.402	2.288	2.216	2.031	2.223	8.84
			1.835								
92)	T	tbutylbenzen	1.688	1.900	1.932	2.019	1.924	1.879	1.710	1.835	7.60
			1.631								
93)	T	124Trimetben	2.499	2.456	2.328	2.464	2.264	2.197	2.022	2.258	10.32
			1.838								
94)	T	sbutylbenzen	2.921	2.954	2.751	2.986	2.887	2.728	2.469	2.732	10.43
			2.162								
95)	PT	13Diclorbenz	1.245	1.186	1.156	1.228	1.185	1.159	1.090	1.162	5.65
			1.050								
96)	T	pIsopropylto	2.483	2.377	2.289	2.438	2.334	2.280	2.039	2.261	9.49
			1.846								
97)	PT	14dichlorobe	1.427	1.272	1.202	1.257	1.147	1.159	1.087	1.202	9.73
			1.065								
98)	PT	12dichlorobe	1.404	1.125	1.118	1.128	1.122	1.105	1.016	1.126	11.06
			0.990								
99)	T	nButylbenzen	2.537	2.437	2.165	2.403	2.245	2.158	1.955	2.212	11.32
			1.795								
100)	PT	12dibromo3cl	0.234	0.215	0.246	0.247	0.275	0.250	0.252	0.249	7.82
			0.272								
101)	T	135Trichloroben	0.883	0.835	0.766	0.854	0.802	0.763	0.719	0.793	7.75
			0.719								
102)	PT	124Trichlobe	0.985	0.711	0.668	0.723	0.703	0.701	0.653	0.725	14.86
			0.661								
103)	T	Hexachlorobu	0.321	0.321	0.315	0.339	0.333	0.332	0.321	0.326	2.54
			0.323								
104)	T	Naphthalene	2.179	2.327	2.183	2.269	2.287	2.123	2.031	2.152	7.77
			1.812								
105)	T	123Trichlben	0.591	0.691	0.608	0.623	0.655	0.620	0.608	0.625	5.27
			0.600								

Total Average %RSD 8.90

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

W110816.M Mon Nov 21 15:37:43 2016

Data File : C:\INSTARCH\Data\NOV0816\BFB1.D Vial: 1
Acq On : 8 Nov 2016 15:49 Operator: AGK-RLD
Sample : BFB Injection Inst : VMS3
Misc : 25 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110816.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.410 to 4.435 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	31.8	17748	PASS
75	95	30	60	52.9	29505	PASS
95	95	100	100	100.0	55748	PASS
96	95	5	9	6.6	3664	PASS
173	174	0.00	2	1.5	749	PASS
174	95	50	100	89.0	49592	PASS
175	174	5	9	5.9	2937	PASS
176	174	95	101	95.5	47364	PASS
177	176	5	9	6.8	3241	PASS

W110816.M Mon Nov 21 15:35:46 2016

Quantitation Report (Qedit)

Data File : C:\INSTARCH\DATA\NOV0816\WCAL1.D Vial: 4
Acq On : 8 Nov 2016 17:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.50/5.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:13:29 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) FLUOROBENZENE**ISTD**	7.51	96	1283847	20.00	ug/L	0.00
68) d5-CHLOROBENZENE**ISTD**	11.41	117	929332	20.00	ug/L	0.00
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	497466	20.00	ug/L	0.00
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	325437	20.223	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 101 %			
45) SURR12DCAd4	7.07	102	90227	20.905	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 105 %			
61) SURRd8Tolule	9.51	98	1303861	20.048	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 100 %			
83) SURR4BrFBenz	13.04	95	445972	19.443	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 97 %			
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	10123	0.5368	ug/L	76
3) Chloromethan	2.00	50	31843m	0.8435	ug/L	96
4) VinylChlorid	2.14	62	16243	0.5647	ug/L	97
5) Bromomethane	2.59	94	4143	0.5528	ug/L #	15
6) Chloroethane	2.74	64	10591	0.6225	ug/L	85
7) Dichloroflmethane	3.04	67	19291	0.6260	ug/L #	77
8) Trichlorofma	3.13	101	12602	0.5948	ug/L #	95
9) Ethylether	3.55	59	11789	0.6302	ug/L	97
10) dichlorotfluoroethan	3.56	67	11058	0.5805	ug/L	89
11) propyleneoxide	3.89	58	44259	10.1609	ug/L	85
12) Acrolein	3.68	56	28347	3.3066	ug/L	92
13) 11dichlorthe	3.84	96	9180	0.6201	ug/L	97
14) Trichlorotfluoroeth	3.88	101	14359	1.0944	ug/L	89
15) Acetone	3.90	43	104882m	7.0033	ug/L	95
16) Iodomethane	4.00	142	3730m	0.5386	ug/L #	81
17) Carbon Dislf	4.09	76	47976m	1.1992	ug/L	93
18) allylchloride	4.31	41	35771	1.1421	ug/L	88
19) methylacetate	4.36	74	5468	0.5252	ug/L #	66
20) Methylchlorid	4.46	84	9663m	0.5566	ug/L #	92
21) tbutylalcohol	4.66	59	215831m	36.3612	ug/L	96
22) Acrylonitrile	4.76	53	41880	2.8102	ug/L	96
23) t12dichlorte	4.85	96	8089m	0.5303	ug/L #	85
24) MtBE	4.86	73	27992	0.5974	ug/L	92
25) Hexane	5.23	57	36465	1.1503	ug/L	98
26) 11dichlorota	5.34	63	21063	0.5832	ug/L	86
27) Vinylacetate	5.44	43	319184	7.8497	ug/L	96
28) chloroprene	5.49	53	35467	1.0054	ug/L	88
29) Diisopether	5.51	45	44482m	0.5629	ug/L	93
30) ETBE	5.96	59	37388	0.6004	ug/L	95
31) 22dichloropr	6.08	77	12307m	0.4909	ug/L	92
32) c12dichlorte	6.07	96	11663	0.6271	ug/L #	83
33) 2Butanone	6.09	72	27742	6.2447	ug/L	98
34) propionitrile	6.12	54	39617	5.8016	ug/L	93
35) Ethylacetate	6.20	88	3249	2.8629	ug/L #	72
36) methacrylonitrile	6.34	67	12922	1.0629	ug/L	92
37) Bromochlorma	6.37	128	4110	0.5678	ug/L #	92
38) Tetrahydofur	6.44	42	78668m	5.2379	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL1.D Vial: 4
Acq On : 8 Nov 2016 17:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.50/5.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:13:29 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39) Chloroform	6.47	83	16777	0.5942 ug/L		95
40) 111trichlota	6.72	97	13963	0.5565 ug/L		97
42) Cyclohexane	6.81	56	21252	0.5193 ug/L		84
43) Carbtetraclo	6.95	119	11124	0.5611 ug/L		85
44) 11dicloprope	6.93	110	3899m	0.4682 ug/L		60
46) Benzene	7.17	78	38799	0.5910 ug/L		80
47) 12dichlorota	7.16	62	17023	0.5982 ug/L	#	89
48) TAME	7.33	73	25811	0.5520 ug/L		82
49) trichloroete	7.99	95	9519	0.5823 ug/L		88
50) methylcyclohexane	8.25	83	17476	0.6176 ug/L		88
51) 12dicloropra	8.23	63	11262	0.4936 ug/L	#	97
52) 23Dicl1propene	8.29	75	13765	0.5367 ug/L	#	67
53) Dibromometha	8.37	93	6321	0.5736 ug/L		93
54) methylmethacrylate	8.40	69	9022	0.5100 ug/L		83
55) 14dioxane	8.41	88	8673	29.7665 ug/L	#	80
56) Bromodiclrma	8.57	83	10407	0.5050 ug/L	#	77
57) 2Nitropropane	8.82	43	73474	6.1425 ug/L		95
58) 2CLEVE	8.97	63	3387m	1.9704 ug/L	#	51
59) c13dicloproe	9.14	75	17213	0.6042 ug/L	#	55
60) 4Meth2Pentan	9.34	43	232237m	6.9996 ug/L		91
62) Toluene	9.59	92	22713	0.5609 ug/L	#	73
63) t13Dicloprop	9.86	75	14358	0.5696 ug/L		83
64) ethylmethacrylate	10.01	69	28973	1.1168 ug/L		89
65) 112Triclotha	10.09	83	8469	0.6147 ug/L	#	78
66) Tetrachlorte	10.31	166	9362	0.5739 ug/L		85
67) 13Diclorpropa	10.31	76	15540	0.5482 ug/L		92
69) 2Hexanone	10.43	43	191602m	6.9849 ug/L		95
70) Clorodibrmta	10.61	129	8943	0.5867 ug/L	#	72
71) 12Dibrometha	10.76	107	10825	0.6535 ug/L		99
72) Chlorobenzen	11.46	112	25749	0.6003 ug/L		86
73) 1Clhexane	11.42	91	13819	0.5973 ug/L	#	32
74) 1112Tetclota	11.55	131	8496	0.5826 ug/L		91
75) Ethylbenzene	11.61	91	45887	0.6223 ug/L		100
76) m p-Xylene	11.78	106	33903	1.1914 ug/L		92
77) o-Xylene	12.32	106	15559	0.5663 ug/L	#	79
78) Styrene	12.34	104	25589	0.5800 ug/L		89
79) Bromoform	12.57	173	6265	0.5392 ug/L		90
80) Isopropylben	12.85	105	36835	0.5534 ug/L		84
81) cyclohexanone	12.93	55	20518	12.1957 ug/L	#	84
84) Bromobenzene	13.25	156	9210	0.5317 ug/L	#	82
85) 1122Tetrclta	13.22	83	18473	0.6600 ug/L		92
86) 123Triclproa	13.28	75	18270	0.5238 ug/L		68
87) 14dichloro2butene	13.32	53	5393	0.5261 ug/L	#	65
88) n-Propylbenz	13.43	91	45444	0.5588 ug/L		94
89) 2chlorotolue	13.54	91	31424	0.6322 ug/L		88
90) 4chlorotolue	13.69	91	31754	0.5768 ug/L		95
91) 135Trimebenz	13.69	105	29325	0.5304 ug/L		97
92) tbutylbenzen	14.16	119	20998	0.4600 ug/L	#	73
93) 124Trimetben	14.23	105	31078	0.5532 ug/L		91
94) sbutylbenzen	14.48	105	36328	0.5345 ug/L		99
95) 13Diclorbenz	14.61	146	15484	0.5356 ug/L		90
96) pIsopropylto	14.69	119	30874	0.5491 ug/L	#	94
97) 14dichlorobe	14.73	146	17752	0.5937 ug/L		84
98) 12dichlorobe	15.26	146	17461	0.6235 ug/L		83
99) nButylbenzen	15.28	91	31555	0.5736 ug/L		94
100) 12dibromo3cl	16.36	157	2906	0.4693 ug/L		93
101) 135Trichlorobenzene	16.71	180	10987	0.5572 ug/L		88

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL1.D Vial: 4
Acq On : 8 Nov 2016 17:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.50/5.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:13:29 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
102) 124Trichlobe	17.53	180	12244	0.6786	ug/L	#	72
103) Hexachlorobu	17.79	225	3990	0.4926	ug/L	#	59
104) Naphthalene	17.82	128	27104	0.5065	ug/L		87
105) 123Trichlben	18.14	180	7355	0.4734	ug/L		84

(#) = qualifier out of range (m) = manual integration

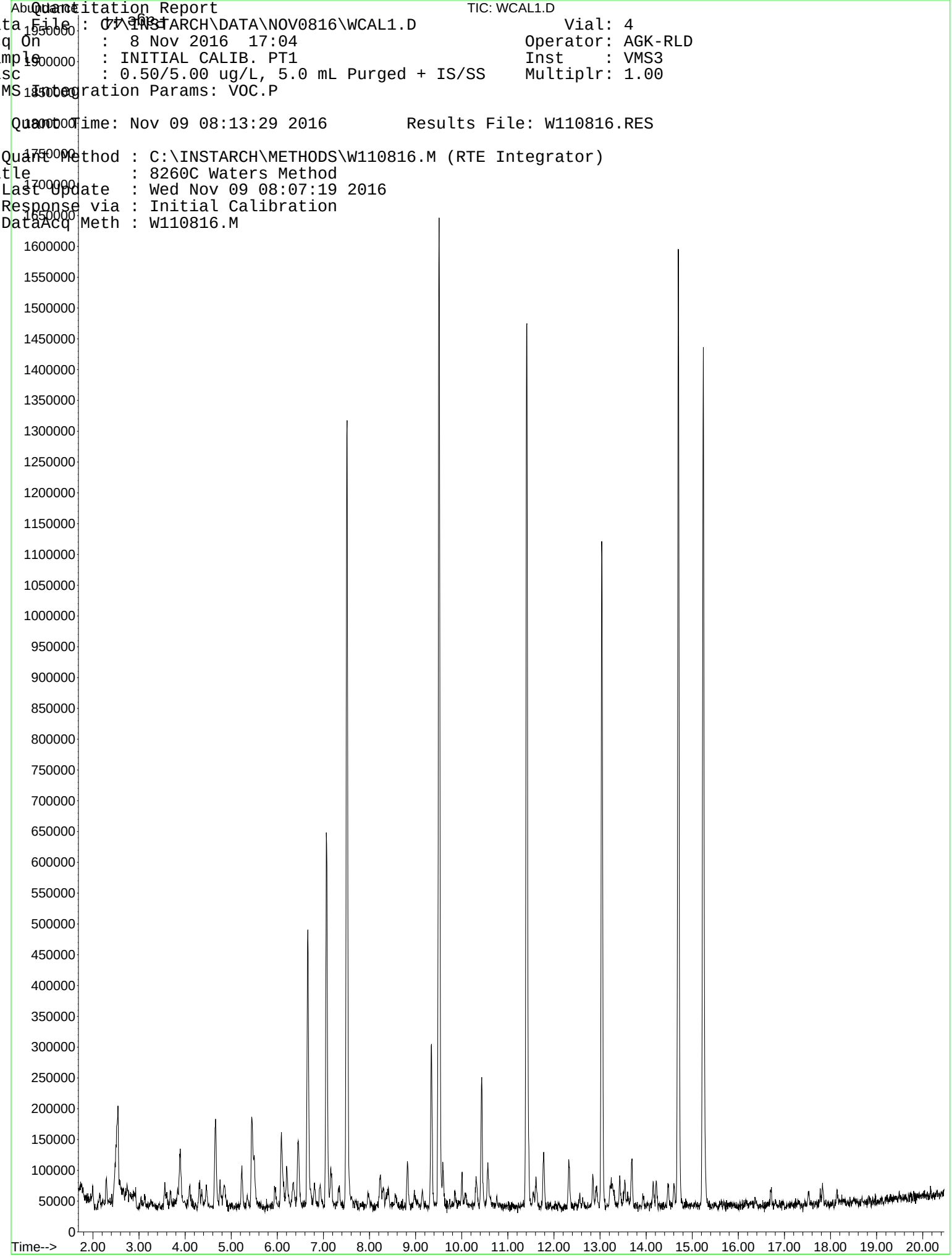
Quantitation Report (RTE Integrator)

Data File : C:\INSTARCH\DATA\NOV0816\WCAL1.D Vial: 4
Acq On : 8 Nov 2016 17:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT1 Inst : VMS3
Misc : 0.50/5.00 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:13:29 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

TIC: WCAL1.D



After Manual Integration

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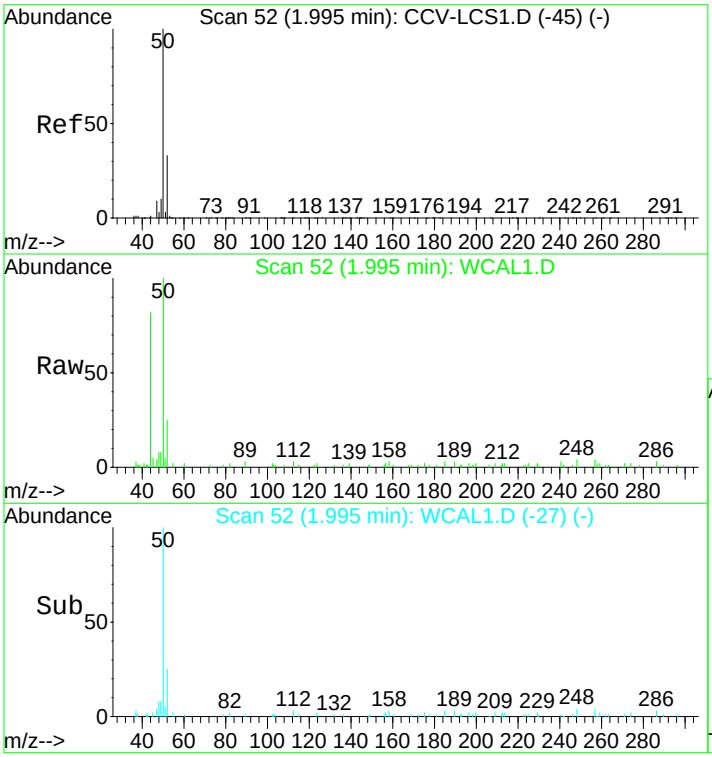
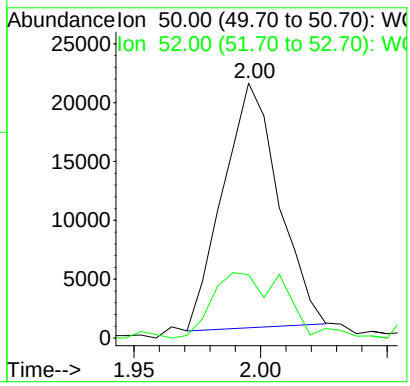
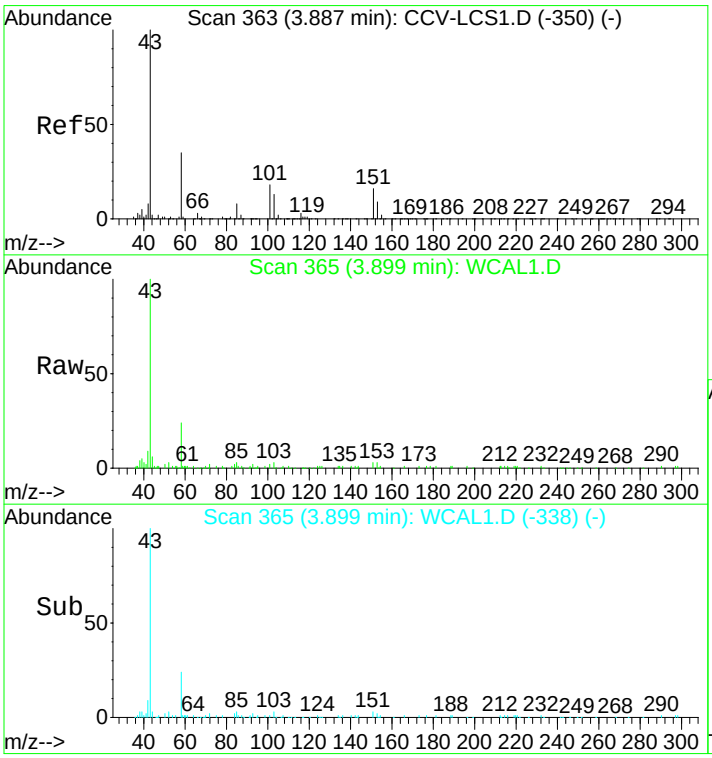


#3
Chloromethan
Concen: 0.84 ug/L m
RT: 2.00 min Scan# 52
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 50 Resp: 31843

Ion	Ratio	Lower	Upper
50	100		
52	35.2	13.9	53.9

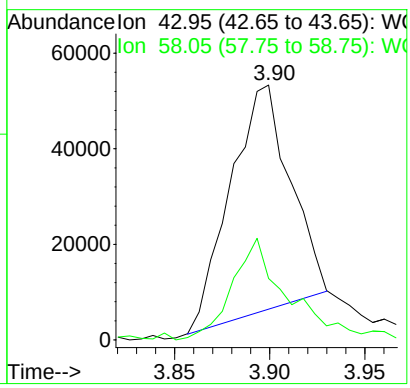




#15
Acetone
Concen: 7.00 ug/L m
RT: 3.90 min Scan# 365
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 43 Resp: 104882

Ion	Ratio	Lower	Upper
43	100		
58	42.2	13.0	53.0



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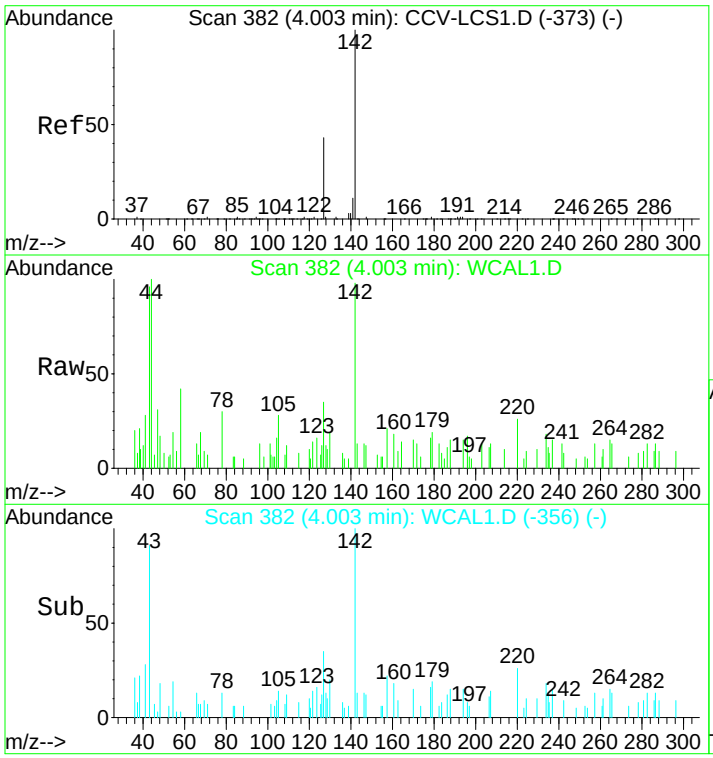
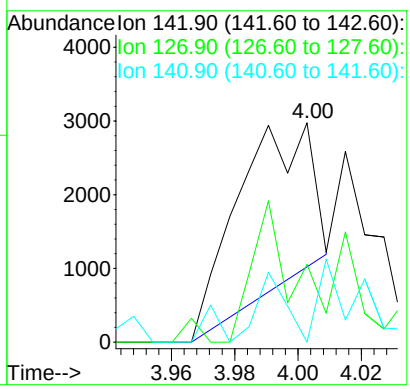
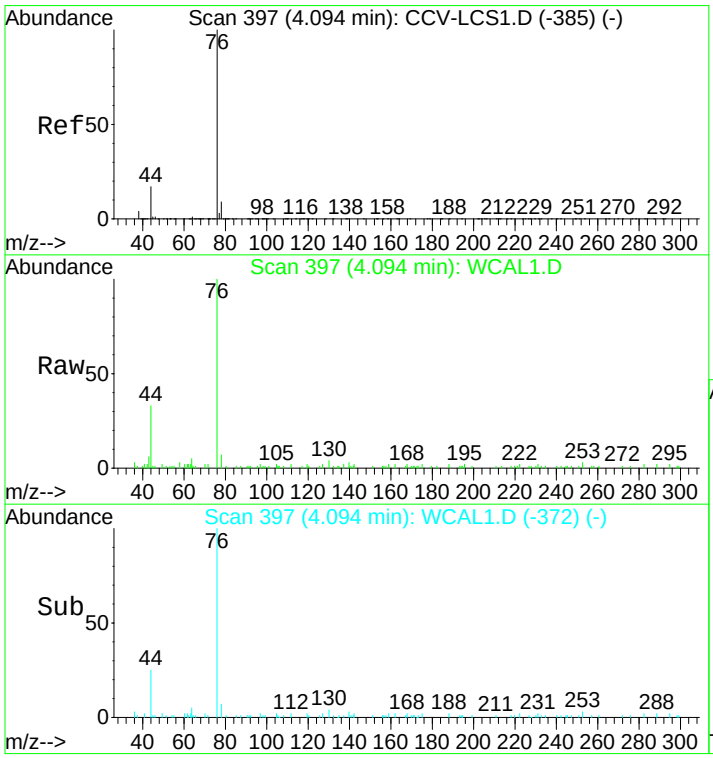


#16
Iodomethane
Concen: 0.54 ug/L m
RT: 4.00 min Scan# 382
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion:142 Resp: 3730

Ion	Ratio	Lower	Upper
142	100		
127	70.8	22.9	62.9#
141	0.0	0.0	35.6

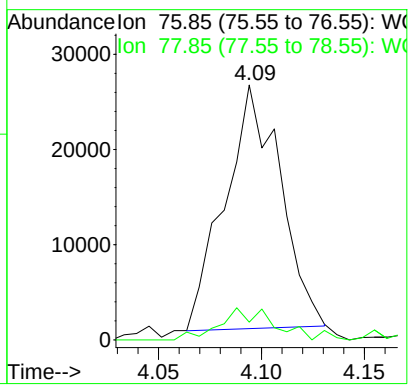




#17
Carbon Dislf
Concen: 1.20 ug/L m
RT: 4.09 min Scan# 397
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 76 Resp: 47976

Ion	Ratio	Lower	Upper
76	100		
78	13.3	0.0	29.4



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After Manual Integration

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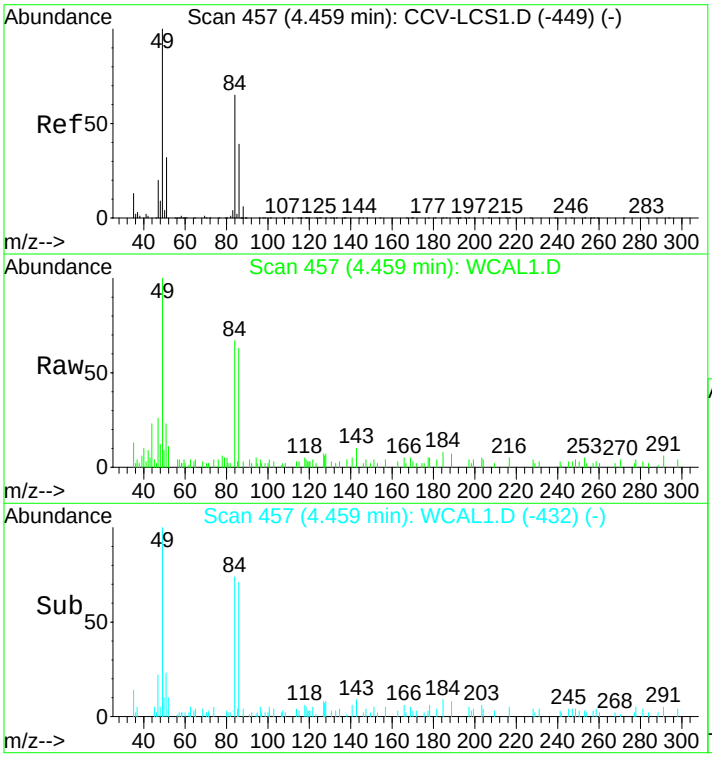
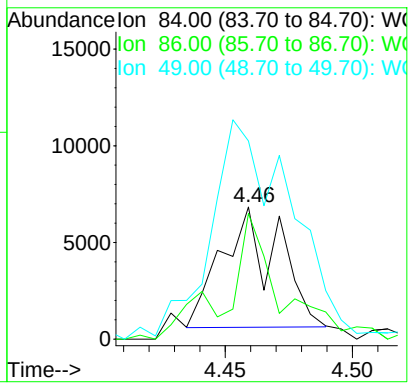
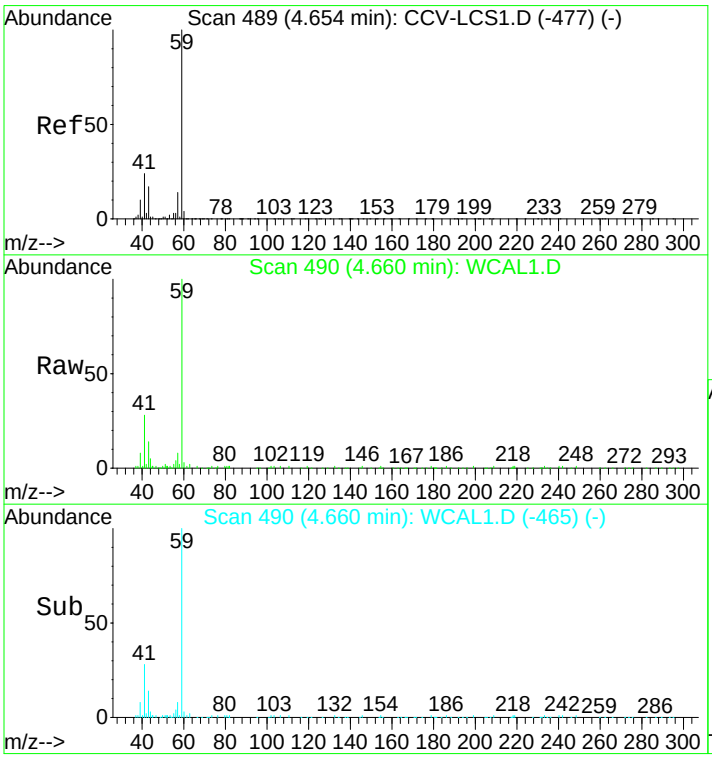


#20
Methylchlorid
Concen: 0.56 ug/L m
RT: 4.46 min Scan# 457
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 84 Resp: 9663

Ion	Ratio	Lower	Upper
84	100		
86	102.6	42.4	82.4#
49	273.7	184.8	224.8#

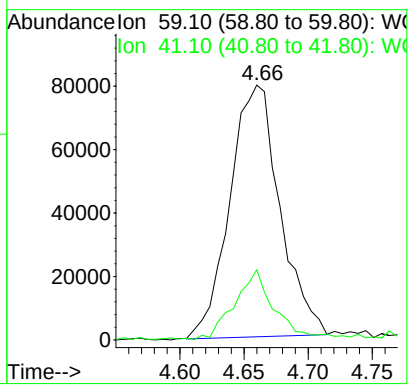




#21
tbutylalcohol
Concen: 36.36 ug/L m
RT: 4.66 min Scan# 490
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 59 Resp: 215831

Ion	Ratio	Lower	Upper
59	100		
41	22.3	2.8	42.8



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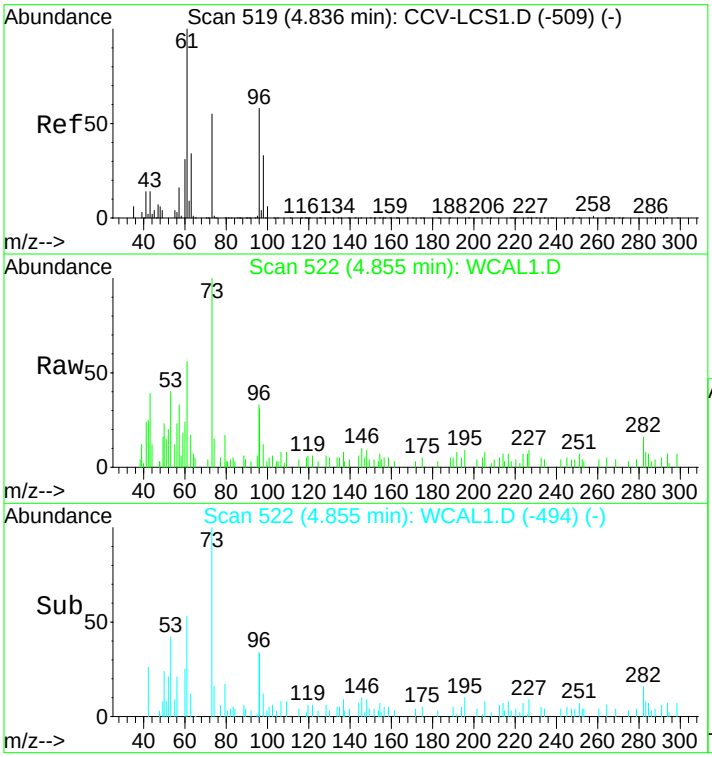
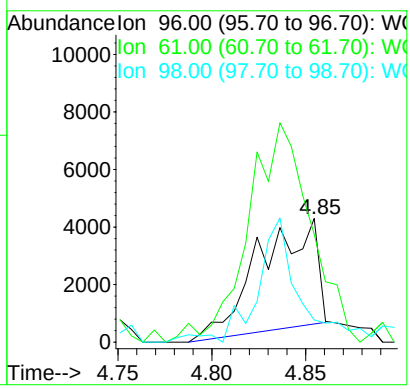
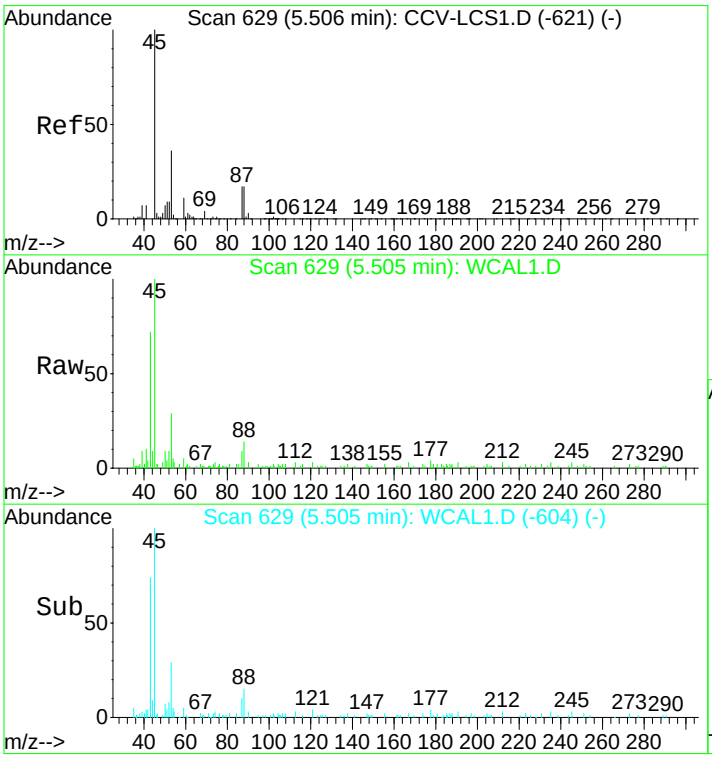


#23
t12dichlorte
Concen: 0.53 ug/L m
RT: 4.85 min Scan# 522
Delta R.T. 0.02 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 96 Resp: 8089

Ion	Ratio	Lower	Upper
96	100		
61	218.4	169.2	209.2#
98	68.7	48.0	88.0

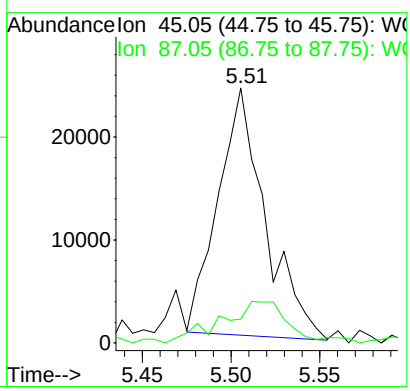




#29
Diisopether
Concen: 0.56 ug/L m
RT: 5.51 min Scan# 629
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 45 Resp: 44482

Ion	Ratio	Lower	Upper
45	100		
87	24.7	0.0	38.4



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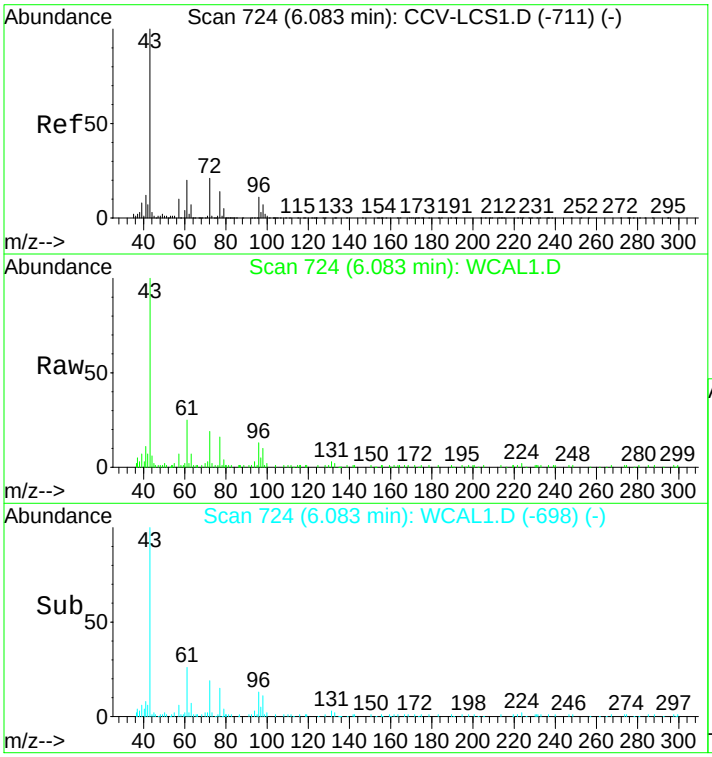
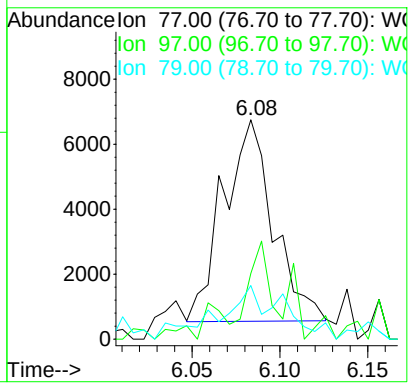
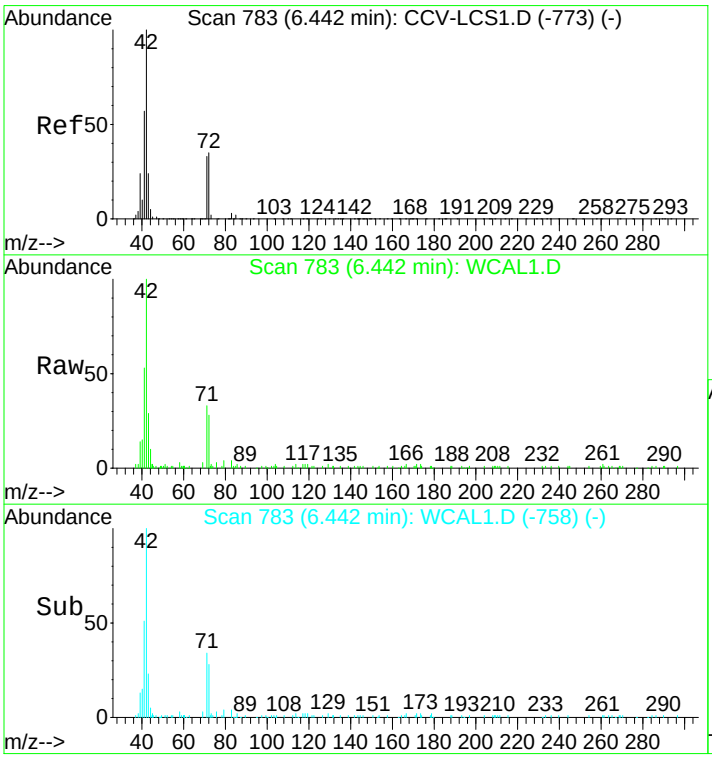


#31
22dichloropr
Concen: 0.49 ug/L m
RT: 6.08 min Scan# 724
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 77 Resp: 12307

Ion	Ratio	Lower	Upper
77	100		
97	31.8	1.8	41.8
79	34.4	11.4	51.4

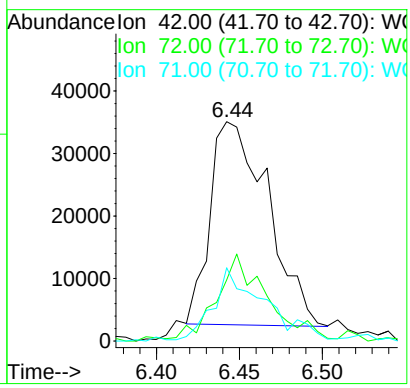




#38
Tetrahydofur
Concen: 5.24 ug/L m
RT: 6.44 min Scan# 783
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 42 Resp: 78668

Ion	Ratio	Lower	Upper
42	100		
72	38.5	11.0	51.0
71	30.9	9.4	49.4



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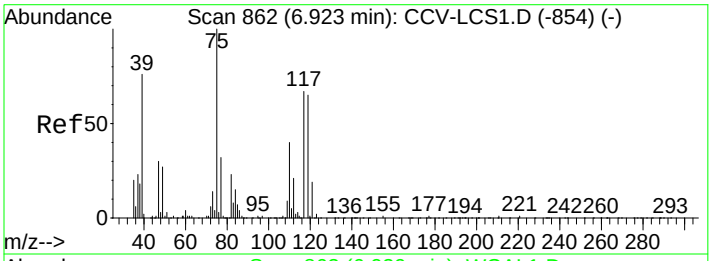
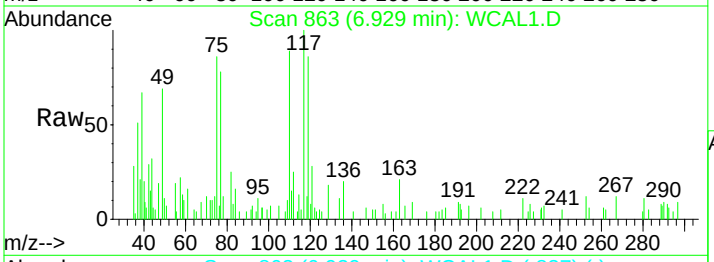
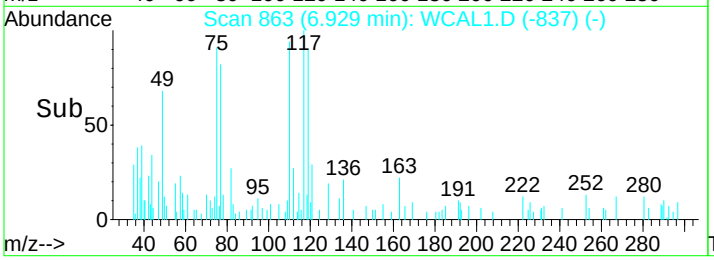


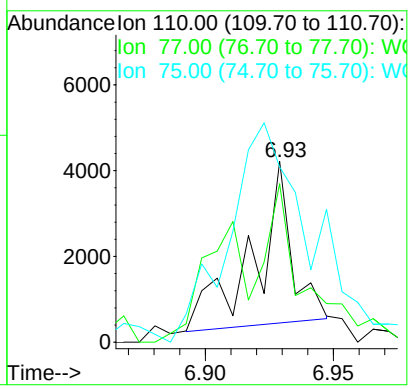


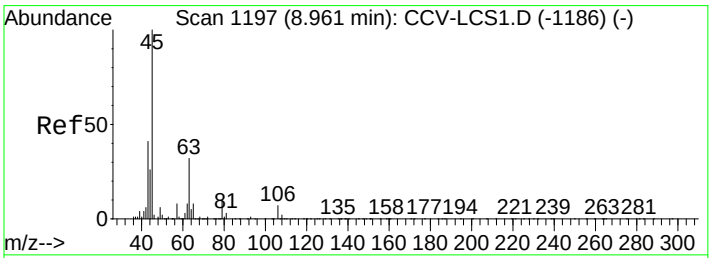


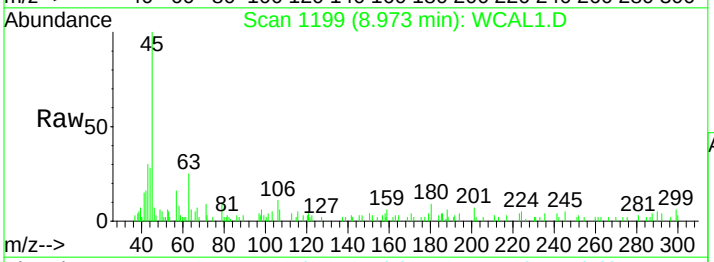
#44
11dicloprope
Concen: 0.47 ug/L m
RT: 6.93 min Scan# 863
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

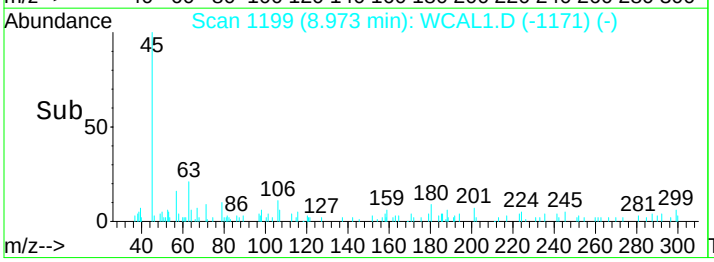
Tgt Ion:110 Resp: 3899

Ion	Ratio	Lower	Upper
110	100		
77	101.9	71.6	111.6
75	301.4	262.9	302.9





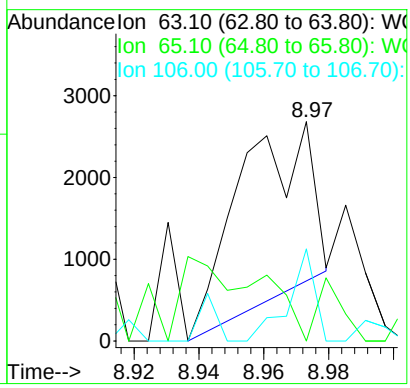




#58
2CLEVE
Concen: 1.97 ug/L m
RT: 8.97 min Scan# 1199
Delta R.T. 0.02 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 63 Resp: 3387

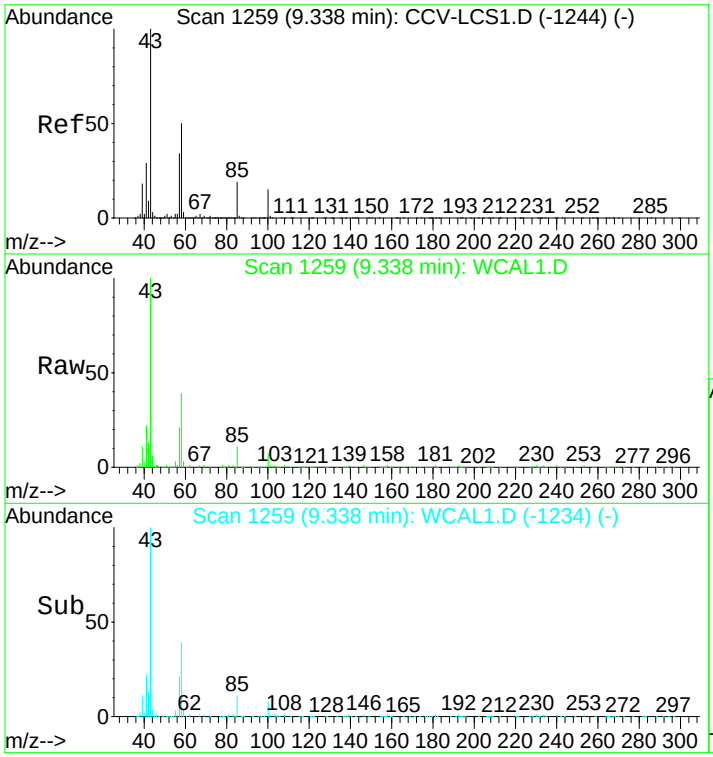
Ion	Ratio	Lower	Upper
63	100		
65	0.0	6.8	46.8#
106	0.0	1.4	41.4#



11/21/2016

After Manual Integration

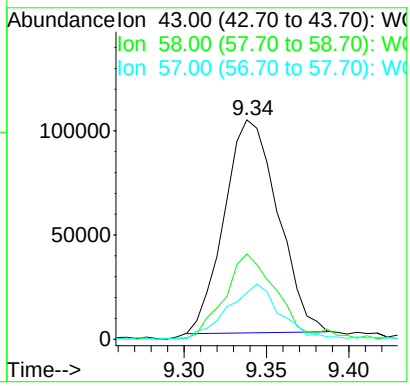
AgK 11/21/16

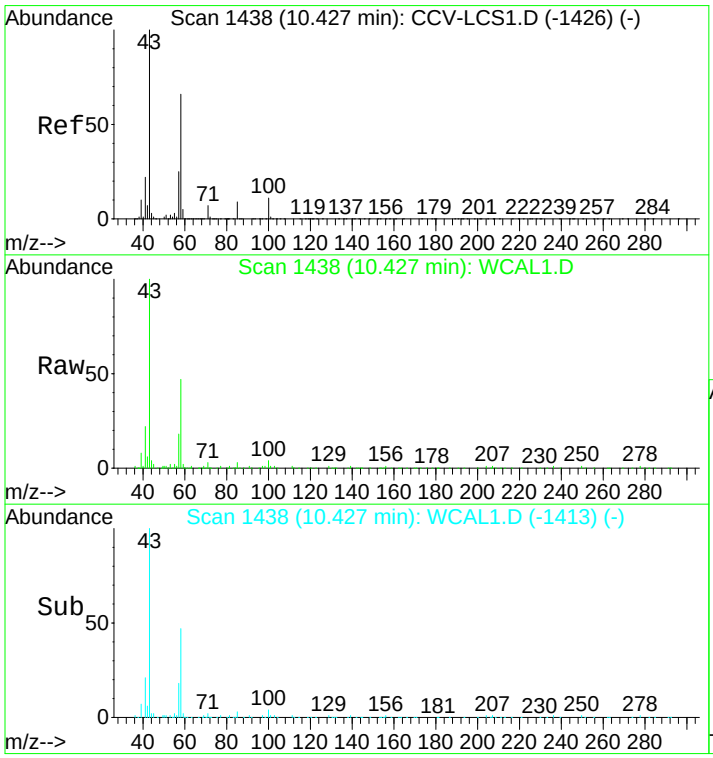


#60
4Meth2Pentan
Concen: 7.00 ug/L m
RT: 9.34 min Scan# 1259
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 43 Resp: 232237

Ion	Ratio	Lower	Upper
43	100		
58	40.3	23.1	63.1
57	26.1	7.0	47.0

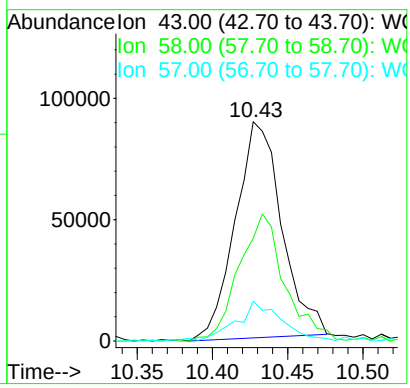




#69
2Hexanone
Concen: 6.98 ug/L m
RT: 10.43 min Scan# 1438
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 43 Resp: 191602

Ion	Ratio	Lower	Upper
43	100		
58	57.7	37.1	77.1
57	18.1	0.5	40.5



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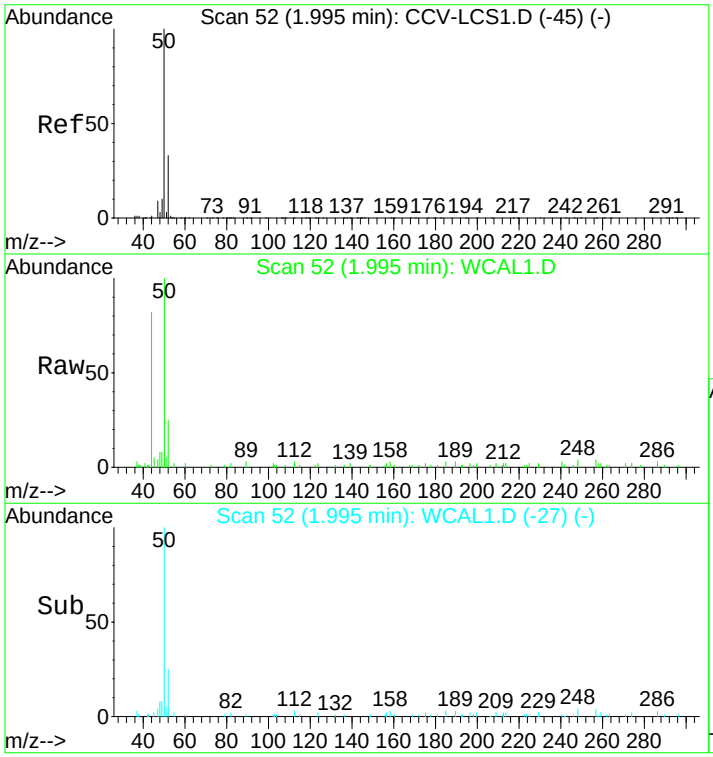
Before Manual Integration

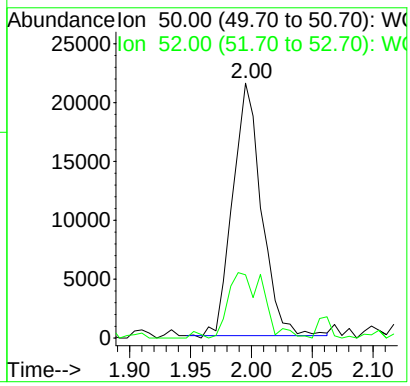
AgK 11/21/16

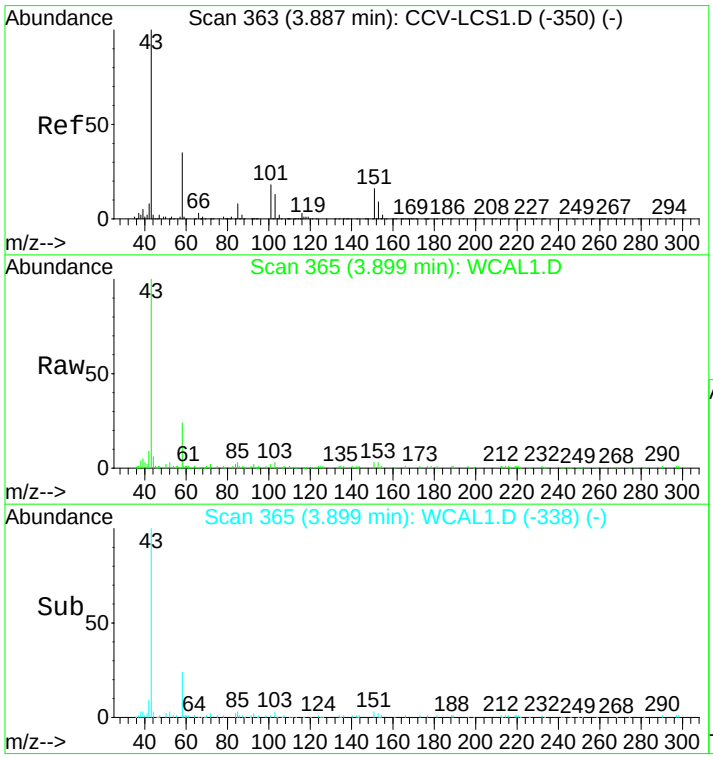


#3
Chloromethan
Concen: 0.81 ug/L
RT: 2.00 min Scan# 52
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 50 Resp: 35287

Ion	Ratio	Lower	Upper
50	100		
52	31.7	13.9	53.9

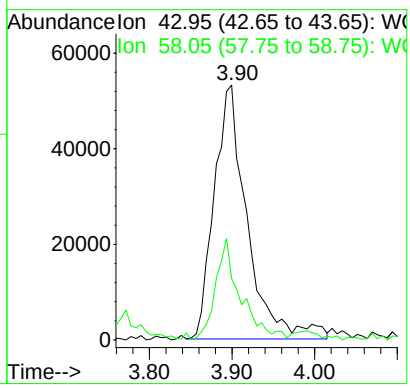




#15
Acetone
Concen: 7.44 ug/L
RT: 3.90 min Scan# 365
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 43 Resp: 147477

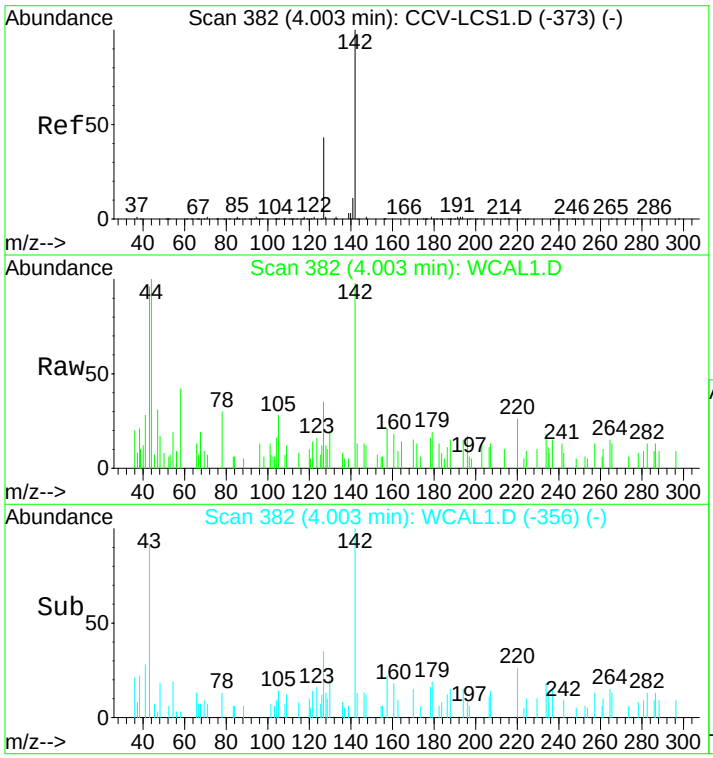
Ion	Ratio	Lower	Upper
43	100		
58	30.0	13.0	53.0



RJ 11/21/2016

Before Manual Integration

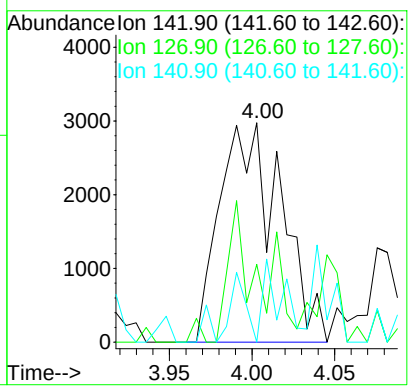
AGK 11/21/16



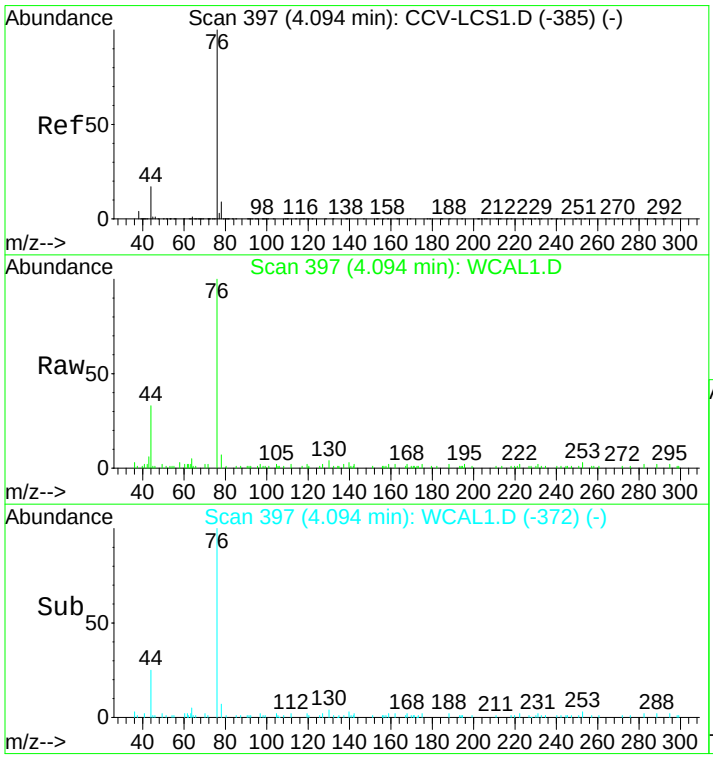
#16
Iodomethane
Concen: 5.47 ug/L
RT: 4.00 min Scan# 382
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion:142 Resp: 7557

Ion	Ratio	Lower	Upper
142	100		
127	34.9	22.9	62.9
141	0.0	0.0	35.6



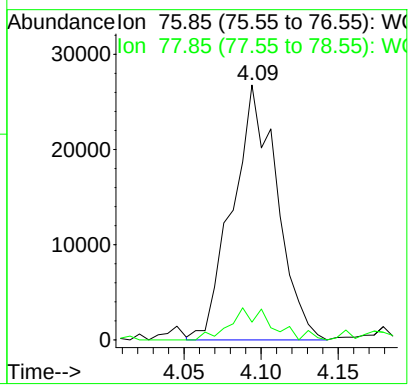
REASON # 2



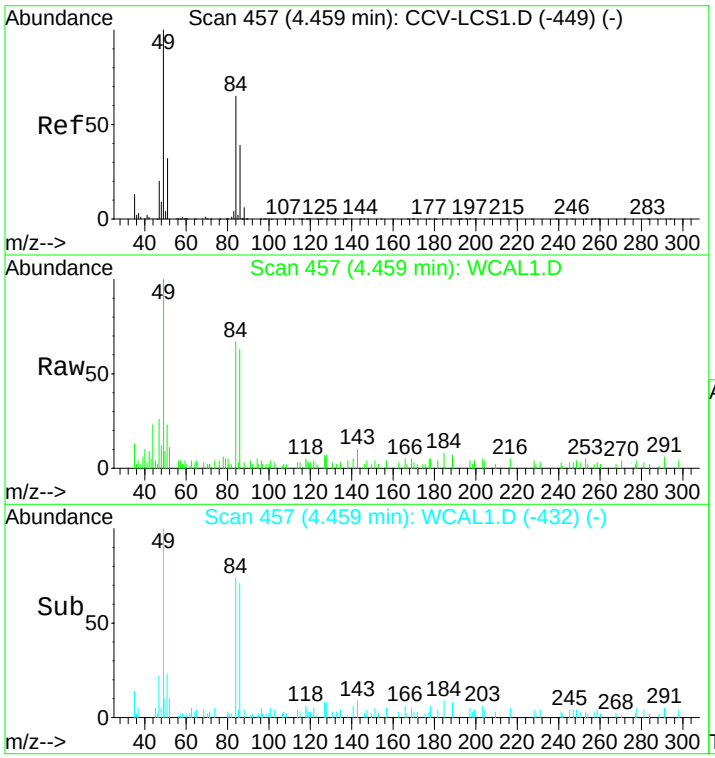
#17
Carbon Dislf
Concen: 1.32 ug/L
RT: 4.09 min Scan# 397
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 76 Resp: 53771

Ion	Ratio	Lower	Upper
76	100		
78	11.9	0.0	29.4



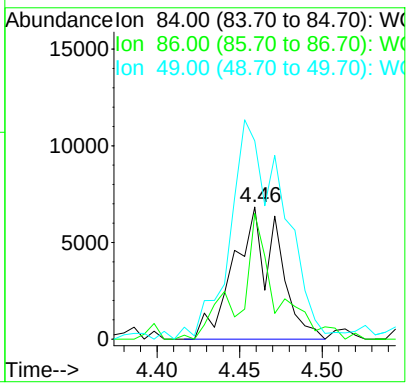
REASON # 2



#20
Methylchlorid
Concen: 0.76 ug/L
RT: 4.46 min Scan# 457
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 84 Resp: 12589

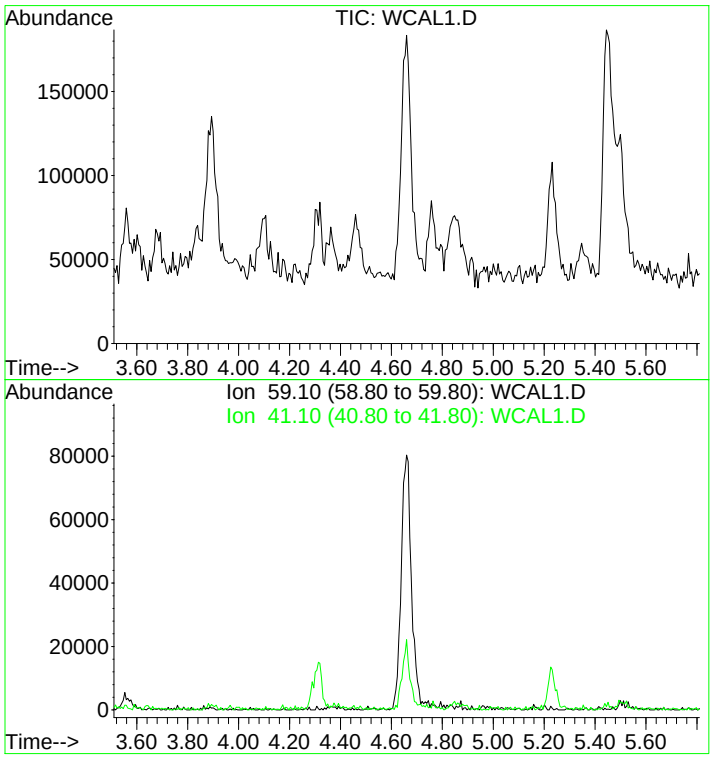
Ion	Ratio	Lower	Upper
84	100		
86	78.8	42.4	82.4
49	210.1	184.8	224.8



Before Manual Integration

11/21/16

REASON # 2



#21
tbutylalcohol
Concen: Below Cal
Expected RT: 4.66 min

Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

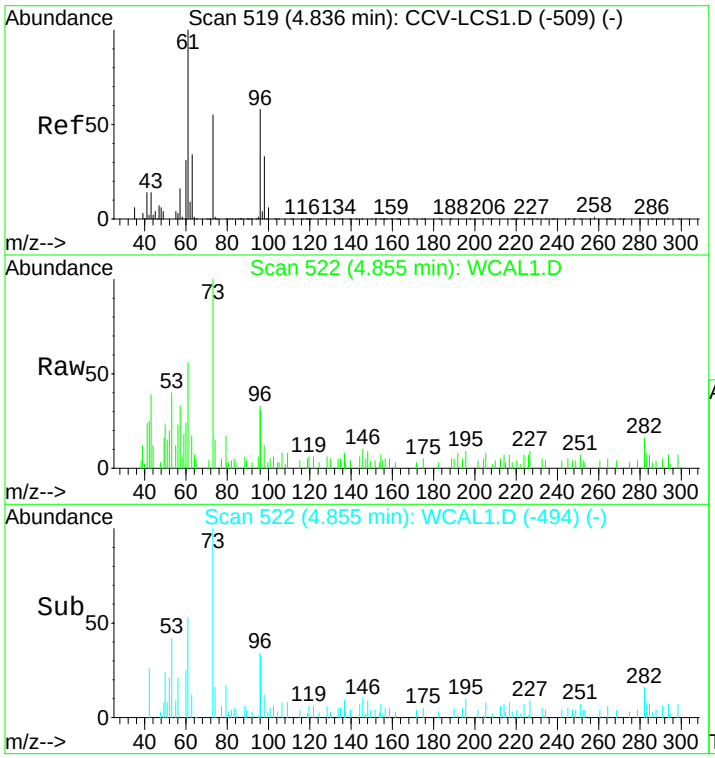
Tgt Ion: 59

Sig	Exp Ratio
59	100
41	22.8

REASON # 1

Before Manual Integration

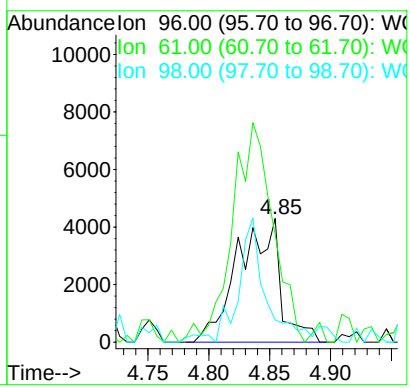
AGK 11/21/16



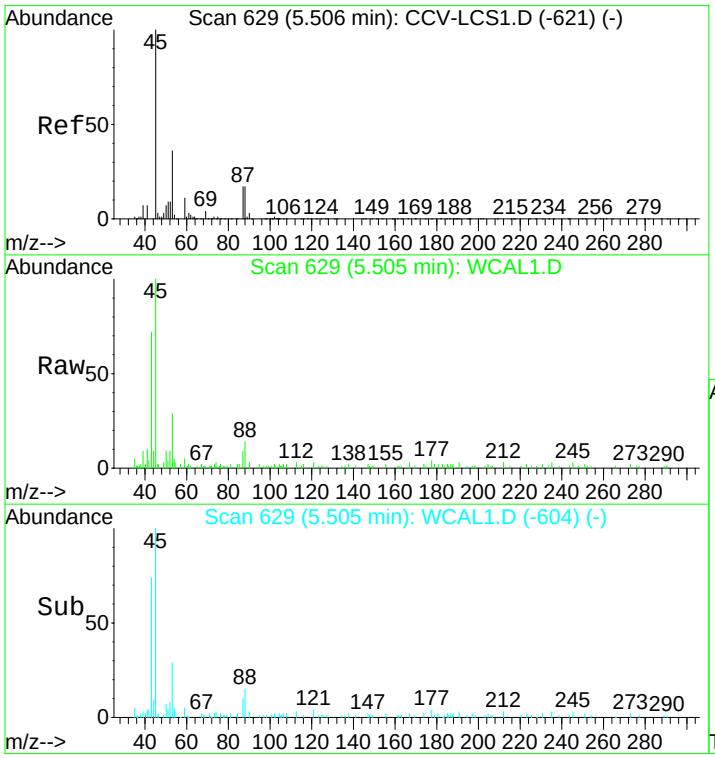
#23
t12dichlorte
Concen: 0.71 ug/L
RT: 4.85 min Scan# 522
Delta R.T. 0.02 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 96 Resp: 10408

Ion	Ratio	Lower	Upper
96	100		
61	169.7	169.2	209.2
98	53.4	48.0	88.0



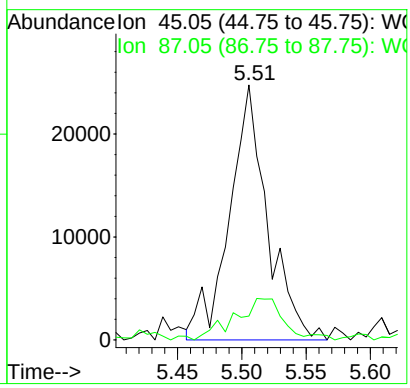
REASON # 2



#29
Diisopether
Concen: 0.66 ug/L
RT: 5.51 min Scan# 629
Delta R.T. -0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 45 Resp: 51293

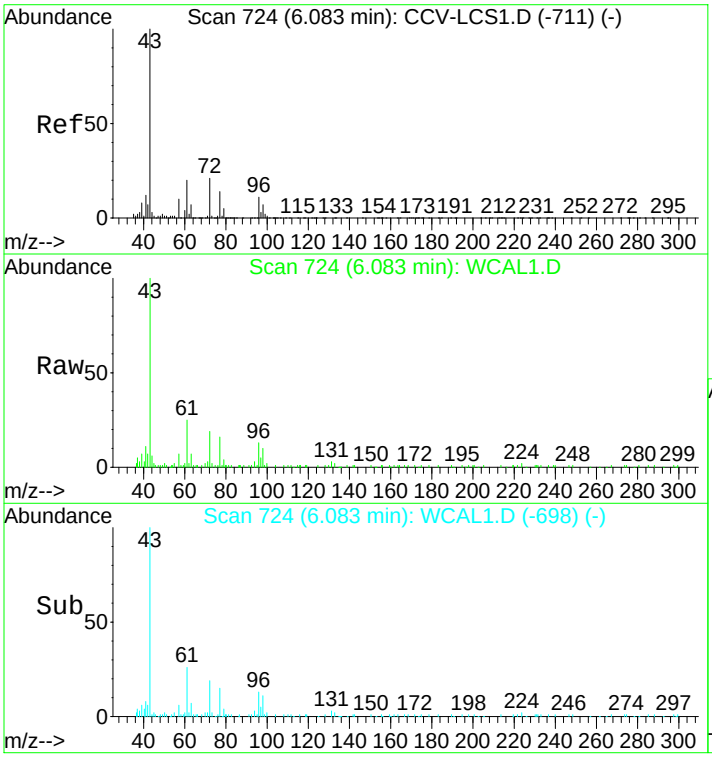
Ion	Ratio	Lower	Upper
45	100		
87	21.4	0.0	38.4



REASON # 2

Before Manual Integration

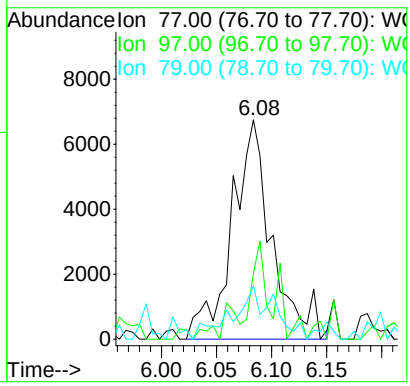
11/21/16



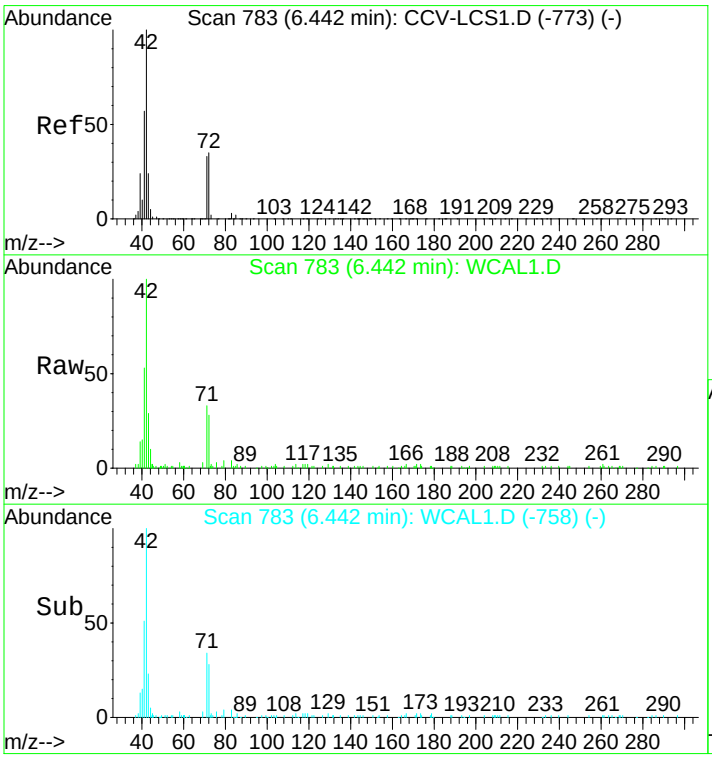
#31
22dichloropr
Concen: 0.71 ug/L
RT: 6.08 min Scan# 724
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 77 Resp: 16932

Ion	Ratio	Lower	Upper
77	100		
97	23.1	1.8	41.8
79	25.0	11.4	51.4



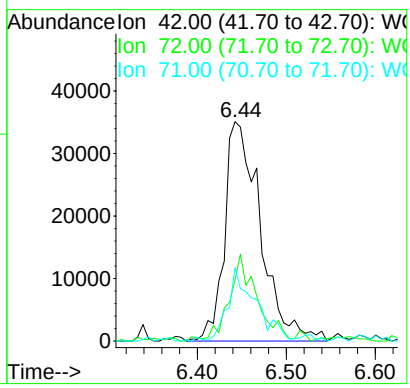
REASON # 2



#38
Tetrahydofur
Concen: 6.42 ug/L
RT: 6.44 min Scan# 783
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 42 Resp: 98230

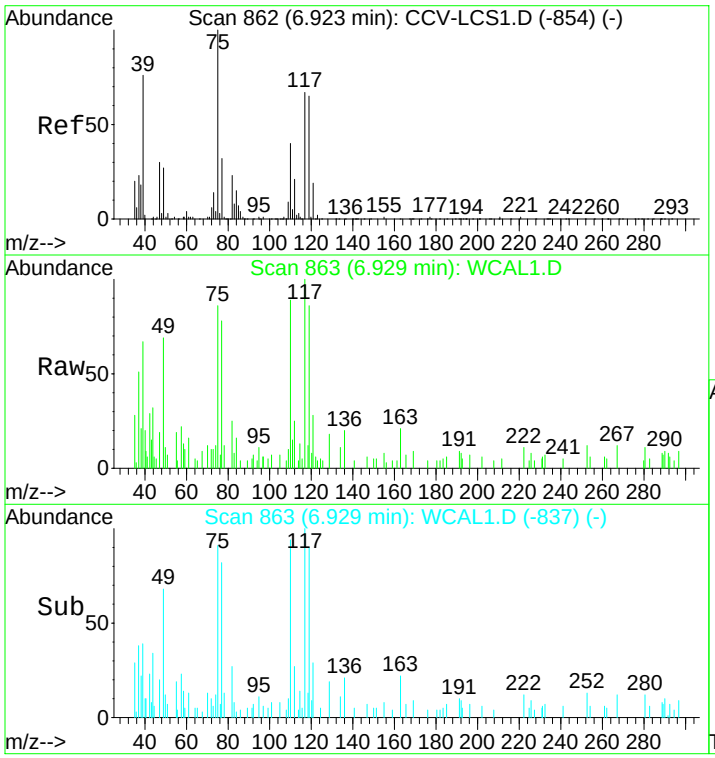
Ion	Ratio	Lower	Upper
42	100		
72	30.9	11.0	51.0
71	24.7	9.4	49.4



REASON # 2

Before Manual Integration

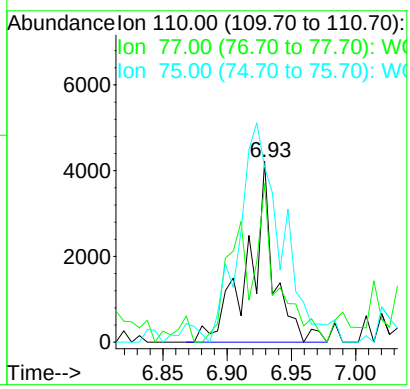
AGK 11/21/16



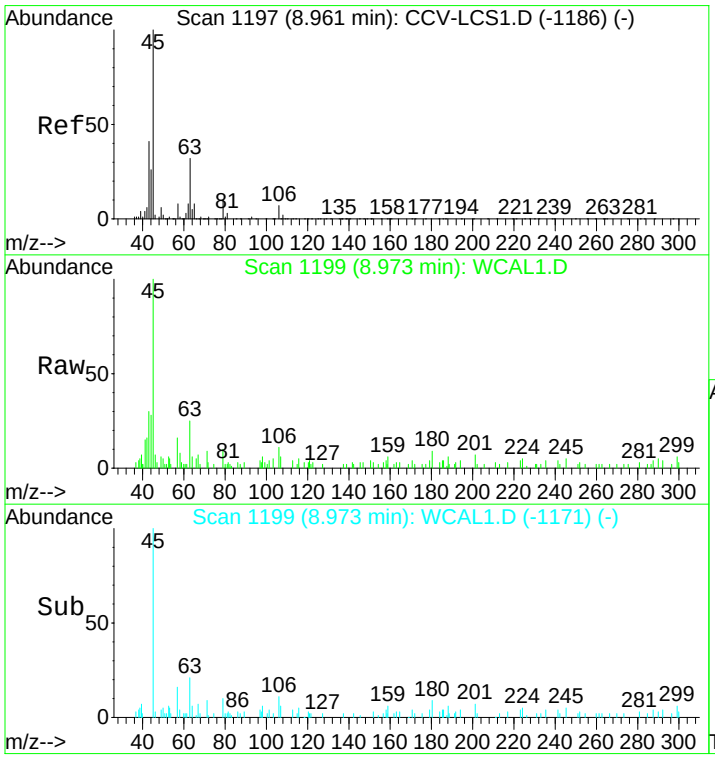
#44
11dicloprope
Concen: 0.76 ug/L
RT: 6.93 min Scan# 863
Delta R.T. 0.01 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion:110 Resp: 5912

Ion	Ratio	Lower	Upper
110	100		
77	67.2	71.6	111.6#
75	198.8	262.9	302.9#



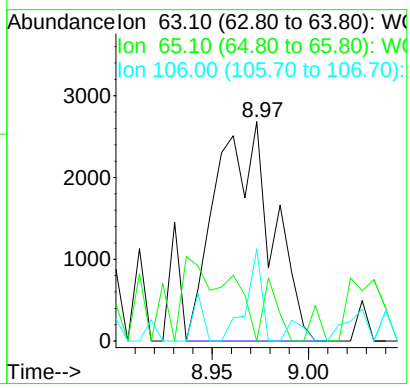
REASON # 2



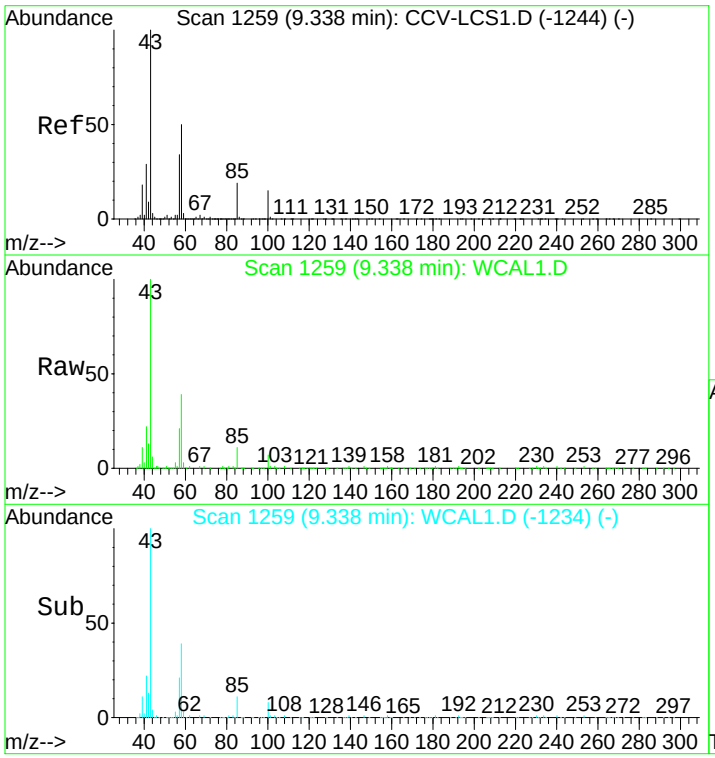
#58
2CLEVE
Concen: 10.39 ug/L
RT: 8.97 min Scan# 1199
Delta R.T. 0.02 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 63 Resp: 5462

Ion	Ratio	Lower	Upper
63	100		
65	0.0	6.8	46.8#
106	0.0	1.4	41.4#



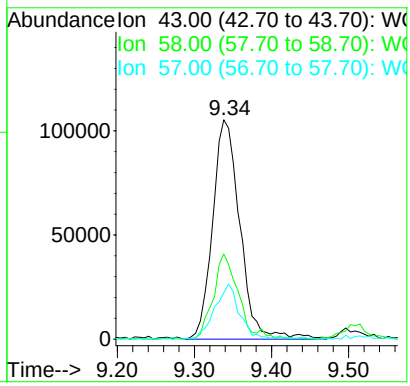
REASON # 2



#60
4Meth2Pentan
Concen: 3.29 ug/L
RT: 9.34 min Scan# 1259
Delta R.T. 0.00 min
Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 43 Resp: 259103

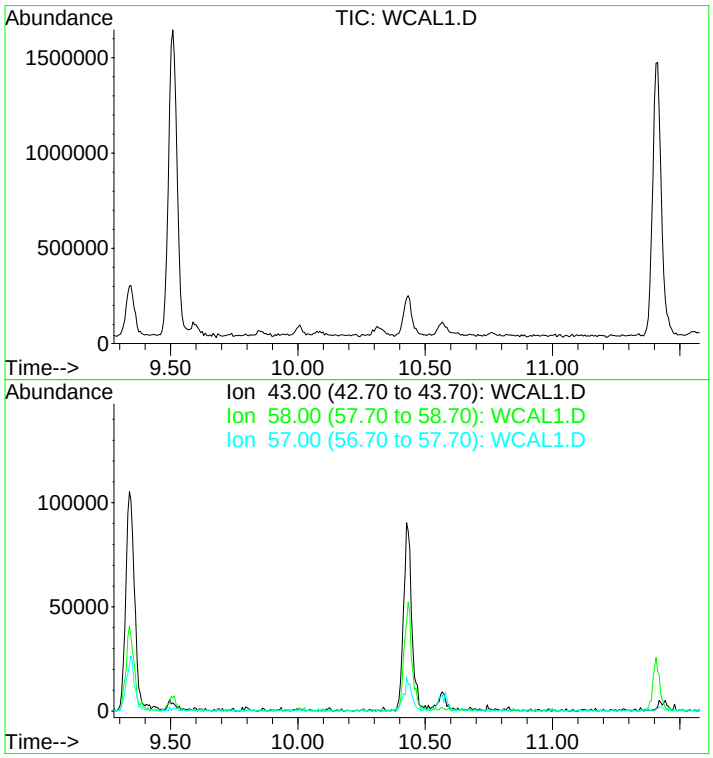
Ion	Ratio	Lower	Upper
43	100		
58	36.1	23.1	63.1
57	23.4	7.0	47.0



Before Manual Integration

AGK 11/21/16

REASON # 2



#69
2Hexanone
Concen: Below Cal
Expected RT: 10.43 min

Lab File: WCAL1.D
Acq: 8 Nov 2016 17:04

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	57.1
57	20.5

REASON # 1

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL2.D Vial: 5
Acq On : 8 Nov 2016 17:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:14:35 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:03 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1313919	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	943478	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	476675	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	329329	19.997	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 100	%		
45) SURR12DCAd4	7.07	102	83899	18.994	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 95	%		
61) SURRd8Tolule	9.51	98	1334995	20.057	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 100	%		
83) SURR4BrFBenz	13.04	95	451413	20.539	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 103	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	41578	2.1542	ug/L	100
3) Chloromethan	2.00	50	68635m	1.7764	ug/L	97
4) VinylChlorid	2.14	62	64651	2.1960	ug/L	91
5) Bromomethane	2.57	94	17631	2.2985	ug/L	97
6) Chloroethane	2.74	64	38801	2.2285	ug/L	89
7) Dichloroflmethane	3.05	67	67986	2.1557	ug/L	99
8) Trichlorofma	3.13	101	44675	2.0604	ug/L	95
9) Ethylether	3.56	59	40461	2.1134	ug/L	92
10) dichlorotfluoroethan	3.57	67	41546	2.1310	ug/L	93
11) propyleneoxide	3.89	58	109140	21.7121	ug/L #	87
12) Acrolein	3.68	56	87460	9.9685	ug/L	95
13) 11dichlorthe	3.82	96	33087	2.1838	ug/L	96
14) Trichlorotfluoroeth	3.88	101	56283	4.1914	ug/L	92
15) Acetone	3.89	43	298277m	19.4611	ug/L	96
16) Iodomethane	4.01	142	18062	2.5485	ug/L	90
17) Carbon Dislf	4.09	76	185909	4.5407	ug/L	99
18) allylchloride	4.31	41	143013	4.4616	ug/L	99
19) methylacetate	4.37	74	24733	2.3211	ug/L	95
20) Methylchlorid	4.47	84	35469	1.9964	ug/L	90
21) tbutylalcohol	4.66	59	784015	129.0605	ug/L	96
22) Acrylonitrile	4.76	53	167913	11.0091	ug/L	99
23) t12dichlorte	4.84	96	30118	1.9293	ug/L	96
24) MtBE	4.87	73	101268	2.1118	ug/L	93
25) Hexane	5.23	57	136396	4.2041	ug/L	94
26) 11dichlorota	5.35	63	77702	2.1020	ug/L	98
27) Vinylacetate	5.44	43	1164895	27.9925	ug/L	97
28) chloroprene	5.48	53	155559	4.3087	ug/L	99
29) Diisopether	5.51	45	171216	2.1170	ug/L	92
30) ETBE	5.96	59	131069	2.0568	ug/L	91
31) 22dichloropr	6.08	77	52093	2.0301	ug/L	96
32) c12dichlorte	6.08	96	38736	2.0352	ug/L	98
33) 2Butanone	6.08	72	95406	20.9844	ug/L	93
34) propionitrile	6.13	54	146089	20.9041	ug/L	97
35) Ethylacetate	6.21	88	13036	11.2241	ug/L #	70
36) methacrylonitrile	6.34	67	52333	4.2063	ug/L	96
37) Bromochlorma	6.35	128	16398	2.2135	ug/L #	86
38) Tetrahydofur	6.45	42	359045	23.3589	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL2.D Vial: 5
Acq On : 8 Nov 2016 17:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:14:35 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:03 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.47	83	62009	2.1458	ug/L		96
40)	111trichlota	6.72	97	53965	2.1015	ug/L		95
42)	Cyclohexane	6.81	56	90725	2.1661	ug/L		94
43)	Carbtetraclo	6.93	119	40441	1.9932	ug/L		97
44)	11dicloprope	6.92	110	16909	1.9839	ug/L		92
46)	Benzene	7.17	78	147332	2.1928	ug/L		98
47)	12dichlorota	7.17	62	65324	2.2431	ug/L		95
48)	TAME	7.33	73	100519	2.1004	ug/L		100
49)	trichloroete	7.98	95	32887	1.9658	ug/L		92
50)	methylcyclohexane	8.24	83	60317	2.0828	ug/L		92
51)	12dicloropra	8.22	63	49522	2.1209	ug/L		94
52)	23Dicl1propene	8.29	75	52140	1.9863	ug/L		94
53)	Dibromometha	8.37	93	23732	2.1043	ug/L		97
54)	methylmethacrylate	8.40	69	38472	2.1249	ug/L		100
55)	14dioxane	8.41	88	33919	113.7485	ug/L		98
56)	Bromodiclrma	8.57	83	43977	2.0853	ug/L		93
57)	2Nitropropane	8.83	43	263993	21.5649	ug/L		98
58)	2CLEVE	8.97	63	15831	8.9990	ug/L		75
59)	c13dicloproe	9.14	75	55633	1.9082	ug/L		98
60)	4Meth2Pentan	9.34	43	910887	26.8256	ug/L		94
62)	Toluene	9.59	92	83739	2.0206	ug/L	#	82
63)	t13Dicloprop	9.86	75	50533	1.9590	ug/L		93
64)	ethylmethacrylate	10.00	69	111382	4.1953	ug/L		98
65)	112Triclotha	10.09	83	29216	2.0721	ug/L		88
66)	Tetrachlorte	10.32	166	32784	1.9635	ug/L		91
67)	13Diclorpropa	10.31	76	60688	2.0919	ug/L		99
69)	2Hexanone	10.43	43	743477	26.6972	ug/L		95
70)	Clorodibrmta	10.61	129	30172	1.9498	ug/L		82
71)	12Dibrometha	10.76	107	31807	1.8915	ug/L		86
72)	Chlorobenzen	11.45	112	95509	2.1933	ug/L		94
73)	1Clhexane	11.44	91	51751	2.2034	ug/L		93
74)	1112Tetclota	11.56	131	30118	2.0345	ug/L		88
75)	Ethylbenzene	11.61	91	164761	2.2009	ug/L		96
76)	m p-Xylene	11.78	106	126667	4.3844	ug/L		98
77)	o-Xylene	12.31	106	51936	1.8620	ug/L	#	86
78)	Styrene	12.33	104	88868	1.9841	ug/L		94
79)	Bromoform	12.54	173	20820	1.7649	ug/L		84
80)	Isopropylben	12.84	105	149434	2.2113	ug/L		99
81)	cyclohexanone	12.92	55	63396	37.1170	ug/L		94
84)	Bromobenzene	13.25	156	37211	2.2419	ug/L	#	83
85)	1122Tetrclta	13.23	83	54360	2.0268	ug/L		97
86)	123Triclproa	13.27	75	70036	2.0957	ug/L		96
87)	14dichloro2butene	13.31	53	21210	2.1595	ug/L		83
88)	n-Propylbenz	13.43	91	175430	2.2513	ug/L		98
89)	2chlorotolue	13.54	91	103875	2.1811	ug/L		99
90)	4chlorotolue	13.69	91	113160	2.1452	ug/L		100
91)	135Trimebenz	13.68	105	113678	2.1459	ug/L		92
92)	tbutylbenzen	14.15	119	90579	2.0707	ug/L		98
93)	124Trimetben	14.22	105	117068	2.1749	ug/L		93
94)	sbutylbenzen	14.47	105	140806	2.1622	ug/L		96
95)	13Diclorbenz	14.61	146	56529	2.0406	ug/L		92
96)	pIsopropylto	14.69	119	113288	2.1027	ug/L		99
97)	14dichlorobe	14.73	146	60653	2.1169	ug/L		92
98)	12dichlorobe	15.27	146	53634	1.9987	ug/L		87
99)	nButylbenzen	15.29	91	116158	2.2035	ug/L		97
100)	12dibromo3cl	16.35	157	10240	1.7259	ug/L	#	75
101)	135Trichlorobenzene	16.71	180	39811	2.1070	ug/L		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL2.D Vial: 5
Acq On : 8 Nov 2016 17:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:14:35 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:03 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.51	180	33896	1.9606	ug/L	97
103) Hexachlorobu	17.78	225	15318	1.9737	ug/L	92
104) Naphthalene	17.83	128	110940	2.1635	ug/L	97
105) 123Trichlben	18.14	180	32919	2.2112	ug/L	93

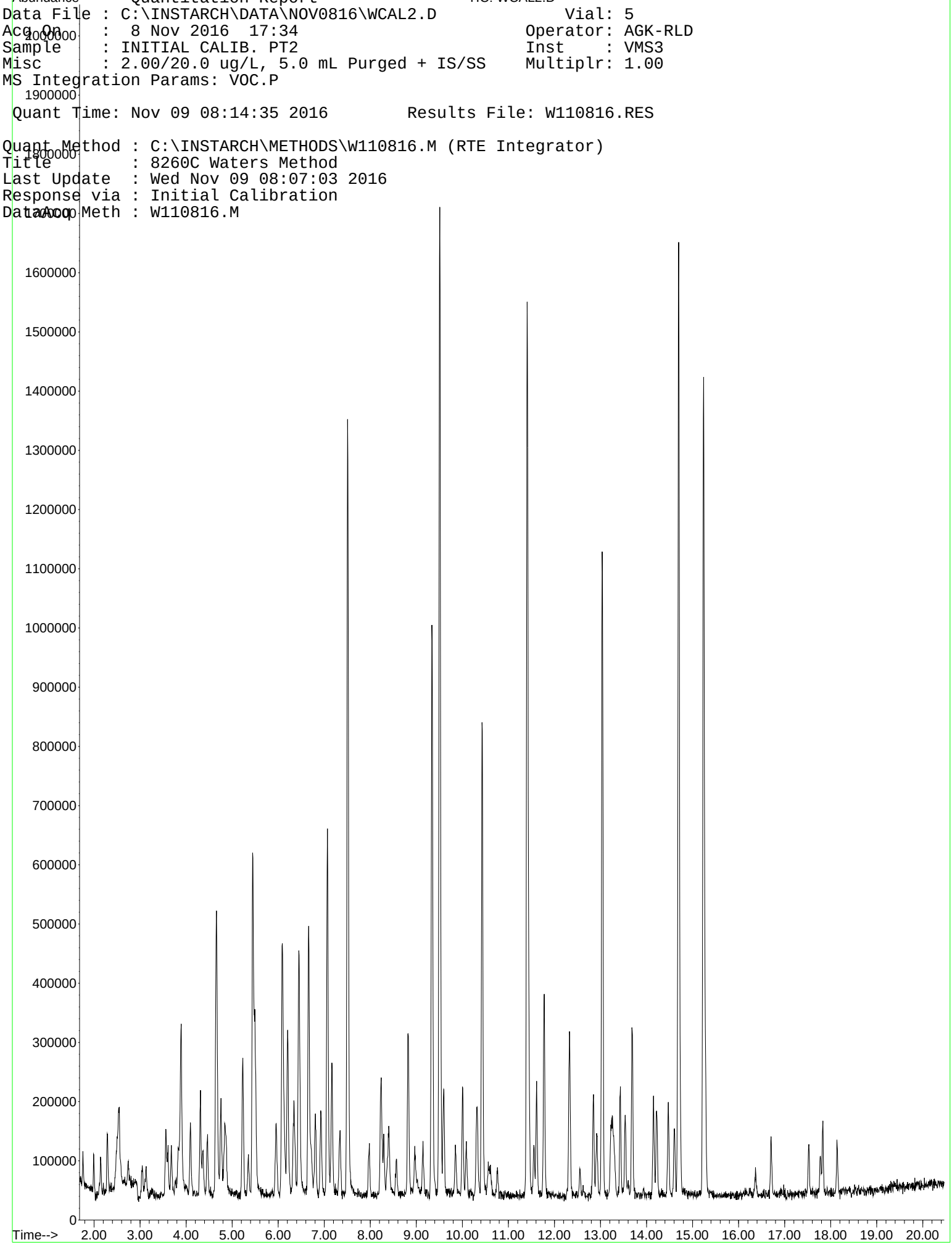
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL2.D

Data File : C:\INSTARCH\DATA\NOV0816\WCAL2.D Vial: 5
Acq On : 8 Nov 2016 17:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT2 Inst : VMS3
Misc : 2.00/20.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

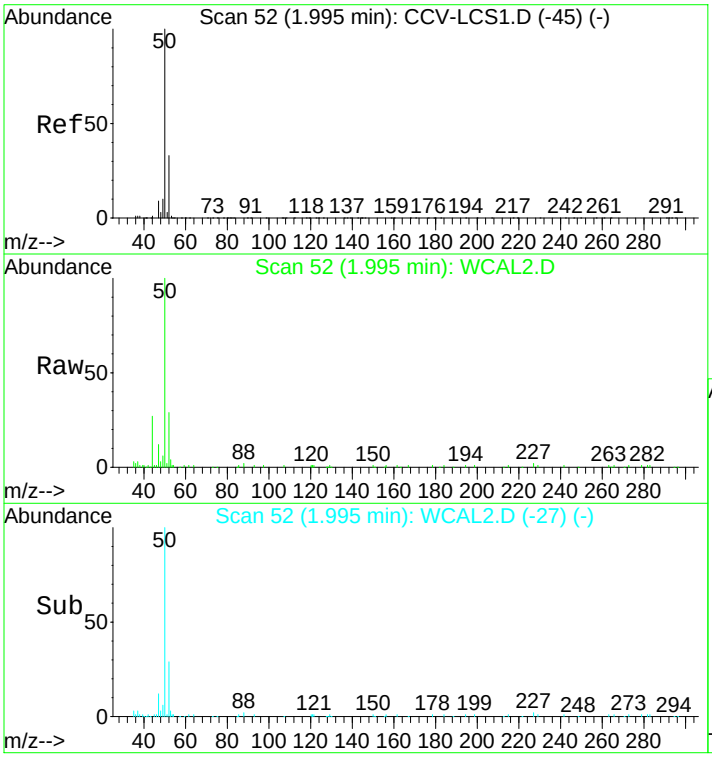
Quant Time: Nov 09 08:14:35 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:07:03 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



After Manual Integration

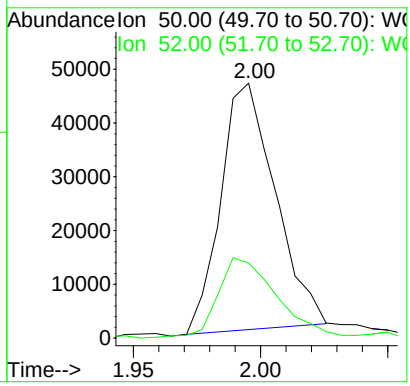
11/21/16

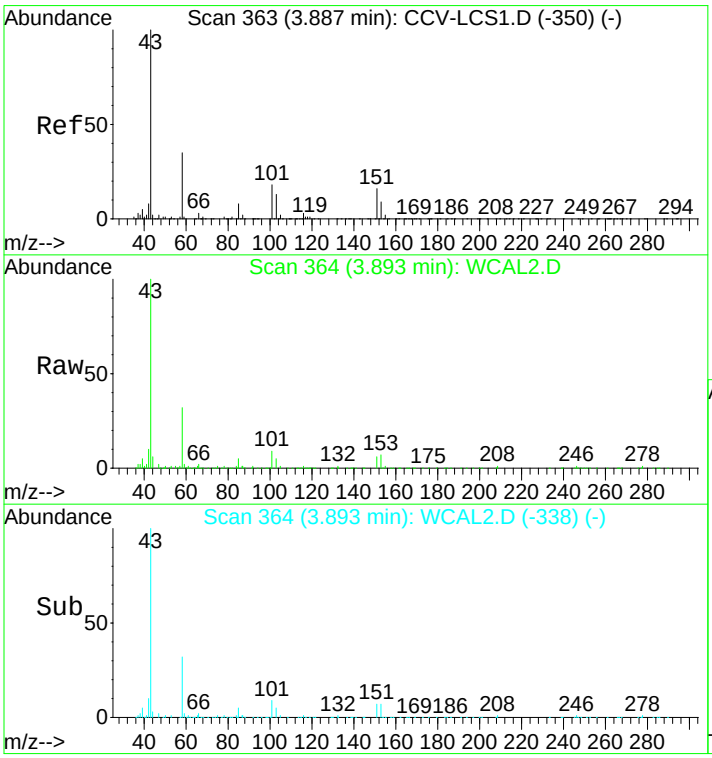


#3
Chloromethan
Concen: 1.78 ug/L m
RT: 2.00 min Scan# 52
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 8 Nov 2016 17:34

Tgt Ion: 50 Resp: 68635

Ion	Ratio	Lower	Upper
50	100		
52	36.4	13.9	53.9

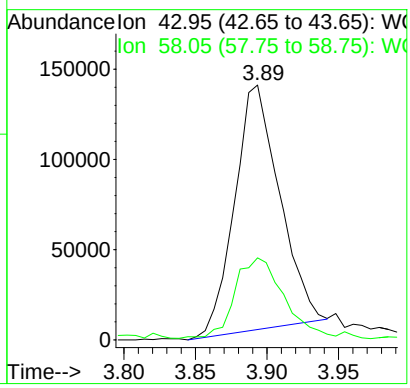




#15
Acetone
Concen: 19.46 ug/L m
RT: 3.89 min Scan# 364
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 8 Nov 2016 17:34

Tgt Ion: 43 Resp: 298277

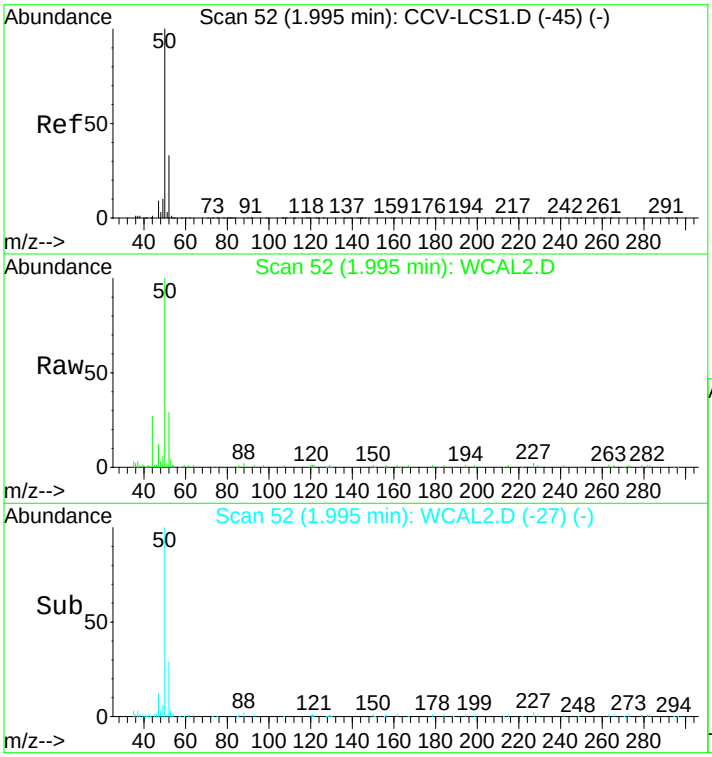
Ion	Ratio	Lower	Upper
43	100		
58	36.6	13.0	53.0



11/21/2016

Before Manual Integration

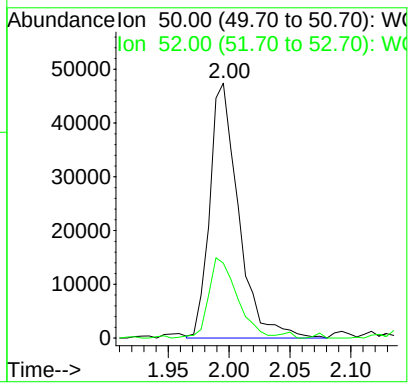
11/21/16



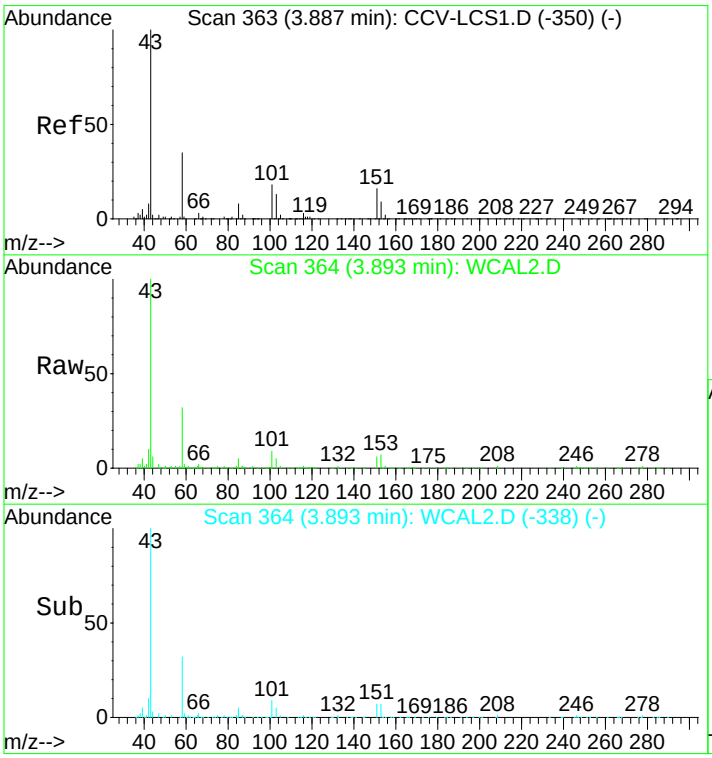
#3
Chloromethan
Concen: 2.01 ug/L
RT: 2.00 min Scan# 52
Delta R.T. 0.00 min
Lab File: WCAL2.D
Acq: 8 Nov 2016 17:34

Tgt Ion: 50 Resp: 78141

Ion	Ratio	Lower	Upper
50	100		
52	32.0	13.9	53.9



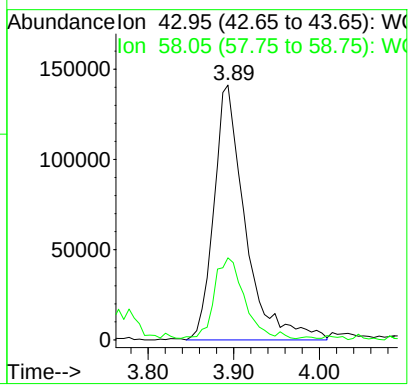
REASON # 2



#15
Acetone
Concen: 22.27 ug/L
RT: 3.89 min Scan# 364
Delta R.T. 0.01 min
Lab File: WCAL2.D
Acq: 8 Nov 2016 17:34

Tgt Ion: 43 Resp: 358200

Ion	Ratio	Lower	Upper
43	100		
58	30.5	13.0	53.0



REASON # 2

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL3.D Vial: 6
Acq On : 8 Nov 2016 18:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:21 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:08 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1347090	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	987387	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	497067	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	332569	19.807	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 99 %			
45) SURR12DCAd4	7.07	102	89721	19.735	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 99 %			
61) SURRd8Tolule	9.51	98	1310457	19.169	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 96 %			
83) SURR4BrFBenz	13.04	95	455999	19.619	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 98 %			
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	85126	3.9897	ug/L	92
3) Chloromethan	2.00	50	183129	3.6565	ug/L	95
4) VinylChlorid	2.15	62	130827	3.9934	ug/L	98
5) Bromomethane	2.58	94	34355	4.1073	ug/L	94
6) Chloroethane	2.74	64	86409	4.3652	ug/L	99
7) Dichloroflmethane	3.05	67	155332	4.3686	ug/L	99
8) Trichlorofma	3.12	101	101892	4.2256	ug/L	97
9) Ethylether	3.55	59	94445	4.4079	ug/L	95
10) dichlorotfluoroethan	3.56	67	97362	4.4837	ug/L	91
11) propyleneoxide	3.89	58	253019	38.7169	ug/L	91
12) Acrolein	3.68	56	217090	22.1008	ug/L	94
13) 11dichlorthe	3.83	96	73700	4.2757	ug/L	95
14) Trichlorotfluoroeth	3.87	101	123552	8.4777	ug/L	99
15) Acetone	3.89	43	810519	38.2312	ug/L	97
16) Iodomethane	4.00	142	46144	7.9322	ug/L	81
17) Carbon Dislf	4.09	76	408953	8.3469	ug/L	99
18) allylchloride	4.30	41	327880	9.0286	ug/L	97
19) methylacetate	4.36	74	58778	5.1134	ug/L	98
20) Methylchlorid	4.47	84	95117	4.6158	ug/L	92
21) tbutylalcohol	4.65	59	1910542	239.7659	ug/L	100
22) Acrylonitrile	4.75	53	434002	25.6839	ug/L	98
23) t12dichlorte	4.84	96	72757	4.1411	ug/L	95
24) MtBE	4.85	73	243452	4.6156	ug/L	98
25) Hexane	5.23	57	305578	8.3942	ug/L	96
26) 11dichlorota	5.35	63	189562	4.6713	ug/L	97
27) Vinylacetate	5.44	43	2708567	47.7612	ug/L	99
28) chloroprene	5.49	53	370679	9.4945	ug/L	99
29) Diisopether	5.51	45	418300	4.4840	ug/L	98
30) ETBE	5.96	59	335592	4.7692	ug/L	97
31) 22dichloropr	6.08	77	115095	3.9460	ug/L	95
32) c12dichlorte	6.08	96	99241	4.7074	ug/L	93
33) 2Butanone	6.09	72	231073	45.6493	ug/L	98
34) propionitrile	6.13	54	385455	50.7549	ug/L	98
35) Ethylacetate	6.21	88	29097	23.3954	ug/L #	86
36) methacrylonitrile	6.34	67	121205	9.1319	ug/L	89
37) Bromochlorma	6.36	128	36362	4.4233	ug/L	94
38) Tetrahydofur	6.45	42	895932	48.9060	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL3.D Vial: 6
Acq On : 8 Nov 2016 18:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:21 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:08 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.47	83	139563	4.3263	ug/L	98
40)	111trichlota	6.72	97	120253	4.3500	ug/L	98
42)	Cyclohexane	6.81	56	187460	4.1172	ug/L	96
43)	Carbtetraclo	6.94	119	89388	4.1570	ug/L	98
44)	11dicloprope	6.92	110	37794	3.7855	ug/L	90
46)	Benzene	7.17	78	341521	4.4694	ug/L	97
47)	12dichlorota	7.17	62	148943	4.5628	ug/L	98
48)	TAME	7.34	73	242224	4.6965	ug/L	96
49)	trichloroete	7.97	95	79851	4.4099	ug/L	97
50)	methylcyclohexane	8.24	83	121218	3.7178	ug/L	93
51)	12dicloropra	8.22	63	119508	4.8632	ug/L	94
52)	23Dicl1propene	8.29	75	132798	4.7882	ug/L	98
53)	Dibromometha	8.36	93	59249	4.8741	ug/L	95
54)	methylmethacrylate	8.40	69	88047	4.6346	ug/L	96
55)	14dioxane	8.41	88	82403	250.1382	ug/L	93
56)	Bromodiclrma	8.57	83	100573	4.5460	ug/L	100
57)	2Nitropropane	8.82	43	681480	48.9249	ug/L	97
58)	2CLEVE	8.97	63	25870	15.3612	ug/L	84
59)	c13dicloproe	9.15	75	149196	4.7938	ug/L	99
60)	4Meth2Pentan	9.34	43	2179426	46.7794	ug/L	97
62)	Toluene	9.60	92	214908	4.8174	ug/L	99
63)	t13Dicloprop	9.86	75	128331	4.7223	ug/L	96
64)	ethylmethacrylate	10.01	69	269683	9.4094	ug/L	97
65)	112Triclotha	10.09	83	63749	4.1117	ug/L	91
66)	Tetrachlorte	10.32	166	75752	4.1731	ug/L	93
67)	13Diclorpropa	10.31	76	140422	4.4736	ug/L	98
69)	2Hexanone	10.43	43	1800993	47.3979	ug/L	99
70)	Clorodibrmta	10.61	129	77399	4.7259	ug/L	93
71)	12Dibrometha	10.76	107	82805	4.4107	ug/L	95
72)	Chlorobenzen	11.45	112	232720	4.6874	ug/L	98
73)	1Clhexane	11.44	91	105384	3.9371	ug/L	89
74)	1112Tetclota	11.55	131	73592	4.5852	ug/L	92
75)	Ethylbenzene	11.61	91	385313	4.3884	ug/L	99
76)	m p-Xylene	11.78	106	290982	8.7684	ug/L	98
77)	o-Xylene	12.32	106	141813	4.7728	ug/L	96
78)	Styrene	12.33	104	221370	4.5454	ug/L	97
79)	Bromoform	12.56	173	59252	4.8655	ug/L	95
80)	Isopropylben	12.84	105	348325	4.5775	ug/L	97
81)	cyclohexanone	12.92	55	178689	96.4256	ug/L	98
84)	Bromobenzene	13.24	156	87170	4.7214	ug/L	94
85)	1122Tetrclta	13.22	83	141646	4.5544	ug/L	97
86)	123Triclproa	13.28	75	176541	4.8621	ug/L	95
87)	14dichloro2butene	13.31	53	46638	4.4126	ug/L	97
88)	n-Propylbenz	13.43	91	421870	4.6328	ug/L	100
89)	2chlorotolue	13.54	91	251101	4.4712	ug/L	100
90)	4chlorotolue	13.69	91	275247	4.5628	ug/L	97
91)	135Trimebenz	13.69	105	281596	4.7575	ug/L	95
92)	tbutylbenzen	14.15	119	240084	5.1680	ug/L	97
93)	124Trimetben	14.22	105	289347	4.7081	ug/L	97
94)	sbutylbenzen	14.47	105	341904	4.6575	ug/L	99
95)	13Diclorbenz	14.60	146	143696	4.7408	ug/L	99
96)	pIsopropylto	14.69	119	284454	4.7051	ug/L	97
97)	14dichlorobe	14.73	146	149409	4.5579	ug/L	93
98)	12dichlorobe	15.26	146	138912	4.5848	ug/L	95
99)	nButylbenzen	15.28	91	269060	4.4027	ug/L	98
100)	12dibromo3cl	16.36	157	30602	5.3078	ug/L	87
101)	135Trichlorobenzene	16.71	180	95223	4.4672	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL3.D Vial: 6
Acq On : 8 Nov 2016 18:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:21 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:08 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	82968	4.1413	ug/L	99
103) Hexachlorobu	17.78	225	39107	4.8109	ug/L	91
104) Naphthalene	17.82	128	271312	4.8331	ug/L	99
105) 123Trichlben	18.14	180	75566	4.7869	ug/L	97

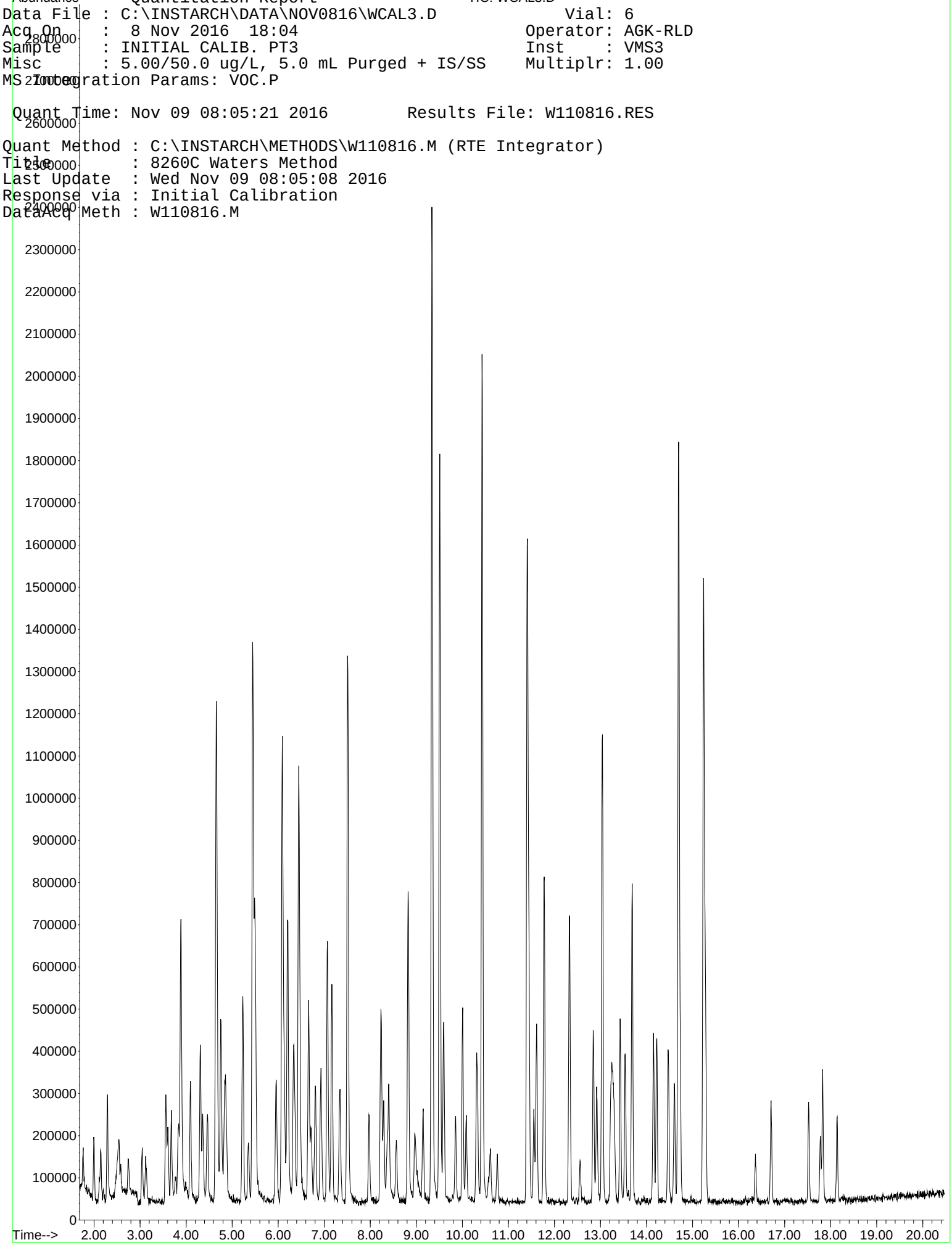
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL3.D Vial: 6
Acq On : 8 Nov 2016 18:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT3 Inst : VMS3
Misc : 5.00/50.0 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:21 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:08 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL4.D Vial: 7
Acq On : 8 Nov 2016 18:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:36 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:28 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1340986	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	996724	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	496672	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	326828	19.601	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 98	%		
45) SURR12DCAd4	7.07	102	91669	20.323	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 102	%		
61) SURRd8Tolule	9.51	98	1359106	20.181	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 101	%		
83) SURR4BrFBenz	13.04	95	477812	20.673	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 103	%		

Target Compounds						Qvalue
2) Dichlorodi	1.76	85	213543	10.5889	ug/L	100
3) Chloromethan	2.00	50	359791	7.7362	ug/L	100
4) VinylChlorid	2.15	62	309140	9.9816	ug/L	100
5) Bromomethane	2.57	94	73277	9.2116	ug/L	100
6) Chloroethane	2.74	64	171907	9.0099	ug/L	100
7) Dichloroflmethane	3.04	67	311938	9.1003	ug/L	100
8) Trichlorofma	3.12	101	228874	9.9190	ug/L	100
9) Ethylether	3.55	59	187133	9.0412	ug/L	100
10) dichlorotfluoroethan	3.56	67	205469	9.7573	ug/L	100
11) propyleneoxide	3.89	58	470131	76.5875	ug/L	100
12) Acrolein	3.67	56	428252	45.1042	ug/L	100
13) 11dichlorthe	3.83	96	154146	9.3211	ug/L	100
14) Trichlorotfluoroeth	3.88	101	283293	20.2995	ug/L	100
15) Acetone	3.89	43	1422610	71.6228	ug/L	100
16) Iodomethane	4.00	142	97420	17.7399	ug/L	100
17) Carbon Dislf	4.09	76	854379	18.2728	ug/L	100
18) allylchloride	4.31	41	692017	19.6187	ug/L	100
19) methylacetate	4.36	74	102844	8.9370	ug/L	100
20) Methylchlorid	4.46	84	171417	8.5200	ug/L	100
21) tbutylalcohol	4.66	59	3107717	395.8332	ug/L	100
22) Acrylonitrile	4.75	53	791448	46.7309	ug/L	100
23) t12dichlorte	4.84	96	153581	9.1751	ug/L	100
24) MtBE	4.86	73	473652	9.1977	ug/L	100
25) Hexane	5.23	57	716527	20.5995	ug/L	100
26) 11dichlorota	5.35	63	375353	9.4471	ug/L	100
27) Vinylacetate	5.44	43	4323837	77.4580	ug/L	100
28) chloroprene	5.48	53	797141	20.7733	ug/L	100
29) Diisopether	5.51	45	840685	9.2926	ug/L	100
30) ETBE	5.96	59	651566	9.4103	ug/L	100
31) 22dichloropr	6.08	77	251519	9.1444	ug/L	100
32) c12dichlorte	6.08	96	188277	9.1046	ug/L	100
33) 2Butanone	6.10	72	447174	90.7163	ug/L	100
34) propionitrile	6.13	54	694913	91.5737	ug/L	100
35) Ethylacetate	6.21	88	51316	42.1243	ug/L	100
36) methacrylonitrile	6.34	67	255756	19.7865	ug/L	100
37) Bromochlorma	6.36	128	75961	9.5581	ug/L	100
38) Tetrahydofur	6.44	42	1586698	87.4854	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL4.D Vial: 7
Acq On : 8 Nov 2016 18:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:36 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:28 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.47	83	296480	9.5543	ug/L	100
40)	111trichlota	6.71	97	258492	9.7088	ug/L	100
42)	Cyclohexane	6.81	56	452801	10.4516	ug/L	100
43)	Carbtetraclo	6.94	119	203415	9.9211	ug/L	100
44)	11dicloprope	6.92	110	88367	9.4662	ug/L	100
46)	Benzene	7.17	78	719672	9.7188	ug/L	100
47)	12dichlorota	7.16	62	285884	8.9944	ug/L	100
48)	TAME	7.34	73	488116	9.6537	ug/L	100
49)	trichloroete	7.98	95	174079	9.9512	ug/L	100
50)	methylcyclohexane	8.24	83	300825	9.9034	ug/L	100
51)	12dicloropra	8.23	63	245905	10.1215	ug/L	100
52)	23Dicl1propene	8.29	75	274635	10.0539	ug/L	100
53)	Dibromometha	8.36	93	109872	9.1373	ug/L	100
54)	methylmethacrylate	8.40	69	182559	9.8329	ug/L	100
55)	14dioxane	8.41	88	138349	421.8183	ug/L	100
56)	Bromodiclrma	8.57	83	218879	10.1694	ug/L	100
57)	2Nitropropane	8.82	43	1277763	92.6488	ug/L	100
58)	2CLEVE	8.96	63	56585	37.3525	ug/L	100
59)	c13dicloproe	9.15	75	285964	9.3263	ug/L	100
60)	4Meth2Pentan	9.34	43	3852546	84.4273	ug/L	100
62)	Toluene	9.59	92	430458	9.7824	ug/L	100
63)	t13Dicloprop	9.85	75	253755	9.5123	ug/L	100
64)	ethylmethacrylate	10.00	69	538229	19.1474	ug/L	100
65)	112Triclotha	10.08	83	137011	9.2898	ug/L	100
66)	Tetrachlorte	10.32	166	179234	10.3466	ug/L	100
67)	13Diclorpropa	10.31	76	303086	9.9619	ug/L	100
69)	2Hexanone	10.43	43	3224363	85.1708	ug/L	100
70)	Clorodibrmta	10.60	129	144767	8.8782	ug/L	100
71)	12Dibrometha	10.76	107	168320	9.1515	ug/L	100
72)	Chlorobenzen	11.45	112	446707	9.0547	ug/L	100
73)	1Clhexane	11.43	91	240815	9.4128	ug/L	100
74)	1112Tetclota	11.56	131	144718	9.1215	ug/L	100
75)	Ethylbenzene	11.61	91	804412	9.3620	ug/L	100
76)	m p-Xylene	11.78	106	613634	18.8999	ug/L	100
77)	o-Xylene	12.32	106	291728	9.8381	ug/L	100
78)	Styrene	12.34	104	456555	9.5027	ug/L	100
79)	Bromoform	12.56	173	124435	10.1908	ug/L	100
80)	Isopropylben	12.84	105	724987	9.6418	ug/L	100
81)	cyclohexanone	12.92	55	347404	187.3873	ug/L	100
84)	Bromobenzene	13.24	156	175680	9.6574	ug/L	100
85)	1122Tetrclta	13.22	83	280213	9.2224	ug/L	100
86)	123Triclproa	13.28	75	358742	9.9565	ug/L	100
87)	14dichloro2butene	13.30	53	98638	9.6226	ug/L	100
88)	n-Propylbenz	13.43	91	908278	10.1690	ug/L	100
89)	2chlorotolue	13.54	91	514795	9.4231	ug/L	100
90)	4chlorotolue	13.69	91	584694	9.9170	ug/L	100
91)	135Trimebenz	13.69	105	596481	10.2092	ug/L	100
92)	tbutylbenzen	14.15	119	501390	10.7114	ug/L	100
93)	124Trimetben	14.22	105	611799	10.1103	ug/L	100
94)	sbutylbenzen	14.47	105	741576	10.2861	ug/L	100
95)	13Diclorbenz	14.61	146	304901	10.1995	ug/L	100
96)	pIsopropylto	14.69	119	605543	10.1742	ug/L	100
97)	14dichlorobe	14.73	146	312172	9.7461	ug/L	100
98)	12dichlorobe	15.26	146	280148	9.4498	ug/L	100
99)	nButylbenzen	15.28	91	596655	10.0718	ug/L	100
100)	12dibromo3cl	16.36	157	61452	10.5054	ug/L	100
101)	135Trichlorobenzene	16.71	180	212177	10.2344	ug/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0816\WCAL4.D Vial: 7
Acq On : 8 Nov 2016 18:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:36 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:28 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	179472	9.3676	ug/L	100
103) Hexachlorobu	17.78	225	84194	10.4647	ug/L	100
104) Naphthalene	17.82	128	563551	10.1316	ug/L	100
105) 123Trichlben	18.14	180	154834	9.9219	ug/L	100

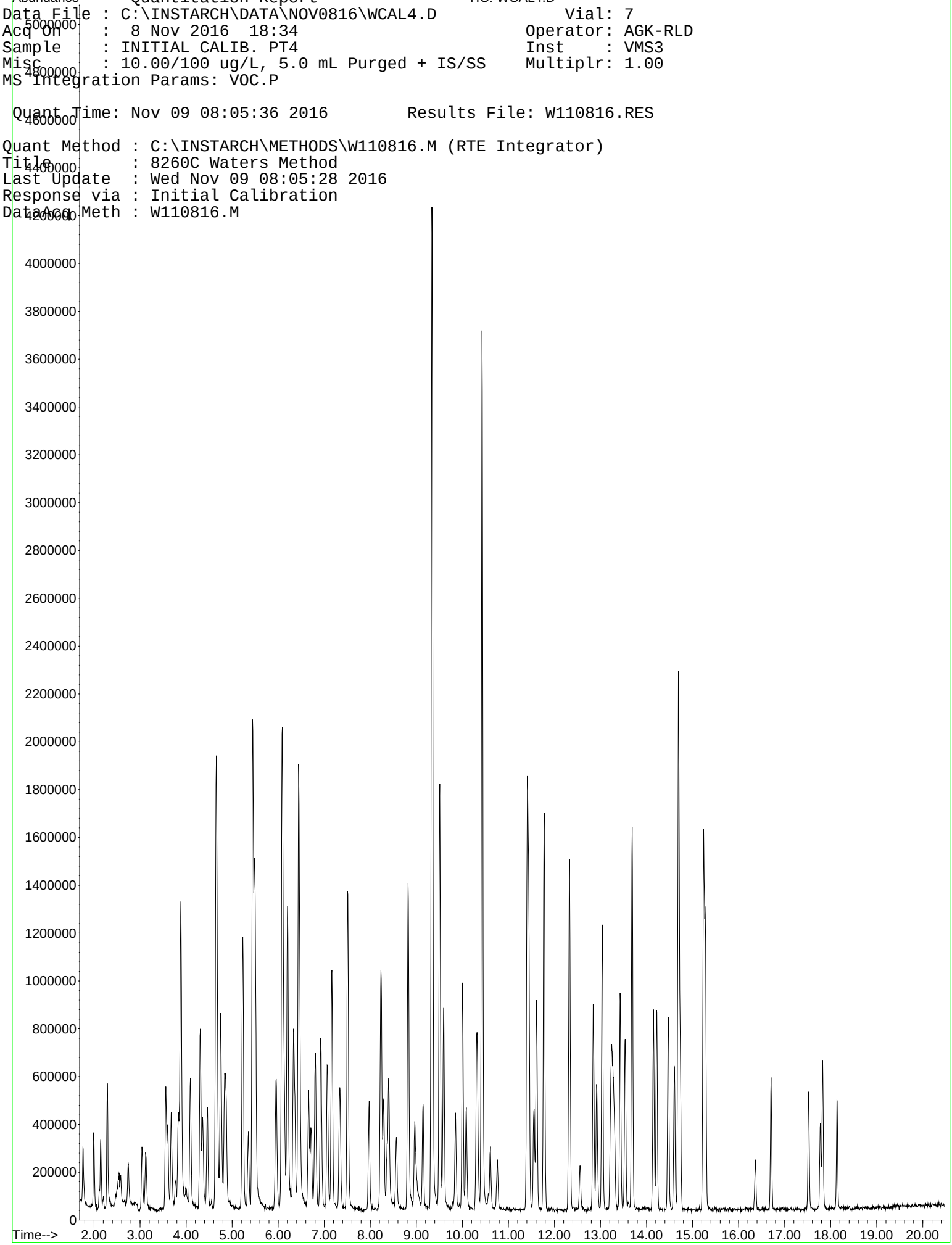
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL4.D

Data File : C:\INSTARCH\DATA\NOV0816\WCAL4.D Vial: 7
Acq On : 8 Nov 2016 18:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT4 Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:36 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:28 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL5.D Vial: 8
Acq On : 8 Nov 2016 19:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 20.00/200 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:49 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:42 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1413252	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1031514	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	554580	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	352538	20.062	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 100	%		
45) SURR12DCAd4	7.06	102	92211	19.398	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 97	%		
61) SURRd8Tolule	9.51	98	1446236	20.375	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 102	%		
83) SURR4BrFBenz	13.04	95	507367	19.659	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	424022	19.9507	ug/L	100
3) Chloromethan	2.00	50	726546	14.8234	ug/L	97
4) VinylChlorid	2.15	62	638325	19.5565	ug/L	98
5) Bromomethane	2.57	94	161917	19.3137	ug/L	93
6) Chloroethane	2.74	64	352779	17.5442	ug/L	97
7) Dichloroflmethane	3.04	67	676925	18.7383	ug/L	97
8) Trichlorofma	3.13	101	466001	19.1630	ug/L	98
9) Ethylether	3.55	59	397687	18.2314	ug/L	99
10) dichlorotfluoroethan	3.56	67	404947	18.2467	ug/L	95
11) propyleneoxide	3.89	58	956946	147.9214	ug/L	96
12) Acrolein	3.68	56	931295	93.0699	ug/L	100
13) 11dichlorthe	3.83	96	313314	17.9771	ug/L	97
14) Trichlorotfluoroeth	3.88	101	612216	41.6255	ug/L	99
15) Acetone	3.89	43	2814166	134.4373	ug/L	98
16) Iodomethane	4.00	142	296182	51.1759	ug/L	95
17) Carbon Dislf	4.09	76	1729867	35.1052	ug/L	100
18) allylchloride	4.31	41	1401856	37.7105	ug/L	98
19) methylacetate	4.36	74	216172	17.8245	ug/L	98
20) Methylchlorid	4.47	84	357788	16.8740	ug/L	96
21) tbutylalcohol	4.66	59	6201536	748.7454	ug/L	95
22) Acrylonitrile	4.75	53	1680820	94.1689	ug/L	99
23) t12dichlorte	4.83	96	336384	19.0685	ug/L	91
24) MtBE	4.86	73	1030744	18.9922	ug/L	99
25) Hexane	5.23	57	1457831	39.7681	ug/L	98
26) 11dichlorota	5.35	63	790212	18.8715	ug/L	97
27) Vinylacetate	5.44	43	8429644	143.2883	ug/L	94
28) chloroprene	5.49	53	1637036	40.4793	ug/L	99
29) Diisopether	5.51	45	1748987	18.3441	ug/L	96
30) ETBE	5.96	59	1374282	18.8332	ug/L	99
31) 22dichloropr	6.08	77	558044	19.2512	ug/L	99
32) c12dichlorte	6.08	96	403329	18.5067	ug/L	95
33) 2Butanone	6.09	72	999724	192.2569	ug/L	98
34) propionitrile	6.13	54	1558197	194.8352	ug/L	99
35) Ethylacetate	6.20	88	124368	96.8708	ug/L #	83
36) methacrylonitrile	6.33	67	561290	41.2035	ug/L	96
37) Bromochlorma	6.36	128	155137	18.5225	ug/L #	90
38) Tetrahydofur	6.44	42	3441478	180.0491	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL5.D Vial: 8
Acq On : 8 Nov 2016 19:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 20.00/200 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:49 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:42 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39) Chloroform	6.47	83	610318	18.6622 ug/L		97
40) 111trichlota	6.72	97	553739	19.7346 ug/L		98
42) Cyclohexane	6.81	56	947681	20.7559 ug/L		99
43) Carbtetraclo	6.93	119	443643	20.5312 ug/L		96
44) 11dicloprope	6.92	110	167524	17.0281 ug/L	#	85
46) Benzene	7.17	78	1451486	18.5993 ug/L		97
47) 12dichlorota	7.16	62	614872	18.3558 ug/L		100
48) TAME	7.34	73	1037410	19.4681 ug/L		100
49) trichloroete	7.97	95	358977	19.4715 ug/L		97
50) methylcyclohexane	8.24	83	631434	19.7244 ug/L		98
51) 12dicloropra	8.22	63	509046	19.8810 ug/L		92
52) 23Dicl1propene	8.29	75	576874	20.0385 ug/L		96
53) Dibromometha	8.36	93	232334	18.3336 ug/L		99
54) methylmethacrylate	8.40	69	393946	20.1334 ug/L		98
55) 14dioxane	8.41	88	317746	918.2543 ug/L		97
56) Bromodiclrma	8.57	83	463805	20.4471 ug/L		97
57) 2Nitropropane	8.82	43	2769406	190.5377 ug/L		99
58) 2CLEVE	8.95	63	224994	140.9271 ug/L		94
59) c13dicloproe	9.14	75	636168	19.6868 ug/L		96
60) 4Meth2Pentan	9.34	43	6851329	142.4672 ug/L		91
62) Toluene	9.59	92	899002	19.3857 ug/L		97
63) t13Dicloprop	9.85	75	574503	20.4346 ug/L		98
64) ethylmethacrylate	10.01	69	1158503	39.1061 ug/L		99
65) 112Triclotha	10.09	83	311072	20.0133 ug/L		96
66) Tetrachlorte	10.33	166	365163	20.0017 ug/L		97
67) 13Diclorpropa	10.31	76	627226	19.5616 ug/L		100
69) 2Hexanone	10.43	43	5928479	151.3178 ug/L		91
70) Clorodibrmta	10.61	129	351781	20.8463 ug/L		89
71) 12Dibrometha	10.76	107	366483	19.2535 ug/L		97
72) Chlorobenzen	11.45	112	932029	18.2550 ug/L		97
73) 1Clhexane	11.44	91	522750	19.7436 ug/L		94
74) 1112Tetclota	11.56	131	322533	19.6434 ug/L		92
75) Ethylbenzene	11.61	91	1658933	18.6561 ug/L		98
76) m p-Xylene	11.78	106	1277987	38.0343 ug/L		97
77) o-Xylene	12.33	106	634943	20.6903 ug/L		96
78) Styrene	12.33	104	1014015	20.3938 ug/L		100
79) Bromoform	12.56	173	263014	20.8135 ug/L		91
80) Isopropylben	12.85	105	1530494	19.6679 ug/L		96
81) cyclohexanone	12.92	55	800321	417.1280 ug/L		99
84) Bromobenzene	13.25	156	375980	18.5101 ug/L		95
85) 1122Tetrclta	13.22	83	600721	17.7066 ug/L		94
86) 123Triclproa	13.28	75	784622	19.5026 ug/L		98
87) 14dichloro2butene	13.30	53	240282	20.9930 ug/L		98
88) n-Propylbenz	13.43	91	1864101	18.6911 ug/L		99
89) 2chlorotolue	13.54	91	1071291	17.5620 ug/L		96
90) 4chlorotolue	13.69	91	1243045	18.8818 ug/L		99
91) 135Trimebenz	13.69	105	1268956	19.4513 ug/L		96
92) tbutylbenzen	14.15	119	1067024	20.4150 ug/L		98
93) 124Trimetben	14.22	105	1255728	18.5847 ug/L		96
94) sbutylbenzen	14.47	105	1601242	19.8910 ug/L		100
95) 13Diclorbenz	14.61	146	657247	19.6903 ug/L		96
96) pIsopropylto	14.69	119	1294263	19.4753 ug/L		96
97) 14dichlorobe	14.73	146	635999	17.7828 ug/L		97
98) 12dichlorobe	15.27	146	621964	18.7891 ug/L		92
99) nButylbenzen	15.28	91	1244964	18.8212 ug/L		97
100) 12dibromo3cl	16.36	157	152657	23.3722 ug/L		86
101) 135Trichlorobenzene	16.71	180	444851	19.2170 ug/L		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL5.D Vial: 8
Acq On : 8 Nov 2016 19:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 20.00/200 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:49 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:42 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	390009	18.2310	ug/L	98
103) Hexachlorobu	17.78	225	184886	20.5804	ug/L	97
104) Naphthalene	17.82	128	1268225	20.4195	ug/L	98
105) 123Trichlben	18.14	180	363449	20.8582	ug/L	98

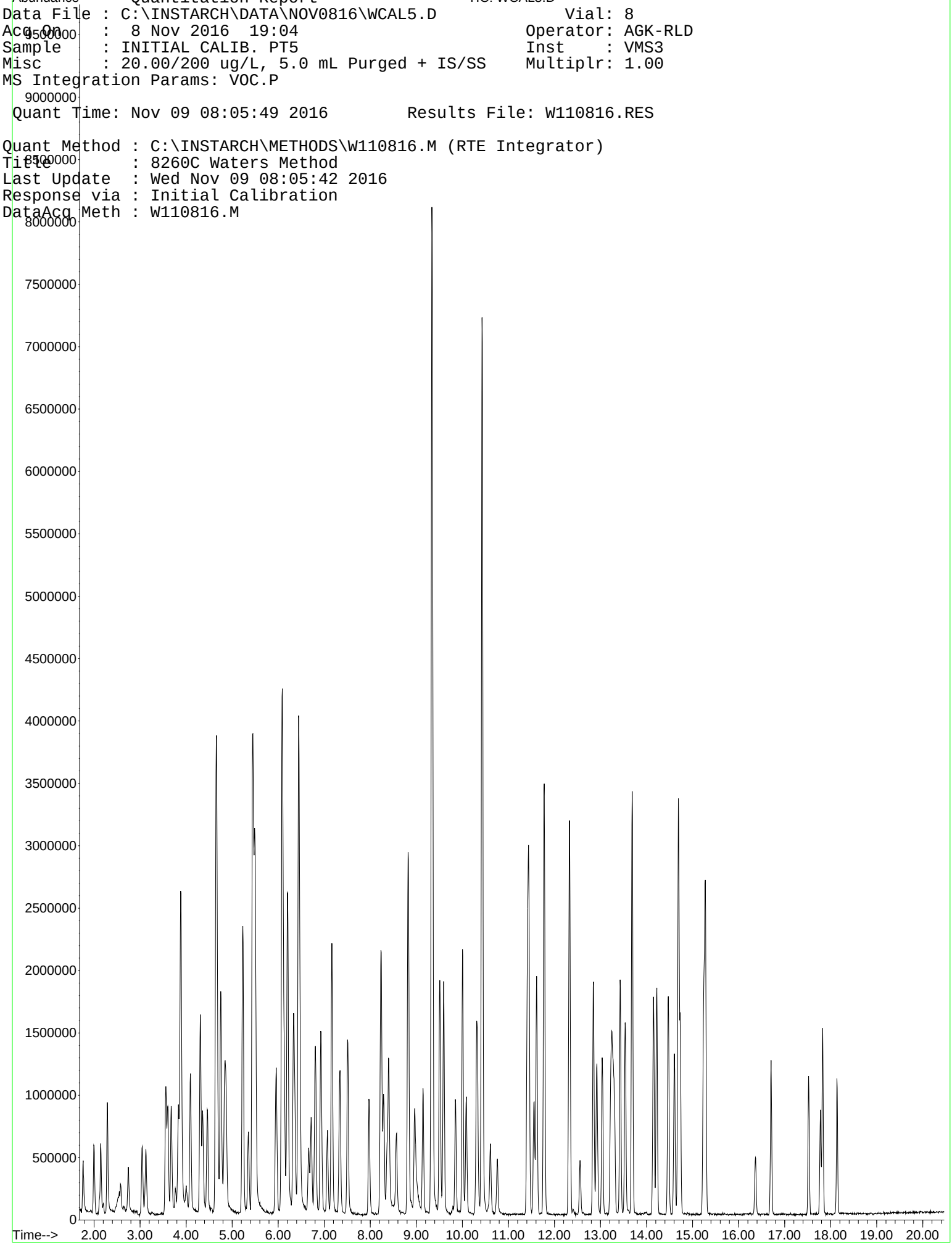
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL5.D

Data File : C:\INSTARCH\DATA\NOV0816\WCAL5.D Vial: 8
Acq On : 8 Nov 2016 19:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT5 Inst : VMS3
Misc : 20.00/200 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:05:49 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:05:42 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL6.D Vial: 9
Acq On : 8 Nov 2016 19:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:27 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:21 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1428421	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1043561	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	578108	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	367499	20.678	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 103	%		
45) SURR12DCAd4	7.07	102	95937	20.088	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 100	%		
61) SURRd8Tolule	9.51	98	1458207	20.250	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 101	%		
83) SURR4BrFBenz	13.04	95	519328	19.370	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 97	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	628612	29.2773	ug/L	96
3) Chloromethan	2.00	50	1094132	23.2917	ug/L	99
4) VinylChlorid	2.15	62	963197	29.3264	ug/L	98
5) Bromomethane	2.57	94	236575	28.1122	ug/L	100
6) Chloroethane	2.74	64	539809	27.2291	ug/L	98
7) Dichloroflmethane	3.04	67	987182	27.3820	ug/L	98
8) Trichlorofma	3.12	101	705066	28.9282	ug/L	98
9) Ethylether	3.56	59	595998	27.5193	ug/L	98
10) dichlorotfluoroethan	3.56	67	629044	28.5438	ug/L	97
11) propyleneoxide	3.89	58	1303566	210.3137	ug/L	95
12) Acrolein	3.67	56	1368882	137.2502	ug/L	99
13) 11dichlorthe	3.83	96	483597	28.0196	ug/L	97
14) Trichlorotfluoroeth	3.87	101	901310	60.1419	ug/L	99
15) Acetone	3.89	43	3822308	193.3344	ug/L	98
16) Iodomethane	4.00	142	566847	91.7744	ug/L	98
17) Carbon Dislf	4.09	76	2539301	52.2634	ug/L	97
18) allylchloride	4.31	41	2097248	56.4641	ug/L	98
19) methylacetate	4.36	74	327198	27.2862	ug/L	98
20) Methylchlorid	4.47	84	514160	24.7654	ug/L	96
21) tbutylalcohol	4.65	59	7584768	953.9634	ug/L	92
22) Acrylonitrile	4.75	53	2320473	130.1430	ug/L	97
23) t12dichlorte	4.84	96	485913	27.5085	ug/L	98
24) MtBE	4.86	73	1533382	28.2382	ug/L	99
25) Hexane	5.23	57	2115572	57.1641	ug/L	97
26) 11dichlorota	5.35	63	1204025	28.7734	ug/L	99
27) Vinylacetate	5.44	43	10491882	187.0570	ug/L	90
28) chloroprene	5.48	53	2423197	59.1408	ug/L	97
29) Diisopether	5.51	45	2410213	25.4319	ug/L	97
30) ETBE	5.96	59	2039843	27.9837	ug/L	98
31) 22dichloropr	6.08	77	820991	28.2329	ug/L	99
32) c12dichlorte	6.08	96	578187	26.6462	ug/L	99
33) 2Butanone	6.09	72	1331892	255.3937	ug/L	98
34) propionitrile	6.12	54	2113220	262.7858	ug/L	99
35) Ethylacetate	6.20	88	179886	139.4991	ug/L #	83
36) methacrylonitrile	6.33	67	782141	56.4663	ug/L	97
37) Bromochlorma	6.36	128	235432	28.2278	ug/L #	89
38) Tetrahydofur	6.44	42	4425544	233.7374	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL6.D Vial: 9
Acq On : 8 Nov 2016 19:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:27 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:21 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.47	83	911280	27.9429	ug/L		96
40)	111trichlota	6.72	97	845825	29.9034	ug/L		99
42)	Cyclohexane	6.81	56	1396404	30.0319	ug/L		99
43)	Carbtetraclo	6.93	119	678966	30.9237	ug/L		97
44)	11dicloprope	6.92	110	256130	26.5470	ug/L	#	89
46)	Benzene	7.17	78	2126647	27.3444	ug/L		97
47)	12dichlorota	7.16	62	895661	26.8965	ug/L		98
48)	TAME	7.34	73	1552192	28.9733	ug/L		98
49)	trichloroete	7.97	95	546028	29.4586	ug/L		97
50)	methylcyclohexane	8.24	83	932853	28.9102	ug/L		97
51)	12dicloropra	8.22	63	759614	29.3870	ug/L		99
52)	23Dicl1propene	8.29	75	842297	28.9364	ug/L		94
53)	Dibromometha	8.36	93	350204	27.8046	ug/L		98
54)	methylmethacrylate	8.40	69	587394	29.6616	ug/L		97
55)	14dioxane	8.41	88	416863	1211.7098	ug/L		93
56)	Bromodiclrma	8.57	83	695744	30.2114	ug/L		97
57)	2Nitropropane	8.82	43	3774053	259.3551	ug/L		99
58)	2CLEVE	8.96	63	260437	149.1835	ug/L		98
59)	c13dicloproe	9.14	75	947259	29.0937	ug/L		99
60)	4Meth2Pentan	9.34	43	8489554	185.3199	ug/L		84
62)	Toluene	9.59	92	1328988	28.5287	ug/L		99
63)	t13Dicloprop	9.85	75	835132	29.2623	ug/L		99
64)	ethylmethacrylate	10.01	69	1737340	58.2828	ug/L		99
65)	112Triclotha	10.08	83	444366	28.2816	ug/L		95
66)	Tetrachlorte	10.32	166	536454	29.0716	ug/L		94
67)	13Diclorpropa	10.31	76	935440	28.9913	ug/L		97
69)	2Hexanone	10.43	43	7359425	195.1742	ug/L		86
70)	Clorodibrmta	10.61	129	530536	30.8155	ug/L		87
71)	12Dibrometha	10.76	107	546784	28.6077	ug/L		98
72)	Chlorobenzen	11.45	112	1407754	27.7384	ug/L		99
73)	1Clhexane	11.44	91	769646	28.8069	ug/L		96
74)	1112Tetclota	11.55	131	499023	30.1489	ug/L		93
75)	Ethylbenzene	11.61	91	2424671	27.3198	ug/L		94
76)	m p-Xylene	11.78	106	1905473	56.6108	ug/L		93
77)	o-Xylene	12.32	106	934978	29.9091	ug/L		98
78)	Styrene	12.33	104	1541767	30.5297	ug/L		99
79)	Bromoform	12.56	173	402586	31.2365	ug/L		93
80)	Isopropylben	12.84	105	2273662	28.9771	ug/L		96
81)	cyclohexanone	12.92	55	1071221	547.1899	ug/L		99
84)	Bromobenzene	13.24	156	584733	28.0334	ug/L		95
85)	1122Tetrclta	13.22	83	916830	26.5328	ug/L		97
86)	123Triclproa	13.28	75	1183730	28.3665	ug/L		98
87)	14dichloro2butene	13.30	53	339241	28.1531	ug/L		98
88)	n-Propylbenz	13.43	91	2754099	26.8425	ug/L		96
89)	2chlorotolue	13.54	91	1627320	26.2310	ug/L		98
90)	4chlorotolue	13.69	91	1890689	27.8622	ug/L		99
91)	135Trimebenz	13.69	105	1921759	28.4149	ug/L		96
92)	tbutylbenzen	14.15	119	1629414	29.7827	ug/L		99
93)	124Trimetben	14.22	105	1905061	27.4357	ug/L		93
94)	sbutylbenzen	14.47	105	2365496	28.2196	ug/L		98
95)	13Diclorbenz	14.61	146	1004936	28.9711	ug/L		98
96)	pIsopropylto	14.69	119	1976885	28.6869	ug/L		99
97)	14dichlorobe	14.73	146	1005035	27.5688	ug/L		99
98)	12dichlorobe	15.26	146	958477	28.1170	ug/L		96
99)	nButylbenzen	15.28	91	1870975	27.4577	ug/L		97
100)	12dibromo3cl	16.36	157	216678	30.7857	ug/L		89
101)	135Trichlorobenzene	16.71	180	661508	27.6297	ug/L		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0816\WCAL6.D Vial: 9
Acq On : 8 Nov 2016 19:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:27 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:21 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	607654	27.7395	ug/L	96
103) Hexachlorobu	17.78	225	288200	30.5975	ug/L	97
104) Naphthalene	17.82	128	1841386	28.3225	ug/L	98
105) 123Trichlben	18.14	180	537511	29.3403	ug/L	98

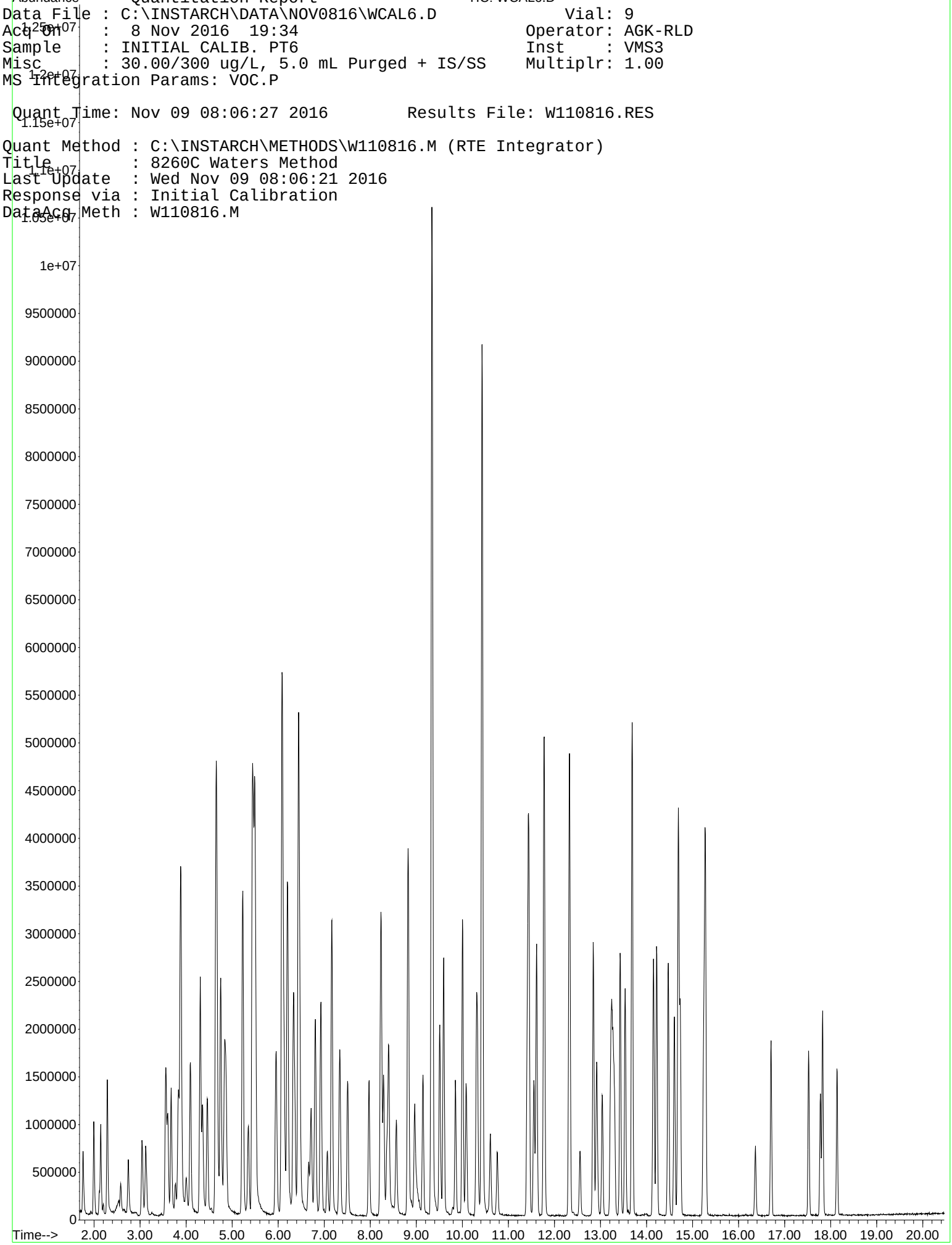
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL6.D

Data File : C:\INSTARCH\DATA\NOV0816\WCAL6.D Vial: 9
Acq On : 8 Nov 2016 19:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT6 Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:27 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:21 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL7.D Vial: 10
Acq On : 8 Nov 2016 20:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 40.00/400 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:43 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:36 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1525002	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1139538	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	658147	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	378422	19.832	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 99 %			
45) SURR12DCAd4	7.07	102	98060	19.218	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 96 %			
61) SURRd8Tolule	9.51	98	1569315	20.370	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 102 %			
83) SURR4BrFBenz	13.04	95	582162	19.173	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 96 %			
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	895474	39.2224	ug/L	99
3) Chloromethan	2.00	50	1455866	30.1532	ug/L	99
4) VinylChlorid	2.15	62	1365378	39.0850	ug/L	99
5) Bromomethane	2.58	94	348005	39.1450	ug/L	94
6) Chloroethane	2.74	64	761548	36.5438	ug/L	96
7) Dichloroflmethane	3.04	67	1377928	36.3281	ug/L	97
8) Trichlorofma	3.13	101	950818	36.7594	ug/L	96
9) Ethylether	3.56	59	850466	37.2960	ug/L	98
10) dichlorotfluoroethan	3.56	67	849059	36.3817	ug/L	98
11) propyleneoxide	3.89	58	1931767	307.2358	ug/L #	88
12) Acrolein	3.67	56	1977720	188.4057	ug/L	98
13) 11dichlorthe	3.83	96	645436	35.4179	ug/L	97
14) Trichlorotfluoroeth	3.87	101	1169014	73.0361	ug/L	97
15) Acetone	3.89	43	5383084	271.1004	ug/L	95
16) Iodomethane	4.00	142	925003	128.8995	ug/L	99
17) Carbon Dislf	4.09	76	3353383	66.0674	ug/L	96
18) allylchloride	4.31	41	2801513	71.3490	ug/L	97
19) methylacetate	4.36	74	482179	38.2406	ug/L	97
20) Methylchlorid	4.47	84	746194	34.6739	ug/L	92
21) tbutylalcohol	4.66	59	10179714	1276.7120	ug/L	88
22) Acrylonitrile	4.75	53	3314616	178.0544	ug/L	97
23) t12dichlorte	4.84	96	701078	37.6976	ug/L	94
24) MtBE	4.86	73	2157948	37.5911	ug/L	100
25) Hexane	5.23	57	2873329	73.2995	ug/L	98
26) 11dichlorota	5.35	63	1642820	37.0255	ug/L	98
27) Vinylacetate	5.44	43	12331810	219.7232	ug/L	86
28) chloroprene	5.49	53	3240223	74.2501	ug/L	96
29) Diisopether	5.51	45	3508065	35.5747	ug/L	99
30) ETBE	5.95	59	2802100	36.4142	ug/L	95
31) 22dichloropr	6.08	77	1124385	36.5766	ug/L	98
32) c12dichlorte	6.08	96	844195	37.1333	ug/L	95
33) 2Butanone	6.09	72	2047726	377.1349	ug/L	96
34) propionitrile	6.13	54	3120378	371.1276	ug/L	97
35) Ethylacetate	6.20	88	268428	197.2808	ug/L #	78
36) methacrylonitrile	6.33	67	1157829	79.0713	ug/L	99
37) Bromochlorma	6.36	128	332348	37.6953	ug/L #	87
38) Tetrahydofur	6.44	42	6053110	310.8960	ug/L	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL7.D Vial: 10
Acq On : 8 Nov 2016 20:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 40.00/400 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:43 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:36 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.47	83	1298454	37.7245	ug/L	97
40)	111trichlota	6.72	97	1199298	39.7362	ug/L	98
42)	Cyclohexane	6.80	56	1902731	38.3229	ug/L	97
43)	Carbtetraclo	6.94	119	970526	41.1920	ug/L	100
44)	11dicloprope	6.92	110	370982	36.7202	ug/L	96
46)	Benzene	7.17	78	2900343	35.4539	ug/L	96
47)	12dichlorota	7.16	62	1260414	36.0748	ug/L	98
48)	TAME	7.34	73	2210345	38.8672	ug/L	100
49)	trichloroete	7.97	95	765116	38.7810	ug/L	95
50)	methylcyclohexane	8.24	83	1314088	38.3783	ug/L	100
51)	12dicloropra	8.22	63	1070746	38.9328	ug/L	91
52)	23Dicl1propene	8.29	75	1223922	39.6180	ug/L	95
53)	Dibromometha	8.36	93	513835	38.6843	ug/L	94
54)	methylmethacrylate	8.40	69	857855	40.6521	ug/L	98
55)	14dioxane	8.41	88	651864	1833.5265	ug/L	95
56)	Bromodiclrma	8.57	83	1002023	40.7076	ug/L	98
57)	2Nitropropane	8.82	43	5197064	342.2548	ug/L	97
58)	2CLEVE	8.96	63	677339	363.7510	ug/L	95
59)	c13dicloproe	9.14	75	1329958	38.4544	ug/L	97
60)	4Meth2Pentan	9.34	43	10167269	222.0329	ug/L	72
62)	Toluene	9.59	92	1900681	38.5319	ug/L	95
63)	t13Dicloprop	9.85	75	1197145	39.4521	ug/L	98
64)	ethylmethacrylate	10.00	69	2422232	76.4776	ug/L	99
65)	112Triclotha	10.09	83	650157	39.1321	ug/L	98
66)	Tetrachlorte	10.33	166	773333	39.4580	ug/L	95
67)	13Diclorpropa	10.31	76	1332900	38.9113	ug/L	97
69)	2Hexanone	10.43	43	9093278	234.5018	ug/L	78
70)	Clorodibrmta	10.61	129	738780	39.1197	ug/L	93
71)	12Dibrometha	10.76	107	802936	38.7712	ug/L	98
72)	Chlorobenzen	11.45	112	1989466	36.3556	ug/L	99
73)	1Clhexane	11.43	91	1102971	38.0580	ug/L	94
74)	1112Tetclota	11.55	131	714522	39.5000	ug/L	95
75)	Ethylbenzene	11.61	91	3339669	34.9810	ug/L	93
76)	m p-Xylene	11.78	106	2611028	71.7141	ug/L	90
77)	o-Xylene	12.32	106	1363899	39.9754	ug/L	89
78)	Styrene	12.33	104	2156915	38.9987	ug/L	97
79)	Bromoform	12.56	173	582699	41.1211	ug/L	91
80)	Isopropylben	12.84	105	3125824	36.6908	ug/L	93
81)	cyclohexanone	12.92	55	1600046	759.6238	ug/L	99
84)	Bromobenzene	13.25	156	841316	35.8208	ug/L	93
85)	1122Tetrclta	13.22	83	1291980	33.4875	ug/L	98
86)	123Triclproa	13.27	75	1729301	36.7340	ug/L	100
87)	14dichloro2butene	13.30	53	528479	38.9234	ug/L	98
88)	n-Propylbenz	13.43	91	3705884	32.2929	ug/L	93
89)	2chlorotolue	13.54	91	2307961	33.3769	ug/L	99
90)	4chlorotolue	13.69	91	2590925	33.9410	ug/L	96
91)	135Trimebenz	13.69	105	2673976	35.0374	ug/L	99
92)	tbutylbenzen	14.15	119	2250449	36.1753	ug/L	99
93)	124Trimetben	14.22	105	2661033	34.1487	ug/L	94
94)	sbutylbenzen	14.47	105	3249841	34.3949	ug/L	97
95)	13Diclorbenz	14.61	146	1434312	36.5297	ug/L	97
96)	pIsopropylto	14.69	119	2683661	34.4584	ug/L	94
97)	14dichlorobe	14.73	146	1430990	34.9515	ug/L	99
98)	12dichlorobe	15.27	146	1337278	34.8227	ug/L	95
99)	nButylbenzen	15.28	91	2573640	33.6518	ug/L	94
100)	12dibromo3cl	16.36	157	331605	41.2050	ug/L	95
101)	135Trichlorobenzene	16.71	180	946380	35.1843	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0816\WCAL7.D Vial: 10
Acq On : 8 Nov 2016 20:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 40.00/400 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:43 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:36 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	858997	34.8826	ug/L	95
103) Hexachlorobu	17.78	225	422358	39.2572	ug/L	96
104) Naphthalene	17.82	128	2673187	36.4559	ug/L	96
105) 123Trichlben	18.14	180	800681	38.5317	ug/L	99

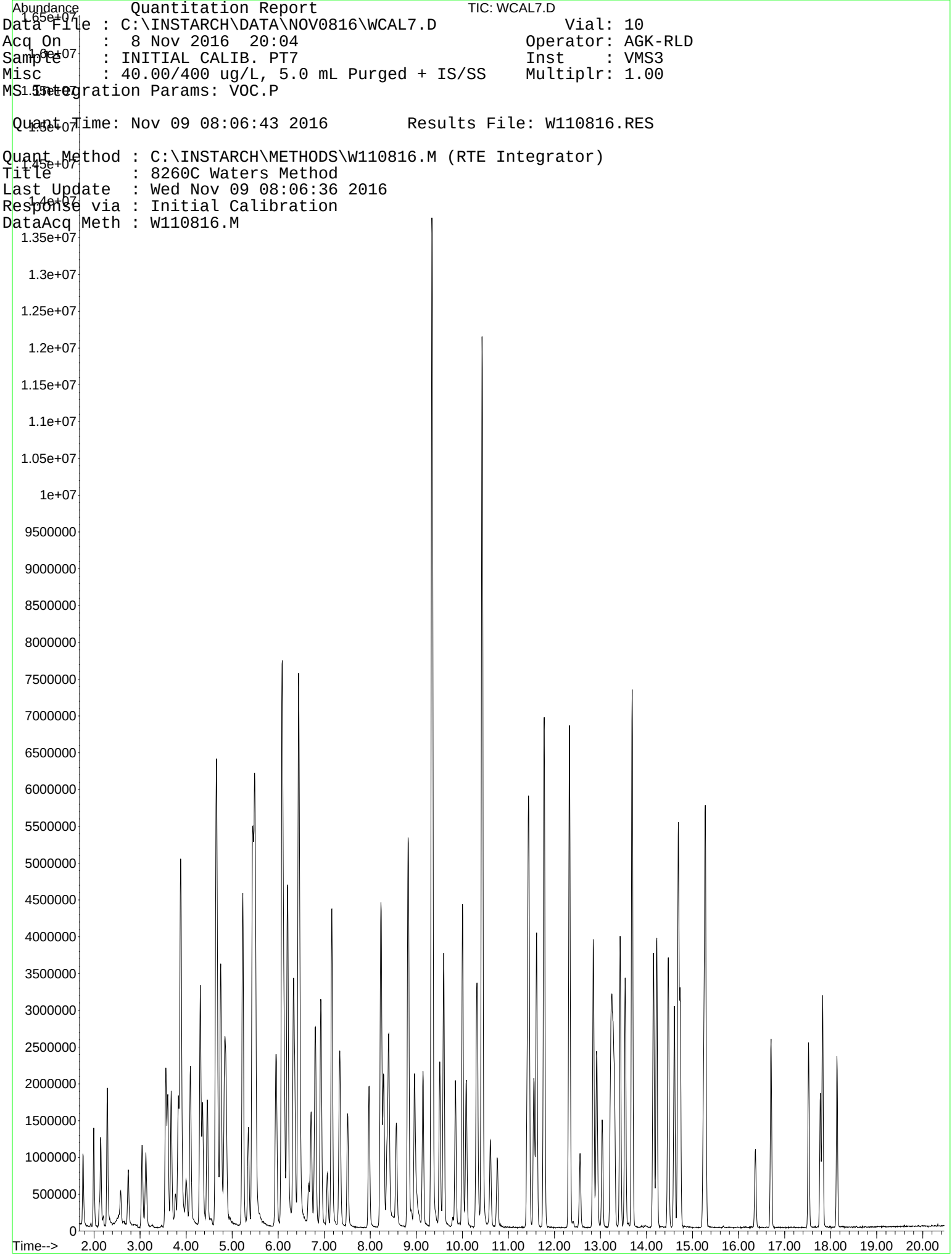
(#) = qualifier out of range (m) = manual integration

Quantitation Report (TIC: WCAL7.D)

Data File : C:\INSTARCH\DATA\NOV0816\WCAL7.D Vial: 10
Acq On : 8 Nov 2016 20:04 Operator: AGK-RLD
Sample : INITIAL CALIB. PT7 Inst : VMS3
Misc : 40.00/400 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:43 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:36 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL8.D Vial: 11
Acq On : 8 Nov 2016 20:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 80.00/800 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:50 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1740581	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1287759	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	678497	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.67	113	445367	20.474	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 102	%		
45) SURR12DCAd4	7.07	102	125472	21.666	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 108	%		
61) SURRd8Tolule	9.51	98	1765079	20.021	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 100	%		
83) SURR4BrFBenz	13.04	95	649144	20.861	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 104	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	1812065	69.7331	ug/L	96
3) Chloromethan	2.00	50	2982262	56.0895	ug/L	94
4) VinylChlorid	2.15	62	2704403	68.0497	ug/L	94
5) Bromomethane	2.57	94	838441	82.8835	ug/L	93
6) Chloroethane	2.74	64	1606128	68.3702	ug/L	98
7) Dichloroflmethane	3.04	67	2812568	65.8307	ug/L	98
8) Trichlorofma	3.12	101	2042055	69.9794	ug/L	95
9) Ethylether	3.55	59	1797429	69.7345	ug/L	98
10) dichlorotfluoroethan	3.57	67	1805460	68.6685	ug/L	98
11) propyleneoxide	3.89	58	3761015	542.0387	ug/L #	67
12) Acrolein	3.67	56	3923436	330.2050	ug/L	97
13) 11dichlorthe	3.83	96	1388117	67.8480	ug/L	95
14) Trichlorotfluoroeth	3.87	101	2562933	142.0580	ug/L	98
15) Acetone	3.89	43	8872091	410.3637	ug/L	83
16) Iodomethane	4.00	142	2043182	229.4213	ug/L	98
17) Carbon Dislf	4.09	76	6154338	108.9440	ug/L	90
18) allylchloride	4.31	41	4934539	111.8354	ug/L	94
19) methylacetate	4.36	74	1025692	71.7211	ug/L	99
20) Methylchlorid	4.46	84	1569638	65.1428	ug/L #	87
21) tbutylalcohol	4.67	59	15867246	1838.5379	ug/L	74
22) Acrylonitrile	4.75	53	6095749	291.4636	ug/L	93
23) t12dichlorte	4.83	96	1446031	68.6890	ug/L	94
24) MtBE	4.87	73	4280442	65.8963	ug/L	92
25) Hexane	5.23	57	5502058	124.4643	ug/L #	91
26) 11dichlorota	5.35	63	3281536	65.4942	ug/L	93
27) Vinylacetate	5.44	43	17188338	286.7885	ug/L	68
28) chloroprene	5.49	53	6006115	121.8356	ug/L	90
29) Diisopether	5.51	45	6535764	59.0018	ug/L	93
30) ETBE	5.96	59	5473974	63.1340	ug/L	91
31) 22dichloropr	6.08	77	2347184	67.7257	ug/L	96
32) c12dichlorte	6.08	96	1754331	68.3090	ug/L	93
33) 2Butanone	6.09	72	4125367	671.1579	ug/L	94
34) propionitrile	6.13	54	6064855	638.5782	ug/L	91
35) Ethylacetate	6.21	88	583540	376.4853	ug/L #	70
36) methacrylonitrile	6.33	67	2409265	144.3963	ug/L	92
37) Bromochlorma	6.36	128	692040	69.3412	ug/L #	85
38) Tetrahydofur	6.44	42	9832868	457.0230	ug/L	75

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV0816\WCAL8.D Vial: 11
Acq On : 8 Nov 2016 20:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 80.00/800 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:50 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.47	83	2679668	68.7698	ug/L		95
40)	111trichlota	6.71	97	2498994	72.6123	ug/L		97
42)	Cyclohexane	6.80	56	3966520	70.4167	ug/L		94
43)	Carbtetraclo	6.94	119	2078286	76.9560	ug/L		96
44)	11dicloprope	6.92	110	844307	74.0877	ug/L		97
46)	Benzene	7.17	78	5525874	60.1590	ug/L		90
47)	12dichlorota	7.16	62	2671373	67.9412	ug/L		96
48)	TAME	7.34	73	4373588	67.6546	ug/L		96
49)	trichloroete	7.97	95	1628694	72.6443	ug/L		97
50)	methylcyclohexane	8.24	83	2794378	71.9192	ug/L		98
51)	12dicloropra	8.23	63	2285072	73.0742	ug/L		90
52)	23Dicl1propene	8.29	75	2536830	72.0443	ug/L		92
53)	Dibromometha	8.36	93	1111506	73.6622	ug/L		97
54)	methylmethacrylate	8.40	69	1831085	75.8478	ug/L		97
55)	14dioxane	8.41	88	1413939	3526.4049	ug/L		96
56)	Bromodiclrma	8.57	83	2106974	74.8061	ug/L		96
57)	2Nitropropane	8.83	43	8734982	514.6120	ug/L		90
58)	2CLEVE	8.96	63	810479	341.4102	ug/L		96
59)	c13dicloproe	9.14	75	2734341	69.6531	ug/L		94
60)	4Meth2Pentan	9.34	43	13804892	282.0604	ug/L	#	53
62)	Toluene	9.59	92	3772827	67.3655	ug/L		88
63)	t13Dicloprop	9.85	75	2513188	72.7068	ug/L		98
64)	ethylmethacrylate	10.00	69	4785599	133.2205	ug/L		95
65)	112Triclotha	10.09	83	1367908	72.3596	ug/L		96
66)	Tetrachlorte	10.33	166	1652956	74.0367	ug/L		95
67)	13Diclorpropa	10.31	76	2787401	71.5725	ug/L		93
69)	2Hexanone	10.43	43	12376232	300.1704	ug/L	#	63
70)	Clorodibrmta	10.61	129	1603770	75.3848	ug/L		93
71)	12Dibrometha	10.76	107	1641015	70.4280	ug/L		94
72)	Chlorobenzen	11.45	112	3858644	63.2198	ug/L		93
73)	1Clhexane	11.43	91	2303374	70.8213	ug/L		93
74)	1112Tetclota	11.56	131	1504679	73.7387	ug/L		97
75)	Ethylbenzene	11.61	91	6060243	57.1964	ug/L		84
76)	m p-Xylene	11.78	106	5074047	125.1745	ug/L	#	74
77)	o-Xylene	12.32	106	2775397	71.9893	ug/L	#	83
78)	Styrene	12.33	104	4250744	68.2546	ug/L		92
79)	Bromoform	12.56	173	1301205	80.9328	ug/L		90
80)	Isopropylben	12.85	105	5755147	60.4933	ug/L		84
81)	cyclohexanone	12.92	55	3372559	1427.1265	ug/L		96
84)	Bromobenzene	13.24	156	1763419	73.9328	ug/L		93
85)	1122Tetrclta	13.22	83	2677456	68.9200	ug/L		93
86)	123Triclproa	13.27	75	3582799	74.6949	ug/L		97
87)	14dichloro2butene	13.30	53	1139069	81.6922	ug/L		95
88)	n-Propylbenz	13.43	91	6557717	56.9986	ug/L		83
89)	2chlorotolue	13.54	91	4409479	63.3543	ug/L		91
90)	4chlorotolue	13.69	91	4937997	64.1353	ug/L		89
91)	135Trimebenz	13.69	105	4979211	64.4282	ug/L		94
92)	tbutylbenzen	14.15	119	4425875	69.9665	ug/L		96
93)	124Trimetben	14.22	105	4987922	63.4148	ug/L		87
94)	sbutylbenzen	14.47	105	5867224	61.4641	ug/L		88
95)	13Diclorbenz	14.61	146	2848670	71.2583	ug/L		95
96)	pIsopropylto	14.69	119	5009188	63.6490	ug/L		88
97)	14dichlorobe	14.73	146	2890114	69.7302	ug/L		96
98)	12dichlorobe	15.27	146	2685608	69.1136	ug/L		98
99)	nButylbenzen	15.28	91	4871121	63.2155	ug/L		88
100)	12dibromo3cl	16.36	157	738746	88.6612	ug/L		92
101)	135Trichlorobenzene	16.71	180	1950797	71.5822	ug/L		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV0816\WCAL8.D Vial: 11
Acq On : 8 Nov 2016 20:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 80.00/800 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:50 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	1792770	71.9328	ug/L	96
103) Hexachlorobu	17.78	225	875298	79.1268	ug/L	97
104) Naphthalene	17.82	128	4916509	65.8723	ug/L	92
105) 123Trichlben	18.14	180	1628191	76.4051	ug/L	98

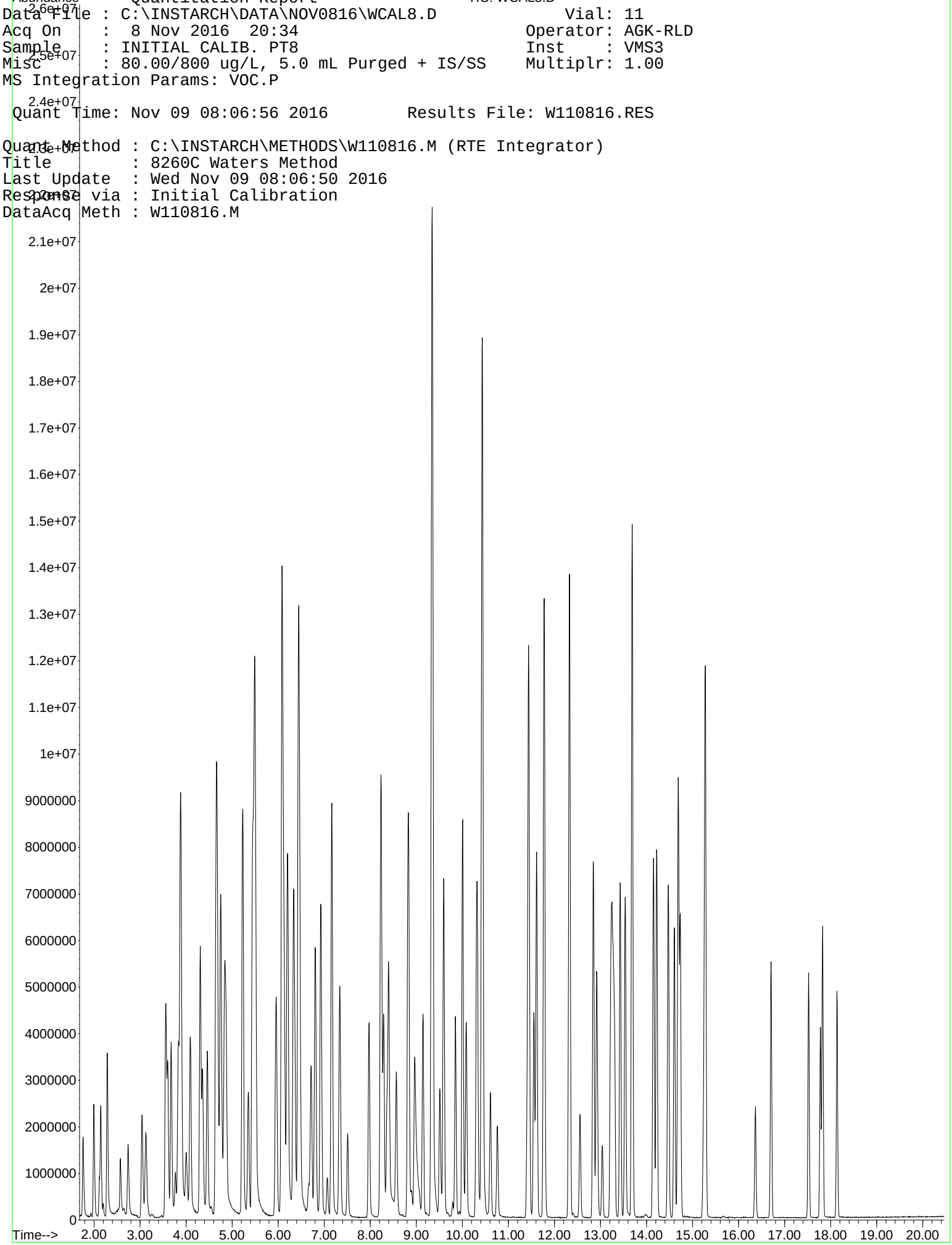
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: WCAL8.D

Data File : C:\INSTARCH\DATA\NOV0816\WCAL8.D Vial: 11
Acq On : 8 Nov 2016 20:34 Operator: AGK-RLD
Sample : INITIAL CALIB. PT8 Inst : VMS3
Misc : 80.00/800 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:06:56 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:06:50 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\NOV0816\ICV1.D Vial: 13
Acq On : 8 Nov 2016 21:33 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 08:21:11 2016

Quant Method : C:\INSTARCH\METHODS\W110816.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110816.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	124	0.00
2	PT	Dichlorodi	0.2938	0.3114	-5.99	122	0.00
3	PT	Chloromethan	0.5657	0.5652	0.09	131	0.00
4	PT	VinylChlorid	0.4481	0.4636	-3.46	125	0.00
5	PT	Bromomethane	0.1168	0.1388	-18.84	158	0.00
6	PT	Chloroethane	0.2650	0.2739	-3.36	133	0.00
7	T	Dichloroflmethane	0.4801	0.4978	-3.69	133	0.00
8	PT	Trichlorofma	0.3300	0.3366	-2.00	123	0.00
9	T	Ethylether	0.2914	0.2926	-0.41	130	0.00
10	T	dichlorotfluoroethan	0.2968	0.2830	4.65	115	0.00
11	T	propyleneoxide	0.0679	0.0711	-4.71	126	0.00
12	T	Acrolein	0.1335	0.1425	-6.74	139	0.00
13	PT	11dichlorthe	0.2306	0.2130	7.63	115	0.00
14	PT	Trichlorotfluoroeth	0.2044	0.2101	-2.79	124	0.00
15	PT	Acetone	0.2110	0.2198	-4.17	129	0.00
16	T	Iodomethane	0.1004	0.1338	-33.27#	229#	0.01
17	PT	Carbon Dislf	0.6362	0.6223	2.18	122	0.00
18	T	allylchloride	0.4879	0.4941	-1.27	119	0.00
19	PT	methylacetate	0.1622	0.1797	-10.79	146	0.00
20	PT	Methylchlorid	0.2590	0.2364	8.73	115	0.00
21	T	tbutylalcohol	0.0914	0.0998	-9.19	134	0.00
22	T	Acrylonitrile	0.2322	0.2434	-4.82	128	0.00
23	PT	t12dichlorte	0.2286	0.2351	-2.84	128	0.00
24	PT	MtBE	0.7299	0.7316	-0.23	129	0.00
25	T	Hexane	0.4938	0.5044	-2.15	117	0.00
26	PT	11dichlorota	0.5627	0.5530	1.72	123	0.00
27	T	Vinylacetate	0.6887	0.6799	1.28	131	0.00
28	T	chloroprene	0.5496	0.5925	-7.81	124	0.00
29	T	Diisopether	1.2045	1.1379	5.53	113	0.00
30	T	ETBE	0.9700	0.9828	-1.32	126	0.00
31	T	22dichloropr	0.3726	0.3584	3.81	119	0.01
32	PT	c12dichlorte	0.2897	0.2732	5.70	121	0.00
33	PT	2Butanone	0.0692	0.0675#	2.46	126	0.00
34	T	propionitrile	0.1064	0.1115	-4.79	134	0.00
35	T	Ethylacetate	0.0177	0.0184#	-3.95	149	0.00
36	T	methacrylonitrile	0.1894	0.1840	2.85	120	-0.01
37	T	Bromochlorma	0.1128	0.1078	4.43	118	0.00
38	T	Tetrahydofur	0.2385	0.2407	-0.92	127	0.00
39	PT	Chloroform	0.4399	0.4352	1.07	122	0.00
40	PT	111trichlota	0.3909	0.3867	1.07	125	0.00
41	S	SURRDibrflma	0.2507	0.2562	-2.19	131	0.00
42	PT	Cyclohexane	0.6376	0.6411	-0.55	118	0.00
43	PT	Carbtetraclo	0.3088	0.3074	0.45	126	0.00
44	T	11dicloprope	0.1219	0.1204	1.23	114	0.00
45	S	SURR12DCAd4	0.0672	0.0685	-1.93	125	0.00
46	PT	Benzene	1.0227	1.0243	-0.16	119	0.00
47	PT	12dichlorota	0.4433	0.4221	4.78	123	0.00
48	T	TAME	0.7285	0.7241	0.60	124	0.00

49	PT	trichloroete	0.2547	0.2397	5.89	115	0.00
50	PT	methylcyclohexane	0.4408	0.4213	4.42	117	0.00
51	PT	12dicloropra	0.3554	0.3527	0.76	120	0.00
52	T	23Dicl1propene	0.3996	0.4088	-2.30	124	0.00
53	T	Dibromometha	0.1717	0.1592	7.28	121	0.00
54	T	methylmethacrylate	0.2756	0.2888	-4.79	132	0.00
55	T	14dioxane	0.0045	0.0047#	-4.44	142	0.00
56	PT	Bromodiclrma	0.3210	0.3188	0.69	122	0.00
57	T	2Nitropropane	0.1863	0.2004	-7.57	131	0.00
58	T	2CLEVE	0.0257	0.0139#	45.91#	67	0.00
59	PT	c13dicloproe	0.4438	0.4147	6.56	121	0.00
60	PT	4Meth2Pentan	0.5504	0.5493	0.20	119	0.00
61	S	SURRd8Tolule	1.0132	1.0053	0.78	123	0.00
62	PT	Toluene	0.6308	0.6364	-0.89	123	0.00
63	PT	t13Dicloprop	0.3927	0.3801	3.21	125	0.00
64	T	ethylmethacrylate	0.4041	0.4114	-1.81	128	0.00
65	PT	112Triclotha	0.2146	0.2017	6.01	123	0.00
66	PT	Tetrachlorte	0.2541	0.2409	5.19	112	0.00
67	T	13Diclorpropa	0.4416	0.4354	1.40	120	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	120	0.00
69	PT	2Hexanone	0.6333	0.6430	-1.53	120	0.00
70	PT	Clorodibrmta	0.3280	0.3106	5.30	129	0.00
71	PT	12Dibrometha	0.3565	0.3423	3.98	122	0.00
72	PT	Chlorobenzen	0.9231	0.8773	4.96	118	0.00
73	T	1Clhexane	0.4979	0.4962	0.34	124	0.00
74	T	1112Tetclota	0.3138	0.2951	5.96	122	0.00
75	PT	Ethylbenzene	1.5869	1.6039	-1.07	120	0.00
76	PT	m p-Xylene	0.6124	0.6046	1.27	118	0.00
77	PT	o-Xylene	0.5913	0.5778	2.28	119	0.00
78	PT	Styrene	0.9495	0.9284	2.22	122	0.00
79	PT	Bromoform	0.2501	0.2284	8.68	110	0.00
80	PT	Isopropylben	1.4325	1.4719	-2.75	122	0.00
81	T	cyclohexanone	0.0362	0.0428	-18.23	148	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	127	0.00
83	S	SURR4BrFBenz	0.9222	0.9404	-1.97	124	0.00
84	T	Bromobenzene	0.6964	0.6915	0.70	124	0.00
85	PT	1122Tetrclta	1.1253	1.0886	3.26	122	0.00
86	T	123Triclproa	1.4022	1.3717	2.18	120	0.00
87	T	14dichloro2butene	0.4121	0.3883	5.78	124	0.01
88	T	n-Propylbenz	3.2694	3.3600	-2.77	117	0.00
89	T	2chlorotolue	1.9982	1.9787	0.98	121	0.00
90	T	4chlorotolue	2.2133	2.2527	-1.78	121	0.00
91	T	135Trimebenz	2.2226	2.2069	0.71	117	0.00
92	T	tbutylbenzen	1.8354	1.8819	-2.53	118	0.00
93	T	124Trimetben	2.2584	2.2909	-1.44	118	0.00
94	T	sbutylbenzen	2.7323	2.8477	-4.22	121	0.00
95	PT	13Diclorbenz	1.1623	1.1457	1.43	118	0.00
96	T	pIsopropylto	2.2606	2.2143	2.05	115	0.00
97	PT	14dichlorobe	1.2021	1.1881	1.16	120	0.00
98	PT	12dichlorobe	1.1259	1.1200	0.52	126	0.00
99	T	nButylbenzen	2.2118	2.1049	4.83	111	0.00
100	PT	12dibromo3cl	0.2489	0.2466	0.92	126	0.00
101	T	135Trichlorobenzene	0.7928	0.7806	1.54	116	0.00
102	PT	124Trichlobe	0.7254	0.6735	7.15	118	0.00
103	T	Hexachlorobu	0.3256	0.3075	5.56	115	0.00
104	T	Naphthalene	2.1515	2.2733	-5.66	127	0.00
105	T	123Trichlben	0.6246	0.6336	-1.44	129	0.00

(#) = Out of Range SPCC's out = 1 CCC's out = 0

W110816.M Mon Nov 21 15:36:57 2016

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\NOV0816\ICV1.D Vial: 13
Acq On : 8 Nov 2016 21:33 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 08:21:11 2016

Quant Method : C:\INSTARCH\METHODS\W110816.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110816.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	124	0.00
2	PT	Dichlorodi	10.0000	10.6006	-6.01	122	0.00
3	PT	Chloromethan	10.0000	10.6007	-6.01	131	0.00
4	PT	VinylChlorid	10.0000	10.3453	-3.45	125	0.00
5	PT	Bromomethane	10.0000	11.8849	-18.85	158	0.00
6	PT	Chloroethane	10.0000	10.3332	-3.33	133	0.00
7	T	Dichloroflmethane	10.0000	10.3701	-3.70	133	0.00
8	PT	Trichlorofma	10.0000	10.1984	-1.98	123	0.00
9	T	Ethylether	10.0000	10.0406	-0.41	130	0.00
10	T	dichlorotfluoroethan	10.0000	9.5376	4.62	115	0.00
11	T	propyleneoxide	100.0000	104.7622	-4.76	126	0.00
12	T	Acrolein	50.0000	53.3612	-6.72	139	0.00
13	PT	11dichlorthe	10.0000	9.2372	7.63	115	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.5627	-2.81	124	0.00
15	PT	Acetone	100.0000	104.1073	-4.11	129	0.00
16	T	Iodomethane	20.0000	23.3792	-16.90	229	0.01
17	PT	Carbon Dislf	20.0000	19.5619	2.19	122	0.00
18	T	allylchloride	20.0000	20.2528	-1.26	119	0.00
19	PT	methylacetate	10.0000	11.0798	-10.80	146	0.00
20	PT	Methylchlorid	10.0000	9.1257	8.74	115	0.00
21	T	tbutylalcohol	500.0000	560.2775	-12.06	134	0.00
22	T	Acrylonitrile	50.0000	52.4239	-4.85	128	0.00
23	PT	t12dichlorte	10.0000	10.2851	-2.85	128	0.00
24	PT	MtBE	10.0000	10.0222	-0.22	129	0.00
25	T	Hexane	20.0000	20.4256	-2.13	117	0.00
26	PT	11dichlorota	10.0000	9.8281	1.72	123	0.00
27	T	Vinylacetate	100.0000	99.3664	0.63	131	0.00
28	T	chloroprene	20.0000	21.5644	-7.82	124	0.00
29	T	Diisopether	10.0000	9.4472	5.53	113	0.00
30	T	ETBE	10.0000	10.1316	-1.32	126	0.00
31	T	22dichloropr	10.0000	9.6204	3.80	119	0.01
32	PT	c12dichlorte	10.0000	9.4295	5.70	121	0.00
33	PT	2Butanone	100.0000	97.4839	2.52	126	0.00
34	T	propionitrile	100.0000	104.8261	-4.83	134	0.00
35	T	Ethylacetate	50.0000	51.9864	-3.97	149	0.00
36	T	methacrylonitrile	20.0000	19.4267	2.87	120	-0.01
37	T	Bromochlorma	10.0000	9.5592	4.41	118	0.00
38	T	Tetrahydofur	100.0000	100.9354	-0.94	127	0.00
39	PT	Chloroform	10.0000	9.8931	1.07	122	0.00
40	PT	111trichlota	10.0000	9.8928	1.07	125	0.00
41	S	SURRDibrflma	20.0000	20.4402	-2.20	131	0.00
42	PT	Cyclohexane	10.0000	10.0560	-0.56	118	0.00
43	PT	Carbtetraclo	10.0000	9.9532	0.47	126	0.00
44	T	11dicloprope	10.0000	9.8794	1.21	114	0.00
45	S	SURR12DCAd4	20.0000	20.3886	-1.94	125	0.00
46	PT	Benzene	10.0000	10.0153	-0.15	119	0.00
47	PT	12dichlorota	10.0000	9.5225	4.77	123	0.00
48	T	TAME	10.0000	9.9399	0.60	124	0.00

49	PT	trichloroete	10.0000	9.4111	5.89	115	0.00
50	PT	methylcyclohexane	10.0000	9.5569	4.43	117	0.00
51	PT	12dicloropra	10.0000	9.9238	0.76	120	0.00
52	T	23Dicl1propene	10.0000	10.2304	-2.30	124	0.00
53	T	Dibromometha	10.0000	9.2721	7.28	121	0.00
54	T	methylmethacrylate	10.0000	10.4808	-4.81	132	0.00
55	T	14dioxane	500.0000	519.6386	-3.93	142	0.00
56	PT	Bromodiclrma	10.0000	9.9310	0.69	122	0.00
57	T	2Nitropropane	100.0000	100.2198	-0.22	131	0.00
58	T	2CLEVE	50.0000	26.1083	47.78#	67	0.00
59	PT	c13dicloproe	10.0000	9.3441	6.56	121	0.00
60	PT	4Meth2Pentan	100.0000	96.8500	3.15	119	0.00
61	S	SURRd8Tolule	20.0000	19.8443	0.78	123	0.00
62	PT	Toluene	10.0000	10.0878	-0.88	123	0.00
63	PT	t13Dicloprop	10.0000	9.6799	3.20	125	0.00
64	T	ethylmethacrylate	20.0000	20.3587	-1.79	128	0.00
65	PT	112Triclotha	10.0000	9.3985	6.01	123	0.00
66	PT	Tetrachlorte	10.0000	9.4772	5.23	112	0.00
67	T	13Diclorpropa	10.0000	9.8606	1.39	120	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	120	0.00
69	PT	2Hexanone	100.0000	98.1399	1.86	120	0.00
70	PT	Clorodibrmta	10.0000	9.4688	5.31	129	0.00
71	PT	12Dibrometha	10.0000	9.6018	3.98	122	0.00
72	PT	Chlorobenzen	10.0000	9.5044	4.96	118	0.00
73	T	1Clhexane	10.0000	9.9661	0.34	124	0.00
74	T	1112Tetclota	10.0000	9.4048	5.95	122	0.00
75	PT	Ethylbenzene	10.0000	10.1067	-1.07	120	0.00
76	PT	m p-Xylene	20.0000	19.7437	1.28	118	0.00
77	PT	o-Xylene	10.0000	9.7723	2.28	119	0.00
78	PT	Styrene	10.0000	9.7776	2.22	122	0.00
79	PT	Bromoform	10.0000	9.1318	8.68	110	0.00
80	PT	Isopropylben	10.0000	10.2749	-2.75	122	0.00
81	T	cyclohexanone	200.0000	236.6104	-18.31	148	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	127	0.00
83	S	SURR4BrFBenz	20.0000	20.3948	-1.97	124	0.00
84	T	Bromobenzene	10.0000	9.9297	0.70	124	0.00
85	PT	1122Tetrclta	10.0000	9.6734	3.27	122	0.00
86	T	123Triclproa	10.0000	9.7831	2.17	120	0.00
87	T	14dichloro2butene	10.0000	9.4234	5.77	124	0.01
88	T	n-Propylbenz	10.0000	10.2770	-2.77	117	0.00
89	T	2chlorotolue	10.0000	9.9021	0.98	121	0.00
90	T	4chlorotolue	10.0000	10.1779	-1.78	121	0.00
91	T	135Trimebenz	10.0000	9.9292	0.71	117	0.00
92	T	tbutylbenzen	10.0000	10.2535	-2.54	118	0.00
93	T	124Trimetben	10.0000	10.1437	-1.44	118	0.00
94	T	sbutylbenzen	10.0000	10.4222	-4.22	121	0.00
95	PT	13Diclorbenz	10.0000	9.8571	1.43	118	0.00
96	T	pIsopropylto	10.0000	9.7952	2.05	115	0.00
97	PT	14dichlorobe	10.0000	9.8830	1.17	120	0.00
98	PT	12dichlorobe	10.0000	9.9470	0.53	126	0.00
99	T	nButylbenzen	10.0000	9.5168	4.83	111	0.00
100	PT	12dibromo3cl	10.0000	9.9078	0.92	126	0.00
101	T	135Trichlorobenzene	10.0000	9.8462	1.54	116	0.00
102	PT	124Trichlobe	10.0000	9.2845	7.16	118	0.00
103	T	Hexachlorobu	10.0000	9.4436	5.56	115	0.00
104	T	Naphthalene	10.0000	10.5660	-5.66	127	0.00
105	T	123Trichlben	10.0000	10.1430	-1.43	129	0.00

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

W110816.M Mon Nov 21 15:36:44 2016

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICV1.D Vial: 13
Acq On : 8 Nov 2016 21:33 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:21:11 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:07 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1668832	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1199527	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	630223	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	427560	20.440	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 102	%		
45) SURR12DCAd4	7.08	102	114387	20.389	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 102	%		
61) SURRd8Tolule	9.51	98	1677633	19.844	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 99	%		
83) SURR4BrFBenz	13.04	95	592646	20.395	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 102	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	259873	10.6006	ug/L	99
3) Chloromethan	2.00	50	471611	10.6007	ug/L	94
4) VinylChlorid	2.15	62	386830	10.3453	ug/L	97
5) Bromomethane	2.57	94	115790	11.8849	ug/L	93
6) Chloroethane	2.74	64	228508	10.3332	ug/L	92
7) Dichloroflmethane	3.05	67	415386	10.3701	ug/L	98
8) Trichlorofma	3.13	101	280863	10.1984	ug/L	96
9) Ethylether	3.55	59	244151	10.0406	ug/L	97
10) dichlorotfluoroethan	3.56	67	236173	9.5376	ug/L	98
11) propyleneoxide	3.89	58	593162	104.7622	ug/L	96
12) Acrolein	3.68	56	594634	53.3612	ug/L	96
13) 11dichlorthe	3.83	96	177756	9.2372	ug/L	89
14) Trichlorotfluoroeth	3.88	101	350703	20.5627	ug/L	97
15) Acetone	3.89	43	1833686	104.1073	ug/L	99
16) Iodomethane	4.01	142	223357	23.3792	ug/L	96
17) Carbon Dislf	4.09	76	1038463	19.5619	ug/L	99
18) allylchloride	4.31	41	824542	20.2528	ug/L	97
19) methylacetate	4.36	74	149957	11.0798	ug/L	99
20) Methylchlorid	4.47	84	197251	9.1257	ug/L	98
21) tbutylalcohol	4.65	59	4163218	560.2775	ug/L	99
22) Acrylonitrile	4.75	53	1015558	52.4239	ug/L	99
23) t12dichlorte	4.84	96	196175	10.2851	ug/L	90
24) MtBE	4.87	73	610421	10.0222	ug/L	97
25) Hexane	5.23	57	841679	20.4256	ug/L	98
26) 11dichlorota	5.35	63	461430	9.8281	ug/L	100
27) Vinylacetate	5.44	43	5673185	99.3664	ug/L	98
28) chloroprene	5.48	53	988846	21.5644	ug/L	100
29) Diisopether	5.51	45	949523	9.4472	ug/L	94
30) ETBE	5.96	59	820042	10.1316	ug/L	99
31) 22dichloropr	6.09	77	299082	9.6204	ug/L	99
32) c12dichlorte	6.08	96	227948	9.4295	ug/L	97
33) 2Butanone	6.09	72	562933	97.4839	ug/L	97
34) propionitrile	6.13	54	930464	104.8261	ug/L	99
35) Ethylacetate	6.21	88	76688	51.9864	ug/L #	73
36) methacrylonitrile	6.33	67	306986	19.4267	ug/L	92
37) Bromochlorma	6.36	128	89947	9.5592	ug/L	96
38) Tetrahydofur	6.44	42	2008781	100.9354	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICV1.D Vial: 13
Acq On : 8 Nov 2016 21:33 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:21:11 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:07 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Chloroform	6.47	83	363116	9.8931	ug/L	100
40) 111trichlota	6.72	97	322665	9.8928	ug/L	98
42) Cyclohexane	6.81	56	534965	10.0560	ug/L	99
43) Carbtetraclo	6.94	119	256493	9.9532	ug/L	94
44) 11dicloprope	6.92	110	100485	9.8794	ug/L	96
46) Benzene	7.17	78	854687	10.0153	ug/L	99
47) 12dichlorota	7.16	62	352217	9.5225	ug/L	98
48) TAME	7.34	73	604204	9.9399	ug/L	98
49) trichloroete	7.97	95	199975	9.4111	ug/L	96
50) methylcyclohexane	8.24	83	351527	9.5569	ug/L	96
51) 12dicloropra	8.22	63	294312	9.9238	ug/L	92
52) 23Dicl1propene	8.29	75	341090	10.2304	ug/L	98
53) Dibromometha	8.36	93	132814	9.2721	ug/L	96
54) methylmethacrylate	8.40	69	241020	10.4808	ug/L	97
55) 14dioxane	8.41	88	196808	519.6386	ug/L	97
56) Bromodiclrma	8.57	83	266008	9.9310	ug/L	97
57) 2Nitropropane	8.82	43	1671772	100.2198	ug/L	99
58) 2CLEVE	8.96	63	57911	26.1083	ug/L	94
59) c13dicloproe	9.14	75	346012	9.3441	ug/L	99
60) 4Meth2Pentan	9.34	43	4583399	96.8500	ug/L	97
62) Toluene	9.59	92	530989	10.0878	ug/L	98
63) t13Dicloprop	9.86	75	317147	9.6799	ug/L	97
64) ethylmethacrylate	10.01	69	686518	20.3587	ug/L	98
65) 112Triclotha	10.09	83	168314	9.3985	ug/L	97
66) Tetrachlorte	10.33	166	200977	9.4772	ug/L	97
67) 13Diclorpropa	10.31	76	363345	9.8606	ug/L	97
69) 2Hexanone	10.43	43	3856570	98.1399	ug/L	97
70) Clorodibrmta	10.60	129	186289	9.4688	ug/L	92
71) 12Dibrometha	10.76	107	205281	9.6018	ug/L	100
72) Chlorobenzen	11.45	112	526188	9.5044	ug/L	97
73) 1Clhexane	11.43	91	297598	9.9661	ug/L	98
74) 1112Tetclota	11.56	131	177012	9.4048	ug/L	98
75) Ethylbenzene	11.61	91	961940	10.1067	ug/L	100
76) m p-Xylene	11.77	106	725209	19.7437	ug/L	97
77) o-Xylene	12.33	106	346545	9.7723	ug/L	96
78) Styrene	12.33	104	556795	9.7776	ug/L	98
79) Bromoform	12.56	173	136957	9.1318	ug/L	89
80) Isopropylben	12.85	105	882790	10.2749	ug/L	99
81) cyclohexanone	12.92	55	513808	236.6104	ug/L	97
84) Bromobenzene	13.25	156	217903	9.9297	ug/L	92
85) 1122Tetrclta	13.23	83	343019	9.6734	ug/L	100
86) 123Triclproa	13.27	75	432254	9.7831	ug/L	99
87) 14dichloro2butene	13.32	53	122369	9.4234	ug/L	97
88) n-Propylbenz	13.43	91	1058774	10.2770	ug/L	99
89) 2chlorotolue	13.54	91	623504	9.9021	ug/L	99
90) 4chlorotolue	13.69	91	709837	10.1779	ug/L	99
91) 135Trimebenz	13.69	105	695418	9.9292	ug/L	97
92) tbutylbenzen	14.15	119	593012	10.2535	ug/L	99
93) 124Trimetben	14.22	105	721884	10.1437	ug/L	99
94) sbutylbenzen	14.47	105	897333	10.4222	ug/L	100
95) 13Diclorbenz	14.61	146	361017	9.8571	ug/L	97
96) pIsopropylto	14.69	119	697744	9.7952	ug/L	97
97) 14dichlorobe	14.73	146	374374	9.8830	ug/L	99
98) 12dichlorobe	15.26	146	352912	9.9470	ug/L	93
99) nButylbenzen	15.28	91	663287	9.5168	ug/L	99
100) 12dibromo3cl	16.36	157	77718	9.9078	ug/L	93
101) 135Trichlorobenzene	16.71	180	245965	9.8462	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICV1.D Vial: 13
Acq On : 8 Nov 2016 21:33 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:21:11 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:07 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	212224	9.2845	ug/L	96
103) Hexachlorobu	17.78	225	96900	9.4436	ug/L	96
104) Naphthalene	17.82	128	716337	10.5660	ug/L	99
105) 123Trichlben	18.14	180	199641	10.1430	ug/L	95

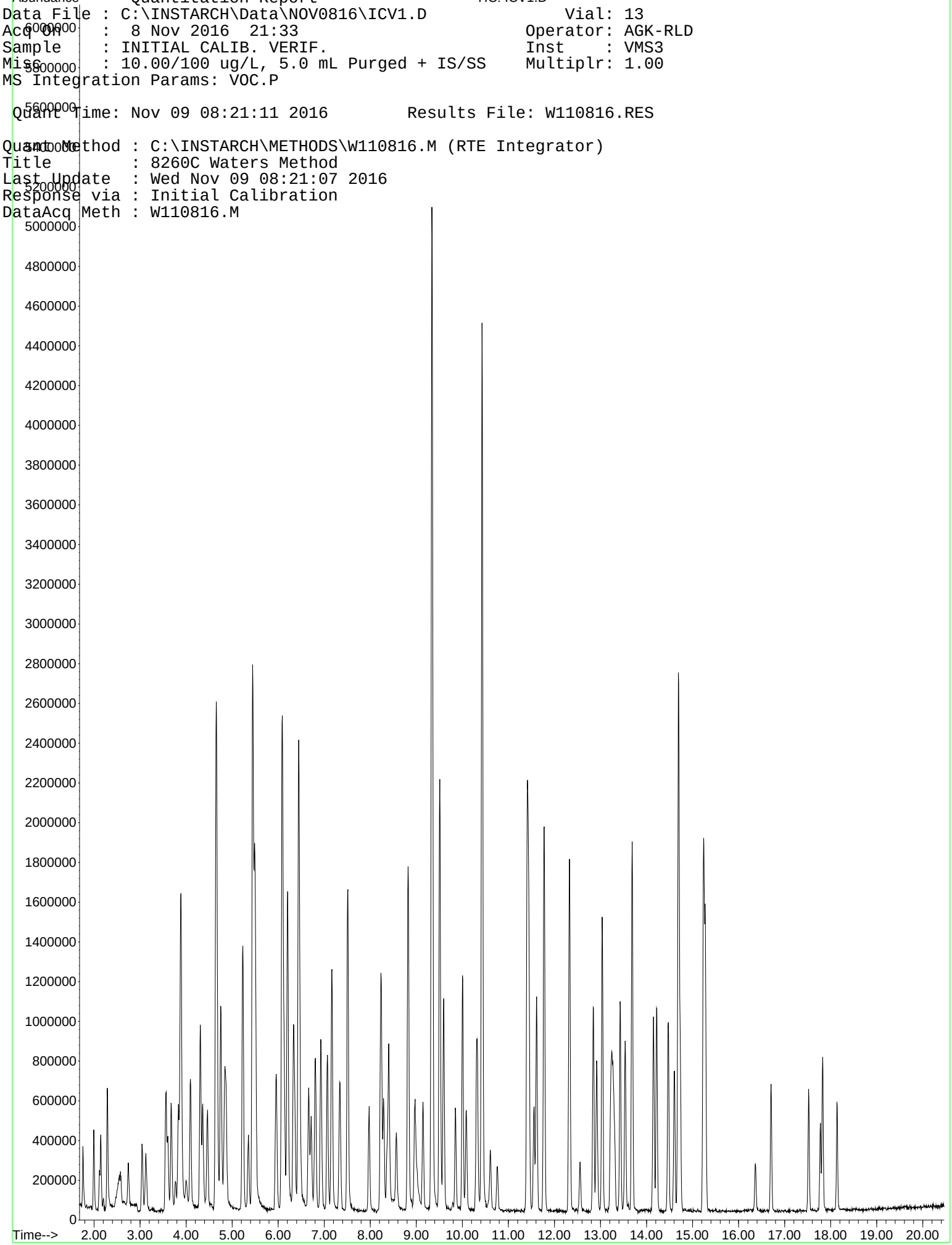
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: ICV1.D

Data File : C:\INSTARCH\Data\NOV0816\ICV1.D Vial: 13
Acq On : 8 Nov 2016 21:33 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:21:11 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:07 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\NOV0816\ICV2.D Vial: 14
Acq On : 8 Nov 2016 22:03 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 09 08:22:10 2016

Quant Method : C:\INSTARCH\METHODS\W110816.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110816.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	116	0.00
2	PT	Dichlorodi	30.0000	31.3882	-4.63	121	0.00
3	PT	Chloromethan	30.0000	27.6941	7.69	105	0.00
4	PT	VinylChlorid	30.0000	30.4528	-1.51	117	0.00
5	PT	Bromomethane	30.0000	34.8468	-16.16	142	0.00
6	PT	Chloroethane	30.0000	28.8658	3.78	117	0.00
7	T	Dichloroflmethane	30.0000	29.2444	2.52	118	0.00
8	PT	Trichlorofma	30.0000	30.4786	-1.60	118	0.00
9	T	Ethylether	30.0000	29.4826	1.72	119	0.00
10	T	dichlorotfluoroethan	30.0000	28.6133	4.62	112	0.00
11	T	propyleneoxide	300.0000	297.1293	0.96	128	0.00
12	T	Acrolein	150.0000	154.4765	-2.98	125	0.00
13	PT	11dichlorthe	30.0000	27.9654	6.78	110	0.00
14	PT	Trichlorotfluoroeth	60.0000	61.3027	-2.17	115	0.00
15	PT	Acetone	300.0000	304.1580	-1.39	121	0.00
16	T	Iodomethane	60.0000	70.1947	-16.99	140	0.00
17	PT	Carbon Dislf	60.0000	53.6185	10.64	111	0.00
18	T	allylchloride	60.0000	57.6386	3.94	111	0.00
19	PT	methylacetate	30.0000	30.6825	-2.28	126	0.00
20	PT	Methylchlorid	30.0000	28.2547	5.82	118	0.00
21	T	tbutylalcohol	1500.0000	1590.5229	-6.03	126	0.00
22	T	Acrylonitrile	150.0000	147.1127	1.92	122	0.00
23	PT	t12dichlorte	30.0000	29.6761	1.08	115	0.00
24	PT	MtBE	30.0000	29.9675	0.11	118	0.00
25	T	Hexane	60.0000	59.2130	1.31	114	0.00
26	PT	11dichlorota	30.0000	28.7553	4.15	111	0.00
27	T	Vinylacetate	300.0000	257.2443	14.25	108	0.00
28	T	chloroprene	60.0000	60.7236	-1.21	114	0.00
29	T	Diisopether	30.0000	26.7184	10.94	110	0.00
30	T	ETBE	30.0000	29.1629	2.79	115	0.00
31	T	22dichloropr	30.0000	28.9103	3.63	108	0.00
32	PT	c12dichlorte	30.0000	27.9563	6.81	116	0.00
33	PT	2Butanone	300.0000	293.4611	2.18	126	0.00
34	T	propionitrile	300.0000	305.7024	-1.90	127	0.00
35	T	Ethylacetate	150.0000	154.2332	-2.82	125	0.00
36	T	methacrylonitrile	60.0000	60.1989	-0.33	121	0.00
37	T	Bromochlorma	30.0000	28.1619	6.13	112	0.00
38	T	Tetrahydofur	300.0000	268.9127	10.36	120	0.00
39	PT	Chloroform	30.0000	29.3612	2.13	117	0.00
40	PT	111trichlota	30.0000	30.0572	-0.19	115	0.00
41	S	SURRDibrflma	20.0000	20.5356	-2.68	116	0.00
42	PT	Cyclohexane	30.0000	31.2168	-4.06	118	0.00
43	PT	Carbtetraclo	30.0000	30.6956	-2.32	115	0.00
44	T	11dicloprope	30.0000	30.0503	-0.17	118	0.00
45	S	SURR12DCAd4	20.0000	20.5315	-2.66	119	0.00
46	PT	Benzene	30.0000	28.2546	5.82	112	0.00
47	PT	12dichlorota	30.0000	28.2112	5.96	115	0.00
48	T	TAME	30.0000	28.8329	3.89	112	0.00

49	PT	trichloroete	30.0000	30.2460	-0.82	117	0.00	
50	PT	methylcyclohexane	30.0000	30.0131	-0.04	117	0.00	
51	PT	12dicloropra	30.0000	28.9413	3.53	112	0.00	
52	T	23Dicl1propene	30.0000	30.0281	-0.09	118	0.00	
53	T	Dibromometha	30.0000	29.3057	2.31	119	0.00	
54	T	methylmethacrylate	30.0000	30.8320	-2.77	120	0.00	
55	T	14dioxane	1500.0000	1742.7577	-16.18	157	0.00	
56	PT	Bromodiclrma	30.0000	30.4369	-1.46	116	0.00	
57	T	2Nitropropane	300.0000	301.4363	-0.48	119	0.00	
58	T	2CLEVE	150.0000	51.9864	65.34#	39	0.00	
59	PT	c13dicloproe	30.0000	29.1209	2.93	113	0.00	
60	PT	4Meth2Pentan	300.0000	256.6174	14.46	109	0.00	
61	S	SURRd8Tolule	20.0000	20.6394	-3.20	119	0.00	
62	PT	Toluene	30.0000	29.5533	1.49	116	0.00	
63	PT	t13Dicloprop	30.0000	29.2221	2.59	114	0.00	
64	T	ethylmethacrylate	60.0000	60.4095	-0.68	116	0.00	
65	PT	112Triclotha	30.0000	28.5844	4.72	114	0.00	
66	PT	Tetrachlorte	30.0000	29.8868	0.38	117	0.00	
67	T	13Diclorpropa	30.0000	29.7144	0.95	116	0.00	
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	117	0.00	
69	PT	2Hexanone	300.0000	258.2226	13.93	110	0.00	
70	PT	Clorodibrmta	30.0000	30.9471	-3.16	117	0.00	
71	PT	12Dibrometha	30.0000	28.4749	5.08	113	0.00	
72	PT	Chlorobenzen	30.0000	27.9784	6.74	112	0.00	
73	T	1Clhexane	30.0000	29.9604	0.13	118	0.00	
74	T	1112Tetclota	30.0000	28.6737	4.42	110	0.00	
75	PT	Ethylbenzene	30.0000	28.5483	4.84	114	0.00	
76	PT	m p-Xylene	60.0000	57.3718	4.38	113	0.00	
77	PT	o-Xylene	30.0000	29.3984	2.01	114	0.00	
78	PT	Styrene	30.0000	29.7996	0.67	112	0.00	
79	PT	Bromoform	30.0000	29.5300	1.57	112	0.00	
80	PT	Isopropylben	30.0000	29.3444	2.19	113	0.00	
81	T	cyclohexanone	600.0000	641.4938	-6.92	132	0.00	
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	116	0.00	
83	S	SURR4BrFBenz	20.0000	19.9549	0.23	119	0.00	
84	T	Bromobenzene	30.0000	28.7259	4.25	115	0.00	
85	PT	1122Tetrclta	30.0000	26.7689	10.77	110	0.00	
86	T	123Triclproa	30.0000	28.8744	3.75	115	0.00	
87	T	14dichloro2butene	30.0000	29.3294	2.24	120	0.00	
88	T	n-Propylbenz	30.0000	27.4576	8.47	109	0.00	
89	T	2chlorotolue	30.0000	27.7343	7.55	114	0.00	
90	T	4chlorotolue	30.0000	28.1651	6.12	111	0.00	
91	T	135Trimebenz	30.0000	28.8655	3.78	112	0.00	
92	T	tbutylbenzen	30.0000	29.9599	0.13	113	0.00	
93	T	124Trimetben	30.0000	28.0547	6.48	112	0.00	
94	T	sbutylbenzen	30.0000	28.4924	5.03	111	0.00	
95	PT	13Diclorbenz	30.0000	28.1570	6.14	109	0.00	
96	T	pIsopropylto	30.0000	28.5543	4.82	110	0.00	
97	PT	14dichlorobe	30.0000	27.5028	8.32	110	0.00	
98	PT	12dichlorobe	30.0000	27.7841	7.39	110	0.00	
99	T	nButylbenzen	30.0000	27.3680	8.77	109	0.00	
100	PT	12dibromo3cl	30.0000	31.1530	-3.84	120	0.01	
101	T	135Trichlorobenzene	30.0000	27.8677	7.11	112	0.00	
102	PT	124Trichlobe	30.0000	27.0538	9.82	108	0.00	
103	T	Hexachlorobu	30.0000	29.0194	3.27	110	0.00	
104	T	Naphthalene	30.0000	29.1449	2.85	114	0.00	
105	T	123Trichlben	30.0000	28.9506	3.50	113	0.00	

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

W110816.M Mon Nov 21 15:37:29 2016

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICV2.D Vial: 14
Acq On : 8 Nov 2016 22:03 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:10 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1653598	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1221354	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	671526	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	425634	20.536	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 103	%		
45) SURR12DCAd4	7.07	102	114137	20.531	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 103	%		
61) SURRd8Tolule	9.51	98	1728917	20.639	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 103	%		
83) SURR4BrFBenz	13.04	95	617867	19.955	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 100	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	762455	31.3882	ug/L	99
3) Chloromethan	2.00	50	1151374	27.6941	ug/L	100
4) VinylChlorid	2.15	62	1128294	30.4528	ug/L	97
5) Bromomethane	2.57	94	336400	34.8468	ug/L	94
6) Chloroethane	2.74	64	632510	28.8658	ug/L	97
7) Dichloroflmethane	3.05	67	1160725	29.2444	ug/L	97
8) Trichlorofma	3.13	101	831714	30.4786	ug/L	95
9) Ethylether	3.55	59	710367	29.4826	ug/L	97
10) dichlorotfluoroethan	3.56	67	702061	28.6133	ug/L	98
11) propyleneoxide	3.89	58	1666984	297.1293	ug/L #	88
12) Acrolein	3.67	56	1705705	154.4765	ug/L	98
13) 11dichlorthe	3.83	96	533236	27.9654	ug/L	96
14) Trichlorotfluoroeth	3.88	101	1035992	61.3027	ug/L	98
15) Acetone	3.89	43	4635921	304.1580	ug/L	95
16) Iodomethane	4.00	142	791824	70.1947	ug/L	98
17) Carbon Dislf	4.09	76	2820412	53.6185	ug/L	97
18) allylchloride	4.31	41	2325194	57.6386	ug/L	98
19) methylacetate	4.36	74	411474	30.6825	ug/L	99
20) Methylchlorid	4.46	84	605148	28.2547	ug/L	92
21) tbutylalcohol	4.66	59	9554918	1590.5229	ug/L	90
22) Acrylonitrile	4.75	53	2823857	147.1127	ug/L	98
23) t12dichlorte	4.83	96	560867	29.6761	ug/L	95
24) MtBE	4.87	73	1808571	29.9675	ug/L	98
25) Hexane	5.23	57	2417718	59.2130	ug/L	97
26) 11dichlorota	5.35	63	1337739	28.7553	ug/L	99
27) Vinylacetate	5.44	43	11309958	257.2443	ug/L	88
28) chloroprene	5.48	53	2759097	60.7236	ug/L	97
29) Diisopether	5.51	45	2660902	26.7184	ug/L	93
30) ETBE	5.96	59	2338876	29.1629	ug/L	96
31) 22dichloropr	6.08	77	890570	28.9103	ug/L	97
32) c12dichlorte	6.08	96	669642	27.9563	ug/L	97
33) 2Butanone	6.09	72	1679159	293.4611	ug/L	96
34) propionitrile	6.13	54	2688726	305.7024	ug/L	97
35) Ethylacetate	6.20	88	225441	154.2332	ug/L #	77
36) methacrylonitrile	6.33	67	942597	60.1989	ug/L	99
37) Bromochlorma	6.36	128	262569	28.1619	ug/L #	90
38) Tetrahydofur	6.44	42	5302951	268.9127	ug/L	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICV2.D Vial: 14
Acq On : 8 Nov 2016 22:03 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:10 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) Chloroform	6.47	83	1067835	29.3612	ug/L	99
40) 111trichlota	6.72	97	971398	30.0572	ug/L	99
42) Cyclohexane	6.81	56	1645532	31.2168	ug/L	99
43) Carbtetraclo	6.94	119	783797	30.6956	ug/L	100
44) 11dicloprope	6.93	110	302857	30.0503	ug/L	92
46) Benzene	7.17	78	2389175	28.2546	ug/L	96
47) 12dichlorota	7.16	62	1033947	28.2112	ug/L	100
48) TAME	7.34	73	1736619	28.8329	ug/L	99
49) trichloroete	7.98	95	636827	30.2460	ug/L	95
50) methylcyclohexane	8.24	83	1093877	30.0131	ug/L	99
51) 12dicloropra	8.22	63	850481	28.9413	ug/L	100
52) 23Dicl1propene	8.29	75	992025	30.0281	ug/L	94
53) Dibromometha	8.36	93	415942	29.3057	ug/L	97
54) methylmethacrylate	8.40	69	702549	30.8320	ug/L	98
55) 14dioxane	8.41	88	654027	1742.7577	ug/L	96
56) Bromodiclrma	8.57	83	807830	30.4369	ug/L	97
57) 2Nitropropane	8.82	43	4475705	301.4363	ug/L	98
58) 2CLEVE	8.96	63	136708	51.9864	ug/L	94
59) c13dicloproe	9.14	75	1068498	29.1209	ug/L	96
60) 4Meth2Pentan	9.34	43	9286789	256.6174	ug/L	78
62) Toluene	9.59	92	1541388	29.5533	ug/L	97
63) t13Dicloprop	9.85	75	948681	29.2221	ug/L	97
64) ethylmethacrylate	10.00	69	2018477	60.4095	ug/L	98
65) 112Triclotha	10.09	83	507235	28.5844	ug/L	95
66) Tetrachlorte	10.33	166	628005	29.8868	ug/L	95
67) 13Diclorpropa	10.31	76	1084923	29.7144	ug/L	96
69) 2Hexanone	10.43	43	8113943	258.2226	ug/L	81
70) Clorodibrmta	10.61	129	619929	30.9471	ug/L	89
71) 12Dibrometha	10.76	107	619858	28.4749	ug/L	97
72) Chlorobenzen	11.45	112	1577147	27.9784	ug/L	98
73) 1Clhexane	11.43	91	910922	29.9604	ug/L	92
74) 1112Tetclota	11.56	131	549501	28.6737	ug/L	96
75) Ethylbenzene	11.61	91	2766633	28.5483	ug/L	96
76) m p-Xylene	11.78	106	2145677	57.3718	ug/L	92
77) o-Xylene	12.32	106	1061496	29.3984	ug/L	97
78) Styrene	12.33	104	1727853	29.7996	ug/L	98
79) Bromoform	12.56	173	450946	29.5300	ug/L	91
80) Isopropylben	12.84	105	2567075	29.3444	ug/L	96
81) cyclohexanone	12.92	55	1418375	641.4938	ug/L	99
84) Bromobenzene	13.25	156	671692	28.7259	ug/L	91
85) 1122Tetrclta	13.22	83	1011436	26.7689	ug/L	93
86) 123Triclproa	13.27	75	1359391	28.8744	ug/L	99
87) 14dichloro2butene	13.30	53	405820	29.3294	ug/L	97
88) n-Propylbenz	13.43	91	3014183	27.4576	ug/L	94
89) 2chlorotolue	13.54	91	1860797	27.7343	ug/L	98
90) 4chlorotolue	13.69	91	2093044	28.1651	ug/L	97
91) 135Trimebenz	13.69	105	2154175	28.8655	ug/L	98
92) tbutylbenzen	14.15	119	1846298	29.9599	ug/L	99
93) 124Trimetben	14.22	105	2127391	28.0547	ug/L	95
94) sbutylbenzen	14.47	105	2613919	28.4924	ug/L	97
95) 13Diclorbenz	14.61	146	1098841	28.1570	ug/L	96
96) pIsopropylto	14.69	119	2167321	28.5543	ug/L	95
97) 14dichlorobe	14.73	146	1110096	27.5028	ug/L	98
98) 12dichlorobe	15.27	146	1050363	27.7841	ug/L	94
99) nButylbenzen	15.28	91	2032457	27.3680	ug/L	95
100) 12dibromo3cl	16.37	157	260384	31.1530	ug/L	90
101) 135Trichlorobenzene	16.71	180	741776	27.8677	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICV2.D Vial: 14
Acq On : 8 Nov 2016 22:03 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:10 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	658919	27.0538	ug/L	94
103) Hexachlorobu	17.78	225	317280	29.0194	ug/L	98
104) Naphthalene	17.82	128	2105415	29.1449	ug/L	100
105) 123Trichlben	18.14	180	607169	28.9506	ug/L	97

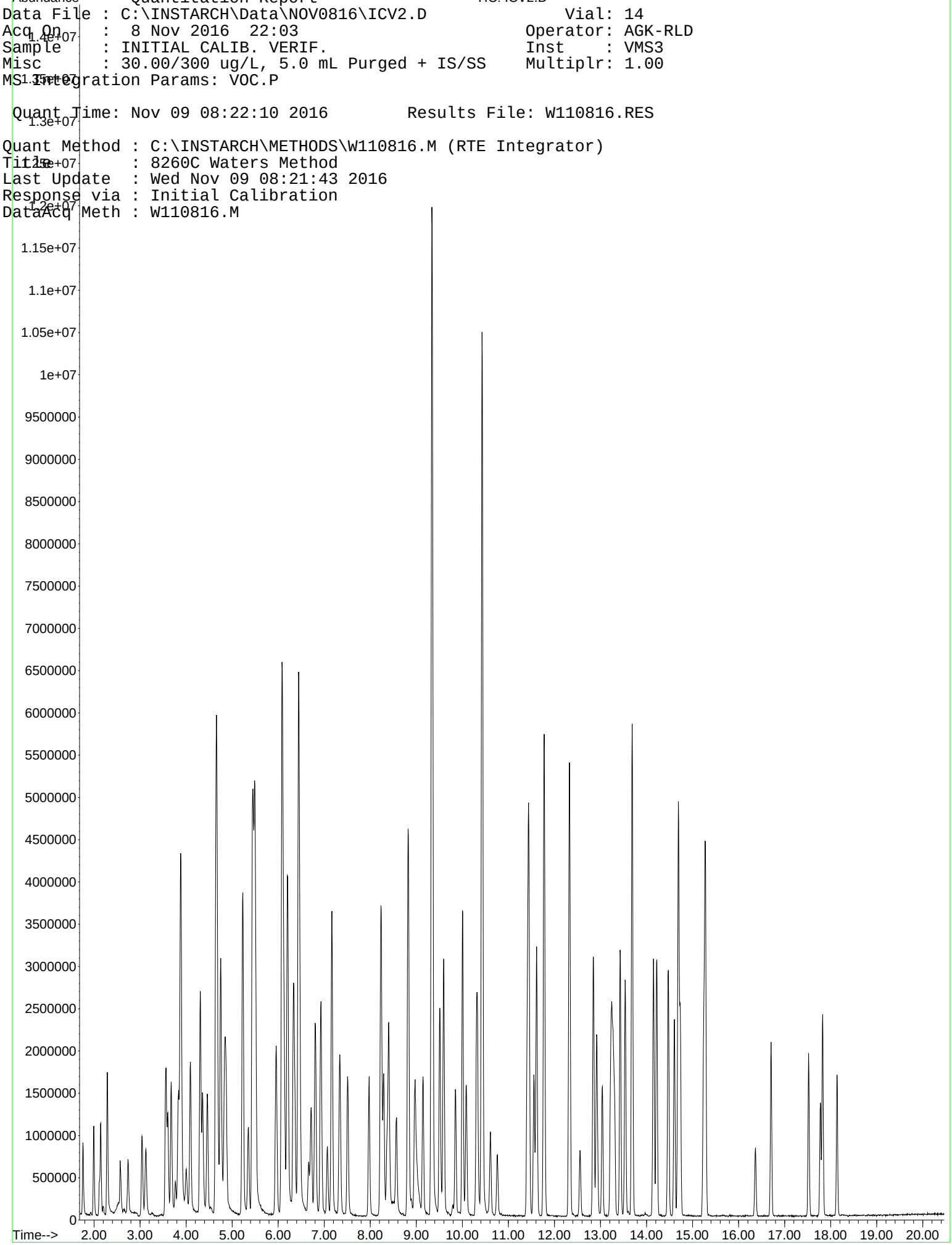
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: ICV2.D

Data File : C:\INSTARCH\Data\NOV0816\ICV2.D Vial: 14
Acq On : 8 Nov 2016 22:03 Operator: AGK-RLD
Sample : INITIAL CALIB. VERIF. Inst : VMS3
Misc : 30.00/300 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:10 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICB1.D Vial: 16
Acq On : 8 Nov 2016 23:03 Operator: AGK-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:46 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1505611	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1085898	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	525929	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	380541	20.165	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 101	%		
45) SURR12DCAd4	7.07	102	91808	18.138	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 91	%		
61) SURRd8Tolule	9.51	98	1479650	19.400	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 97	%		
83) SURR4BrFBenz	13.04	95	513456	21.174	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 106	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	1.99	50	11933	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	3.89	58	19153	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	3.89	43	54726	N.D.		
16) Iodomethane	4.01	142	7022	5.3009	ug/L #	41
17) Carbon Dislf	4.11	76	12583	N.D.		
18) allylchloride	0.00	41	0	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	0.00	84	0	N.D.		
21) tbutylalcohol	4.67	59	18827	Below Cal	#	50
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	5.46	43	4298	Below Cal	#	78
28) chloroprene	5.48	53	2542	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.47	42	9256	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICB1.D Vial: 16
Acq On : 8 Nov 2016 23:03 Operator: AGK-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:46 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39) Chloroform	0.00	83	0	N.D.	
40) 111trichlota	0.00	97	0	N.D.	
42) Cyclohexane	0.00	56	0	N.D.	
43) Carbtetraclo	0.00	119	0	N.D.	
44) 11dicloprope	0.00	110	0	N.D.	
46) Benzene	7.15	78	2961	N.D.	
47) 12dichlorota	0.00	62	0	N.D.	
48) TAME	0.00	73	0	N.D.	
49) trichloroete	0.00	95	0	N.D.	
50) methylcyclohexane	0.00	83	0	N.D.	
51) 12dicloropra	0.00	63	0	N.D.	
52) 23Dicl1propene	0.00	75	0	N.D.	
53) Dibromometha	0.00	93	0	N.D.	
54) methylmethacrylate	0.00	69	0	N.D.	
55) 14dioxane	8.42	88	10535	30.8314 ug/L #	61
56) Bromodiclrma	0.00	83	0	N.D.	
57) 2Nitropropane	8.84	43	3221	1.4007 ug/L #	17
58) 2CLEVE	0.00	63	0	N.D.	
59) c13dicloproe	0.00	75	0	N.D.	
60) 4Meth2Pentan	9.34	43	8703	Below Cal #	68
62) Toluene	9.62	92	2671	N.D.	
63) t13Dicloprop	0.00	75	0	N.D.	
64) ethylmethacrylate	0.00	69	0	N.D.	
65) 112Triclotha	0.00	83	0	N.D.	
66) Tetrachlorte	0.00	166	0	N.D.	
67) 13Diclorpropa	0.00	76	0	N.D.	
69) 2Hexanone	10.42	43	7794	Below Cal #	31
70) Clorodibrmta	0.00	129	0	N.D.	
71) 12Dibrometha	0.00	107	0	N.D.	
72) Chlorobenzen	11.44	112	2528	N.D.	
73) 1Clhexane	11.41	91	4303	N.D.	
74) 1112Tetclota	0.00	131	0	N.D.	
75) Ethylbenzene	0.00	91	0	N.D.	
76) m p-Xylene	0.00	106	0	N.D.	
77) o-Xylene	0.00	106	0	N.D.	
78) Styrene	0.00	104	0	N.D.	
79) Bromoform	0.00	173	0	N.D.	
80) Isopropylben	0.00	105	0	N.D.	
81) cyclohexanone	12.90	55	12731	N.D.	
84) Bromobenzene	0.00	156	0	N.D.	
85) 1122Tetrclta	0.00	83	0	N.D.	
86) 123Triclproa	0.00	75	0	N.D.	
87) 14dichloro2butene	0.00	53	0	N.D.	
88) n-Propylbenz	0.00	91	0	N.D.	
89) 2chlorotolue	0.00	91	0	N.D.	
90) 4chlorotolue	0.00	91	0	N.D.	
91) 135Trimebenz	0.00	105	0	N.D.	
92) tbutylbenzen	0.00	119	0	N.D.	
93) 124Trimetben	14.21	105	2844	N.D.	
94) sbutylbenzen	0.00	105	0	N.D.	
95) 13Diclorbenz	14.72	146	2781	N.D.	
96) pIsopropylto	0.00	119	0	N.D.	
97) 14dichlorobe	14.72	146	2781	N.D.	
98) 12dichlorobe	0.00	146	0	N.D.	
99) nButylbenzen	15.23	91	2614	N.D.	
100) 12dibromo3cl	0.00	157	0	N.D.	
101) 135Trichlorobenzene	0.00	180	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICB1.D Vial: 16
Acq On : 8 Nov 2016 23:03 Operator: AGK-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:46 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	17.82	128	7496	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

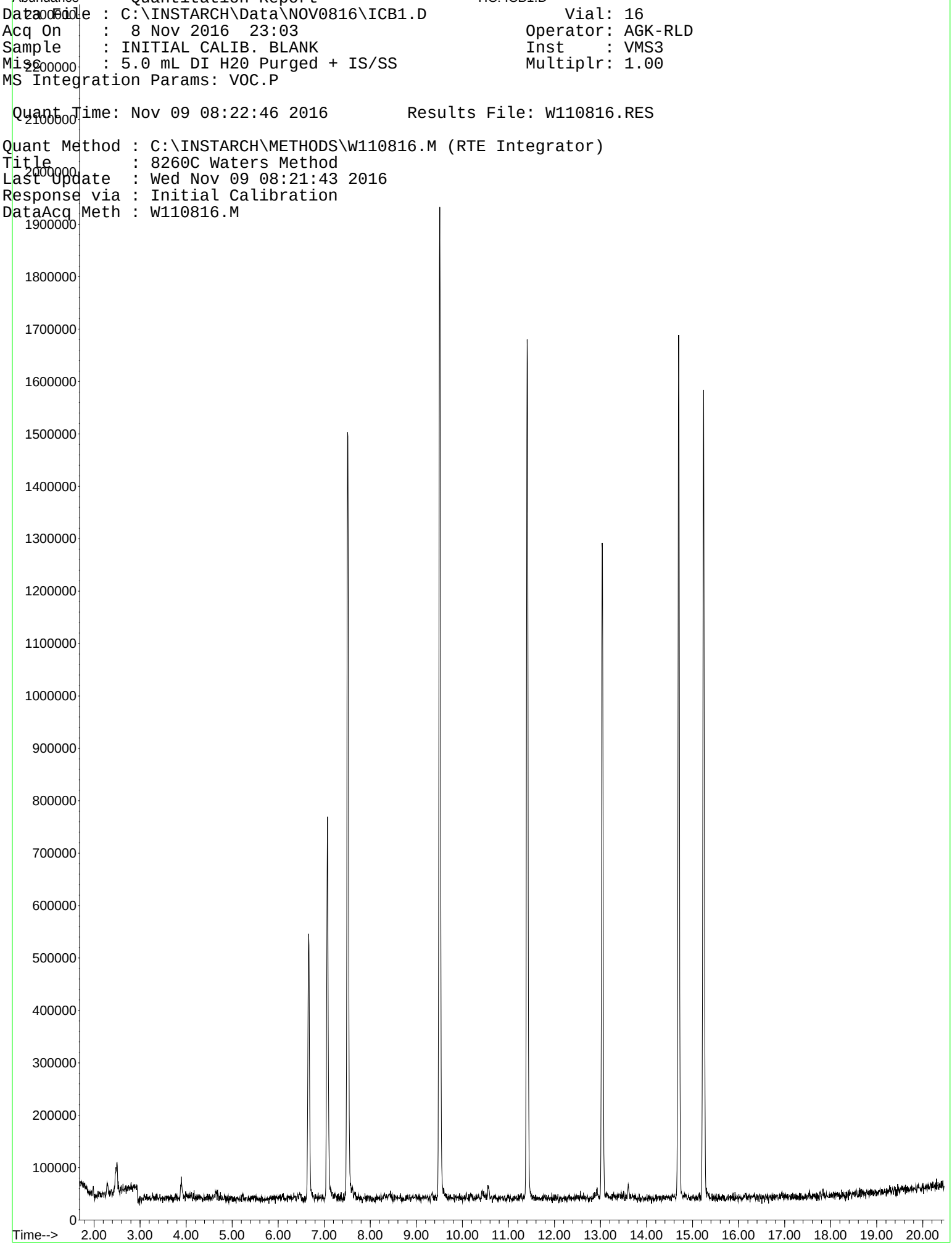
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV0816\ICB1.D Vial: 16
Acq On : 8 Nov 2016 23:03 Operator: AGK-RLD
Sample : INITIAL CALIB. BLANK Inst : VMS3
Misc : 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 09 08:22:46 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Wed Nov 09 08:21:43 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

BFB

Data File : C:\INSTARCH\Data\NOV2816\BFB1.D Vial: 1
Acq On : 28 Nov 2016 10:52 Operator: AGK-RLD
Sample : 133065,BFB, Inst : VMS3
Misc : 25 ng Inj. Multiplr: 1.00
Integration File: VOC.P

Method : C:\INSTARCH\METHODS\W110816.M
Title : 8260C Waters Method

Spectrum Information: Average of 4.423 to 4.441 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	28.7	28316	PASS
75	95	30	60	56.8	55984	PASS
95	95	100	100	100.0	98610	PASS
96	95	5	9	8.2	8052	PASS
173	174	0.00	2	1.0	857	PASS
174	95	50	100	84.6	83428	PASS
175	174	5	9	7.6	6321	PASS
176	174	95	101	96.6	80572	PASS
177	176	5	9	6.2	5008	PASS

W110816.M Wed Nov 30 15:31:41 2016

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\NOV2816\CCV1.D Vial: 3
Acq On : 28 Nov 2016 11:41 Operator: AGK-RLD
Sample : 133065,CCV, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 28 12:01:40 2016

Quant Method : C:\INSTARCH\METHODS\W110816.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110816.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	91	0.00
2	PT	Dichlorodi	0.2938	0.3298	-12.25	94	0.00
3	PT	Chloromethan	0.5657	0.4696	16.99	80	0.00
4	PT	VinylChlorid	0.4481	0.4479	0.04	88	0.00
5	PT	Bromomethane	0.1168	0.1151	1.46	96	0.02
6	PT	Chloroethane	0.2650	0.2083	21.40#	74	0.00
7	T	Dichloroflmethane	0.4801	0.4756	0.94	93	0.00
8	PT	Trichlorofma	0.3300	0.3499	-6.03	93	0.00
9	T	Ethylether	0.2914	0.3122	-7.14	102	0.00
10	T	dichlorotfluoroethan	0.2968	0.3107	-4.68	92	0.00
11	T	propyleneoxide	0.0679	0.0657	3.24	85	0.00
12	T	Acrolein	0.1335	0.1287	3.60	92	0.00
13	PT	11dichlorthe	0.2306	0.2180	5.46	86	0.00
14	PT	Trichlorotfluoroeth	0.2044	0.2105	-2.98	91	0.00
15	PT	Acetone	0.2110	0.2147	-1.75	92	0.00
16	T	Iodomethane	0.1004	0.1236	-23.11#	155	0.00
17	PT	Carbon Dislf	0.6362	0.7139	-12.21	102	0.00
18	T	allylchloride	0.4879	0.6538	-34.00#	115	0.00
19	PT	methylacetate	0.1622	0.1765	-8.82	105	0.00
20	PT	Methylchlorid	0.2590	0.3507	-35.41#	125	0.00
21	T	tbutylalcohol	0.0914	0.0891	2.52	87	-0.02
22	T	Acrylonitrile	0.2322	0.2558	-10.16	99	0.00
23	PT	t12dichlorte	0.2286	0.2388	-4.46	95	-0.01
24	PT	MtBE	0.7299	0.7570	-3.71	97	0.00
25	T	Hexane	0.4938	0.5565	-12.70	95	0.00
26	PT	11dichlorota	0.5627	0.5777	-2.67	94	0.00
27	T	Vinylacetate	0.6887	0.8116	-17.85	114	0.00
28	T	chloroprene	0.5496	0.6226	-13.28	95	0.00
29	T	Diisopether	1.2045	1.4428	-19.78	105	0.00
30	T	ETBE	0.9700	1.0602	-9.30	99	0.00
31	T	22dichloropr	0.3726	0.3794	-1.83	92	0.00
32	PT	c12dichlorte	0.2897	0.2899	-0.07	94	0.00
33	PT	2Butanone	0.0692	0.0642#	7.23	87	-0.01
34	T	propionitrile	0.1064	0.1009	5.17	89	0.00
35	T	Ethylacetate	0.0177	0.0160#	9.60	95	0.00
36	T	methacrylonitrile	0.1894	0.1922	-1.48	92	-0.01
37	T	Bromochlorma	0.1128	0.1172	-3.90	94	-0.01
38	T	Tetrahydofur	0.2385	0.2747	-15.18	106	0.00
39	PT	Chloroform	0.4399	0.4525	-2.86	93	0.00
40	PT	111trichlota	0.3909	0.4201	-7.47	99	0.00
41	S	SURRDibrflma	0.2507	0.2448	2.35	91	0.00
42	PT	Cyclohexane	0.6376	0.6866	-7.69	92	0.00
43	PT	Carbtetraclo	0.3088	0.3402	-10.17	102	0.00
44	T	11dicloprope	0.1219	0.1198	1.72	83	0.00
45	S	SURR12DCAd4	0.0672	0.0655	2.53	87	-0.01
46	PT	Benzene	1.0227	1.1185	-9.37	95	0.00
47	PT	12dichlorota	0.4433	0.4254	4.04	91	0.00
48	T	TAME	0.7285	0.8045	-10.43	100	0.00

49	PT	trichloroete	0.2547	0.2682	-5.30	94	0.00
50	PT	methylcyclohexane	0.4408	0.4513	-2.38	91	0.00
51	PT	12dicloropra	0.3554	0.3661	-3.01	91	-0.01
52	T	23Dicl1propene	0.3996	0.4256	-6.51	94	0.00
53	T	Dibromometha	0.1717	0.1690	1.57	94	0.00
54	T	methylmethacrylate	0.2756	0.2720	1.31	91	0.00
55	T	14dioxane	0.0045	0.0024#	46.67#	52	-0.01
56	PT	Bromodiclrma	0.3210	0.3608	-12.40	100	0.00
57	T	2Nitropropane	0.1863	0.1871	-0.43	89	0.00
58	T	2CLEVE	0.0257	0.0216#	15.95	76	0.00
59	PT	c13dicloproe	0.4438	0.4592	-3.47	98	0.00
60	PT	4Meth2Pentan	0.5504	0.6485	-17.82	103	0.00
61	S	SURRd8Tolule	1.0132	1.0254	-1.20	92	0.00
62	PT	Toluene	0.6308	0.6856	-8.69	97	0.00
63	PT	t13Dicloprop	0.3927	0.4184	-6.54	101	0.00
64	T	ethylmethacrylate	0.4041	0.4182	-3.49	95	0.00
65	PT	112Triclotha	0.2146	0.2142	0.19	95	0.00
66	PT	Tetrachlorte	0.2541	0.2583	-1.65	88	0.00
67	T	13Diclorpropa	0.4416	0.4638	-5.03	93	-0.01
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	93	0.00
69	PT	2Hexanone	0.6333	0.7030	-11.01	101	0.00
70	PT	Clorodibrmta	0.3280	0.3246	1.04	104	0.00
71	PT	12Dibrometha	0.3565	0.3462	2.89	95	0.00
72	PT	Chlorobenzen	0.9231	0.9107	1.34	94	0.00
73	T	1Clhexane	0.4979	0.4824	3.11	93	0.00
74	T	1112Tetclota	0.3138	0.3219	-2.58	103	0.00
75	PT	Ethylbenzene	1.5869	1.6843	-6.14	97	0.00
76	PT	m p-Xylene	0.6124	0.6336	-3.46	96	0.00
77	PT	o-Xylene	0.5913	0.6245	-5.61	99	0.00
78	PT	Styrene	0.9495	0.9913	-4.40	101	0.00
79	PT	Bromoform	0.2501	0.2636	-5.40	98	0.00
80	PT	Isopropylben	1.4325	1.5132	-5.63	97	0.00
81	T	cyclohexanone	0.0362	0.0261#	27.90#	70	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	105	0.00
83	S	SURR4BrFBenz	0.9222	0.8961	2.83	98	0.00
84	T	Bromobenzene	0.6964	0.6864	1.44	102	0.00
85	PT	1122Tetrclta	1.1253	1.0369	7.86	97	0.00
86	T	123Triclproa	1.4022	1.2579	10.29	92	0.00
87	T	14dichloro2butene	0.4121	0.4258	-3.32	113	0.00
88	T	n-Propylbenz	3.2694	3.3631	-2.87	97	0.00
89	T	2chlorotolue	1.9982	1.9538	2.22	99	0.00
90	T	4chlorotolue	2.2133	2.2283	-0.68	100	0.00
91	T	135Trimebenz	2.2226	2.2821	-2.68	100	0.00
92	T	tbutylbenzen	1.8354	1.8403	-0.27	96	0.00
93	T	124Trimetben	2.2584	2.2027	2.47	94	0.00
94	T	sbutylbenzen	2.7323	2.8157	-3.05	99	0.00
95	PT	13Diclorbenz	1.1623	1.1465	1.36	98	0.00
96	T	pIsopropylto	2.2606	2.2395	0.93	97	0.00
97	PT	14dichlorobe	1.2021	1.1848	1.44	99	0.00
98	PT	12dichlorobe	1.1259	1.1136	1.09	104	0.00
99	T	nButylbenzen	2.2118	2.2420	-1.37	98	0.00
100	PT	12dibromo3cl	0.2489	0.2257	9.32	96	0.00
101	T	135Trichlorobenzene	0.7928	0.7573	4.48	93	0.00
102	PT	124Trichlobe	0.7254	0.6536	9.90	95	0.00
103	T	Hexachlorobu	0.3256	0.3343	-2.67	104	0.00
104	T	Naphthalene	2.1515	2.0800	3.32	97	0.00
105	T	123Trichlben	0.6246	0.5475	12.34	92	0.00

(#) = Out of Range SPCC's out = 1 CCC's out = 0

W110816.M Wed Nov 30 15:33:06 2016

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\NOV2816\CCV1.D Vial: 3
Acq On : 28 Nov 2016 11:41 Operator: AGK-RLD
Sample : 133065,CCV, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 28 12:01:40 2016

Quant Method : C:\INSTARCH\METHODS\W110816.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110816.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	91	0.00
2	PT	Dichlorodi	10.0000	11.2271	-12.27	94	0.00
3	PT	Chloromethan	10.0000	8.7267	12.73	80	0.00
4	PT	VinylChlorid	10.0000	9.9958	0.04	88	0.00
5	PT	Bromomethane	10.0000	9.8567	1.43	96	0.02
6	PT	Chloroethane	10.0000	7.8596	21.40#	74	0.00
7	T	Dichloroflmethane	10.0000	9.9080	0.92	93	0.00
8	PT	Trichlorofma	10.0000	10.6011	-6.01	93	0.00
9	T	Ethylether	10.0000	10.7137	-7.14	102	0.00
10	T	dichlorotfluoroethan	10.0000	10.4685	-4.69	92	0.00
11	T	propyleneoxide	100.0000	96.7756	3.22	85	0.00
12	T	Acrolein	50.0000	48.1949	3.61	92	0.00
13	PT	11dichlorthe	10.0000	9.4522	5.48	86	0.00
14	PT	Trichlorotfluoroeth	20.0000	20.5936	-2.97	91	0.00
15	PT	Acetone	100.0000	101.4626	-1.46	92	0.00
16	T	Iodomethane	20.0000	21.9608	-9.80	155	0.00
17	PT	Carbon Dislf	20.0000	22.4417	-12.21	102	0.00
18	T	allylchloride	20.0000	26.8007	-34.00#	115	0.00
19	PT	methylacetate	10.0000	10.8827	-8.83	105	0.00
20	PT	Methylchlorid	10.0000	13.5389	-35.39#	125	0.00
21	T	tbutylalcohol	500.0000	489.4904	2.10	87	-0.02
22	T	Acrylonitrile	50.0000	55.0931	-10.19	99	0.00
23	PT	t12dichlorte	10.0000	10.4484	-4.48	95	-0.01
24	PT	MtBE	10.0000	10.3711	-3.71	97	0.00
25	T	Hexane	20.0000	22.5390	-12.70	95	0.00
26	PT	11dichlorota	10.0000	10.2667	-2.67	94	0.00
27	T	Vinylacetate	100.0000	123.1964	-23.20#	114	0.00
28	T	chloroprene	20.0000	22.6583	-13.29	95	0.00
29	T	Diisopether	10.0000	11.9784	-19.78	105	0.00
30	T	ETBE	10.0000	10.9301	-9.30	99	0.00
31	T	22dichloropr	10.0000	10.1827	-1.83	92	0.00
32	PT	c12dichlorte	10.0000	10.0064	-0.06	94	0.00
33	PT	2Butanone	100.0000	92.7002	7.30	87	-0.01
34	T	propionitrile	100.0000	94.8644	5.14	89	0.00
35	T	Ethylacetate	50.0000	45.2637	9.47	95	0.00
36	T	methacrylonitrile	20.0000	20.2988	-1.49	92	-0.01
37	T	Bromochlorma	10.0000	10.3964	-3.96	94	-0.01
38	T	Tetrahydofur	100.0000	115.1852	-15.19	106	0.00
39	PT	Chloroform	10.0000	10.2877	-2.88	93	0.00
40	PT	111trichlota	10.0000	10.7481	-7.48	99	0.00
41	S	SURRDibrflma	20.0000	19.5311	2.34	91	0.00
42	PT	Cyclohexane	10.0000	10.7698	-7.70	92	0.00
43	PT	Carbtetraclo	10.0000	11.0151	-10.15	102	0.00
44	T	11dicloprope	10.0000	9.8286	1.71	83	0.00
45	S	SURR12DCAd4	20.0000	19.4906	2.55	87	-0.01
46	PT	Benzene	10.0000	10.9364	-9.36	95	0.00
47	PT	12dichlorota	10.0000	9.5960	4.04	91	0.00
48	T	TAME	10.0000	11.0432	-10.43	100	0.00

49	PT	trichloroete	10.0000	10.5337	-5.34	94	0.00
50	PT	methylcyclohexane	10.0000	10.2387	-2.39	91	0.00
51	PT	12dicloropra	10.0000	10.2994	-2.99	91	-0.01
52	T	23Dicl1propene	10.0000	10.6521	-6.52	94	0.00
53	T	Dibromometha	10.0000	9.8460	1.54	94	0.00
54	T	methylmethacrylate	10.0000	9.8703	1.30	91	0.00
55	T	14dioxane	500.0000	258.9206	48.22#	52	-0.01
56	PT	Bromodiclrma	10.0000	11.2401	-12.40	100	0.00
57	T	2Nitropropane	100.0000	93.3143	6.69	89	0.00
58	T	2CLEVE	50.0000	36.2954	27.41#	76	0.00
59	PT	c13dicloproe	10.0000	10.3469	-3.47	98	0.00
60	PT	4Meth2Pentan	100.0000	118.4246	-18.42	103	0.00
61	S	SURRd8Tolule	20.0000	20.2421	-1.21	92	0.00
62	PT	Toluene	10.0000	10.8691	-8.69	97	0.00
63	PT	t13Dicloprop	10.0000	10.6551	-6.55	101	0.00
64	T	ethylmethacrylate	20.0000	20.6963	-3.48	95	0.00
65	PT	112Triclotha	10.0000	9.9796	0.20	95	0.00
66	PT	Tetrachlorte	10.0000	10.1650	-1.65	88	0.00
67	T	13Diclorpropa	10.0000	10.5018	-5.02	93	-0.01
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	93	0.00
69	PT	2Hexanone	100.0000	109.0421	-9.04	101	0.00
70	PT	Clorodibrmta	10.0000	9.8970	1.03	104	0.00
71	PT	12Dibrometha	10.0000	9.7120	2.88	95	0.00
72	PT	Chlorobenzen	10.0000	9.8659	1.34	94	0.00
73	T	1Clhexane	10.0000	9.6892	3.11	93	0.00
74	T	1112Tetclota	10.0000	10.2561	-2.56	103	0.00
75	PT	Ethylbenzene	10.0000	10.6136	-6.14	97	0.00
76	PT	m p-Xylene	20.0000	20.6924	-3.46	96	0.00
77	PT	o-Xylene	10.0000	10.5627	-5.63	99	0.00
78	PT	Styrene	10.0000	10.4404	-4.40	101	0.00
79	PT	Bromoform	10.0000	10.5419	-5.42	98	0.00
80	PT	Isopropylben	10.0000	10.5635	-5.63	97	0.00
81	T	cyclohexanone	200.0000	144.3113	27.84#	70	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	105	0.00
83	S	SURR4BrFBenz	20.0000	19.4347	2.83	98	0.00
84	T	Bromobenzene	10.0000	9.8557	1.44	102	0.00
85	PT	1122Tetrclta	10.0000	9.2142	7.86	97	0.00
86	T	123Triclproa	10.0000	8.9714	10.29	92	0.00
87	T	14dichloro2butene	10.0000	10.3323	-3.32	113	0.00
88	T	n-Propylbenz	10.0000	10.2863	-2.86	97	0.00
89	T	2chlorotolue	10.0000	9.7774	2.23	99	0.00
90	T	4chlorotolue	10.0000	10.0680	-0.68	100	0.00
91	T	135Trimebenz	10.0000	10.2673	-2.67	100	0.00
92	T	tbutylbenzen	10.0000	10.0269	-0.27	96	0.00
93	T	124Trimetben	10.0000	9.7530	2.47	94	0.00
94	T	sbutylbenzen	10.0000	10.3053	-3.05	99	0.00
95	PT	13Diclorbenz	10.0000	9.8640	1.36	98	0.00
96	T	pIsopropylto	10.0000	9.9066	0.93	97	0.00
97	PT	14dichlorobe	10.0000	9.8555	1.45	99	0.00
98	PT	12dichlorobe	10.0000	9.8901	1.10	104	0.00
99	T	nButylbenzen	10.0000	10.1368	-1.37	98	0.00
100	PT	12dibromo3cl	10.0000	9.0679	9.32	96	0.00
101	T	135Trichlorobenzene	10.0000	9.5531	4.47	93	0.00
102	PT	124Trichlobe	10.0000	9.0102	9.90	95	0.00
103	T	Hexachlorobu	10.0000	10.2678	-2.68	104	0.00
104	T	Naphthalene	10.0000	9.6675	3.32	97	0.00
105	T	123Trichlben	10.0000	8.7648	12.35	92	0.00

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

W110816.M Wed Nov 30 15:32:52 2016

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\CCV1.D Vial: 3
Acq On : 28 Nov 2016 11:41 Operator: AGK-RLD
Sample : 133065,CCV, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:01:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1219227	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	926796	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	523095	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	298476	19.531	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 98 %			
45) SURR12DCAd4	7.06	102	79889	19.491	ug/L	-0.01
Spiked Amount 20.000	Range 89 - 112		Recovery = 97 %			
61) SURRd8Tolule	9.50	98	1250224	20.242	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 101 %			
83) SURR4BrFBenz	13.04	95	468750	19.435	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 97 %			
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	201081	11.2271	ug/L	97
3) Chloromethan	1.99	50	286270	8.7267	ug/L	98
4) VinylChlorid	2.14	62	273065	9.9958	ug/L	97
5) Bromomethane	2.59	94	70158	9.8567	ug/L	92
6) Chloroethane	2.74	64	126982	7.8596	ug/L	97
7) Dichloroflmethane	3.04	67	289952	9.9080	ug/L	99
8) Trichlorofma	3.13	101	213297	10.6011	ug/L	94
9) Ethylether	3.55	59	190332	10.7137	ug/L	93
10) dichlorotfluoroethan	3.57	67	189385	10.4685	ug/L	98
11) propyleneoxide	3.88	58	400319	96.7756	ug/L #	88
12) Acrolein	3.67	56	392371	48.1949	ug/L	99
13) 11dichlorthe	3.83	96	132888	9.4522	ug/L	91
14) Trichlorotfluoroeth	3.87	101	256604	20.5936	ug/L	97
15) Acetone	3.88	43	1308539	101.4626	ug/L	96
16) Iodomethane	4.00	142	150725	21.9608	ug/L	93
17) Carbon Dislf	4.09	76	870381	22.4417	ug/L	98
18) allylchloride	4.31	41	797161	26.8007	ug/L	91
19) methylacetate	4.36	74	107607	10.8827	ug/L	95
20) Methylchlorid	4.45	84	213801	13.5389	ug/L	93
21) tbutylalcohol	4.64	59	2716372	489.4904	ug/L	98
22) Acrylonitrile	4.75	53	779730	55.0931	ug/L	98
23) t12dichlorte	4.82	96	145599	10.4484	ug/L	100
24) MtBE	4.86	73	461492	10.3711	ug/L	100
25) Hexane	5.23	57	678544	22.5390	ug/L	97
26) 11dichlorota	5.35	63	352158	10.2667	ug/L	97
27) Vinylacetate	5.44	43	4947772	123.1964	ug/L	98
28) chloroprene	5.48	53	759087	22.6583	ug/L	99
29) Diisopether	5.50	45	879572	11.9784	ug/L	96
30) ETBE	5.95	59	646330	10.9301	ug/L	98
31) 22dichloropr	6.08	77	231276	10.1827	ug/L	96
32) c12dichlorte	6.08	96	176724	10.0064	ug/L	96
33) 2Butanone	6.08	72	391090	92.7002	ug/L	97
34) propionitrile	6.12	54	615185	94.8644	ug/L	100
35) Ethylacetate	6.20	88	48782	45.2637	ug/L #	90
36) methacrylonitrile	6.33	67	234349	20.2988	ug/L #	83
37) Bromochlorma	6.35	128	71469	10.3964	ug/L	95
38) Tetrahydofur	6.44	42	1674779	115.1852	ug/L	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\CCV1.D Vial: 3
Acq On : 28 Nov 2016 11:41 Operator: AGK-RLD
Sample : 133065,CCV, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:01:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.47	83	275869	10.2877	ug/L		97
40)	111trichlota	6.71	97	256114	10.7481	ug/L		95
42)	Cyclohexane	6.80	56	418581	10.7698	ug/L		97
43)	Carbtetraclo	6.93	119	207382	11.0151	ug/L		99
44)	11dicloprope	6.92	110	73036	9.8286	ug/L	#	87
46)	Benzene	7.16	78	681851	10.9364	ug/L		99
47)	12dichlorota	7.16	62	259310	9.5960	ug/L		98
48)	TAME	7.34	73	490416	11.0432	ug/L		98
49)	trichloroete	7.98	95	163527	10.5337	ug/L		97
50)	methylcyclohexane	8.24	83	275141	10.2387	ug/L		98
51)	12dicloropra	8.22	63	223159	10.2994	ug/L		99
52)	23Dicl1propene	8.29	75	259469	10.6521	ug/L		98
53)	Dibromometha	8.36	93	103038	9.8460	ug/L		96
54)	methylmethacrylate	8.40	69	165829	9.8703	ug/L		96
55)	14dioxane	8.40	88	71644	258.9206	ug/L		88
56)	Bromodiclrma	8.56	83	219960	11.2401	ug/L		98
57)	2Nitropropane	8.82	43	1140445	93.3143	ug/L		99
58)	2CLEVE	8.96	63	65723	36.2954	ug/L		93
59)	c13dicloproe	9.14	75	279920	10.3469	ug/L		98
60)	4Meth2Pentan	9.33	43	3953565	118.4246	ug/L		92
62)	Toluene	9.59	92	417980	10.8691	ug/L		99
63)	t13Dicloprop	9.85	75	255048	10.6551	ug/L		95
64)	ethylmethacrylate	10.00	69	509878	20.6963	ug/L		89
65)	112Triclotha	10.08	83	130572	9.9796	ug/L		98
66)	Tetrachlorte	10.32	166	157488	10.1650	ug/L		93
67)	13Diclorpropa	10.30	76	282716	10.5018	ug/L		99
69)	2Hexanone	10.43	43	3257853	109.0421	ug/L		94
70)	Clorodibrmta	10.60	129	150442	9.8970	ug/L		90
71)	12Dibrometha	10.76	107	160429	9.7120	ug/L		99
72)	Chlorobenzen	11.44	112	422016	9.8659	ug/L		99
73)	1Clhexane	11.43	91	223544	9.6892	ug/L		99
74)	1112Tetclota	11.55	131	149145	10.2561	ug/L		92
75)	Ethylbenzene	11.61	91	780507	10.6136	ug/L		98
76)	m p-Xylene	11.77	106	587245	20.6924	ug/L		100
77)	o-Xylene	12.32	106	289408	10.5627	ug/L		95
78)	Styrene	12.33	104	459364	10.4404	ug/L		99
79)	Bromoform	12.56	173	122158	10.5419	ug/L		92
80)	Isopropylben	12.84	105	701235	10.5635	ug/L		98
81)	cyclohexanone	12.91	55	242126	144.3113	ug/L		95
84)	Bromobenzene	13.24	156	179515	9.8557	ug/L	#	89
85)	1122Tetrclta	13.22	83	271196	9.2142	ug/L		97
86)	123Triclproa	13.27	75	329010	8.9714	ug/L		99
87)	14dichloro2butene	13.30	53	111364	10.3323	ug/L		94
88)	n-Propylbenz	13.43	91	879599	10.2863	ug/L		99
89)	2chlorotolue	13.54	91	511003	9.7774	ug/L		98
90)	4chlorotolue	13.68	91	582812	10.0680	ug/L		98
91)	135Trimebenz	13.68	105	596867	10.2673	ug/L		91
92)	tbutylbenzen	14.14	119	481334	10.0269	ug/L		96
93)	124Trimetben	14.22	105	576101	9.7530	ug/L		97
94)	sbutylbenzen	14.47	105	736446	10.3053	ug/L		99
95)	13Diclorbenz	14.61	146	299860	9.8640	ug/L		99
96)	pIsopropylto	14.69	119	585724	9.9066	ug/L		99
97)	14dichlorobe	14.73	146	309871	9.8555	ug/L		99
98)	12dichlorobe	15.27	146	291247	9.8901	ug/L		95
99)	nButylbenzen	15.28	91	586402	10.1368	ug/L		98
100)	12dibromo3cl	16.36	157	59039	9.0679	ug/L		89
101)	135Trichlorobenzene	16.71	180	198076	9.5531	ug/L		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\CCV1.D Vial: 3
Acq On : 28 Nov 2016 11:41 Operator: AGK-RLD
Sample : 133065,CCV, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:01:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

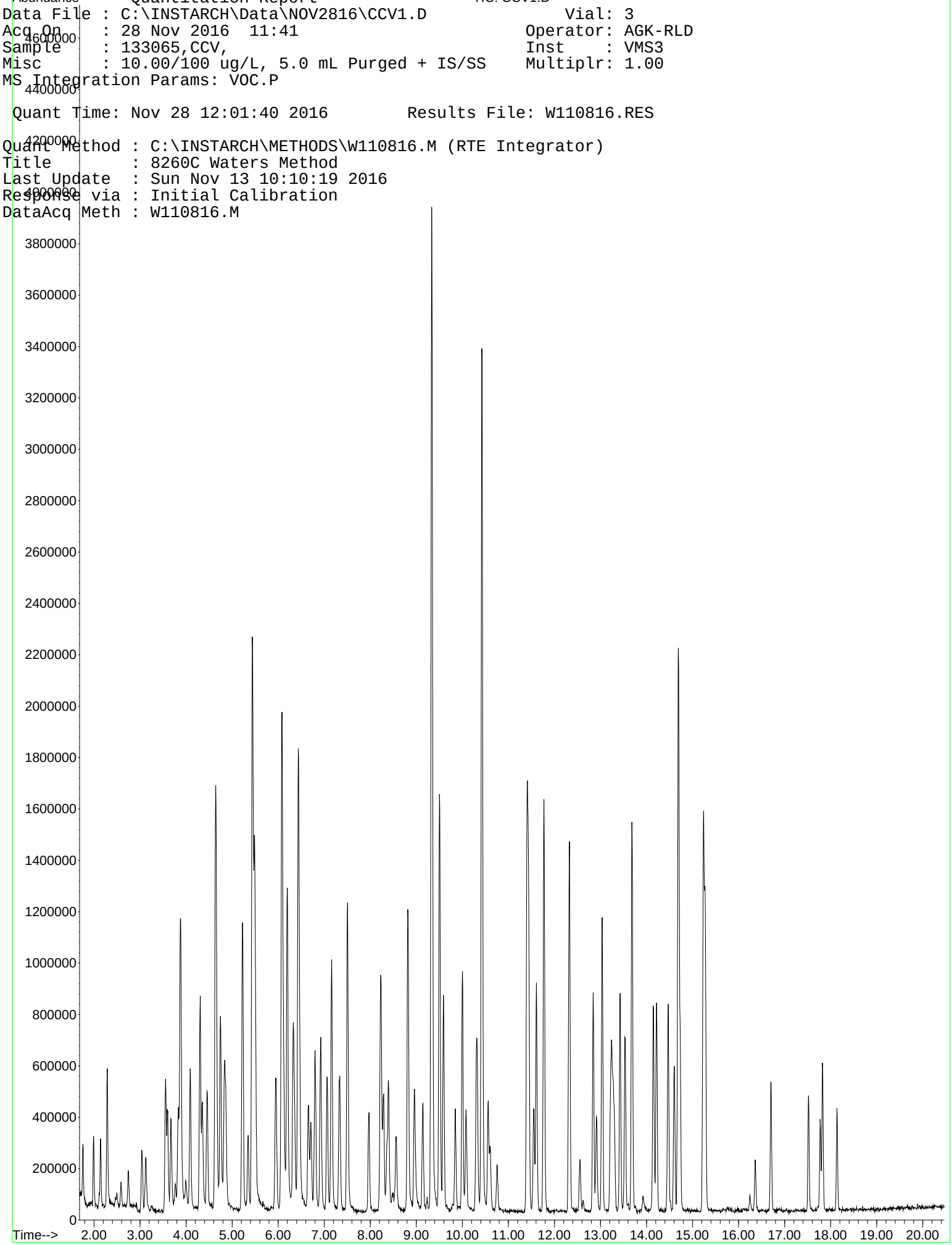
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.51	180	170944	9.0102	ug/L	98
103) Hexachlorobu	17.78	225	87448	10.2678	ug/L	91
104) Naphthalene	17.82	128	544008	9.6675	ug/L	99
105) 123Trichlben	18.14	180	143190	8.7648	ug/L	95

(#) = qualifier out of range (m) = manual integration

Data File : C:\INSTARCH\Data\NOV2816\CCV1.D Vial: 3
Acq On : 28 Nov 2016 11:41 Operator: AGK-RLD
Sample : 133065,CCV, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:01:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\DATA\NOV2816\CCVF2.D Vial: 23
Acq On : 28 Nov 2016 21:33 Operator: AGK-RLD
Sample : 132949,CCVF, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 28 21:53:39 2016

Quant Method : C:\INSTARCH\METHODS\W110816.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110816.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	1.0000	1.0000	0.00	161	0.00
2	PT	Dichlorodi	0.2938	0.2783	5.28	141	0.00
3	PT	Chloromethan	0.5657	0.3925	30.62	118	0.00
4	PT	VinylChlorid	0.4481	0.4377	2.32	153	0.00
5	PT	Bromomethane	0.1168	0.1152	1.37	170	0.02
6	PT	Chloroethane	0.2650	0.2358	11.02	148	0.01
7	T	Dichloroflmethane	0.4801	0.5285	-10.08	183	0.00
8	PT	Trichlorofma	0.3300	0.3825	-15.91	181	0.01
9	T	Ethylether	0.2914	0.3377	-15.89	195	0.00
10	T	dichlorotfluoroethan	0.2968	0.3336	-12.40	176	0.00
11	T	propyleneoxide	0.0679	0.0657	3.24	151	0.00
12	T	Acrolein	0.1335	0.1392	-4.27	176	0.00
13	PT	11dichlorthe	0.2306	0.2494	-8.15	175	0.00
14	PT	Trichlorotfluoroeth	0.2044	0.2314	-13.21	177	0.00
15	PT	Acetone	0.2110	0.1870	11.37	142	0.00
16	T	Iodomethane	0.1004	0.1469	-46.31	326#	0.00
17	PT	Carbon Dislf	0.6362	0.6912	-8.65	175	0.00
18	T	allylchloride	0.4879	0.5156	-5.68	161	0.00
19	PT	methylacetate	0.1622	0.1801	-11.04	189	0.00
20	PT	Methylchlorid	0.2590	0.3548	-36.99	224#	0.00
21	T	tbutylalcohol	0.0914	0.0835	8.64	145	-0.01
22	T	Acrylonitrile	0.2322	0.2387	-2.80	163	0.00
23	PT	t12dichlorte	0.2286	0.2638	-15.40	186	0.00
24	PT	MtBE	0.7299	0.8315	-13.92	190	0.00
25	T	Hexane	0.4938	0.4985	-0.95	150	0.00
26	PT	11dichlorota	0.5627	0.6048	-7.48	174	0.00
27	T	Vinylacetate	0.6887	0.6277	8.86	157	0.00
28	T	chloroprene	0.5496	0.6343	-15.41	172	0.00
29	T	Diisopether	1.2045	1.2181	-1.13	157	0.00
30	T	ETBE	0.9700	1.0911	-12.48	181	0.00
31	T	22dichloropr	0.3726	0.3461	7.11	149	0.01
32	PT	c12dichlorte	0.2897	0.3140	-8.39	180	0.00
33	PT	2Butanone	0.0692	0.0704#	-1.73	170	0.00
34	T	propionitrile	0.1064	0.0996	6.39	155	0.00
35	T	Ethylacetate	0.0177	0.0194#	-9.60	204#	0.00
36	T	methacrylonitrile	0.1894	0.2063	-8.92	174	0.00
37	T	Bromochlorma	0.1128	0.1267	-12.32	180	0.00
38	T	Tetrahydofur	0.2385	0.2225	6.71	152	0.00
39	PT	Chloroform	0.4399	0.4846	-10.16	177	0.00
40	PT	111trichlota	0.3909	0.4431	-13.35	185	0.00
41	S	SURRDibrflma	0.2507	0.2548	-1.64	169	0.00
42	PT	Cyclohexane	0.6376	0.6877	-7.86	164	0.00
43	PT	Carbtetraclo	0.3088	0.3386	-9.65	180	0.00
44	T	11dicloprope	0.1219	0.1348	-10.58	165	0.00
45	S	SURR12DCAd4	0.0672	0.0678	-0.89	160	0.00
46	PT	Benzene	1.0227	1.1447	-11.93	172	0.00
47	PT	12dichlorota	0.4433	0.4407	0.59	167	0.00
48	T	TAME	0.7285	0.8343	-14.52	185	0.00

49	PT	trichloroete	0.2547	0.2878	-13.00	179	0.00
50	PT	methylcyclohexane	0.4408	0.4375	0.75	157	0.00
51	PT	12dicloropra	0.3554	0.3772	-6.13	166	0.00
52	T	23Dicl1propene	0.3996	0.4358	-9.06	172	0.00
53	T	Dibromometha	0.1717	0.1804	-5.07	178	0.00
54	T	methylmethacrylate	0.2756	0.3008	-9.14	178	0.00
55	T	14dioxane	0.0045	0.0022#	51.11#	87	0.00
56	PT	Bromodiclrma	0.3210	0.3578	-11.46	177	0.00
57	T	2Nitropropane	0.1863	0.1704	8.53	144	0.00
58	T	2CLEVE	0.0257	0.0346	-34.63	216#	0.00
59	PT	c13dicloproe	0.4438	0.4726	-6.49	179	0.00
60	PT	4Meth2Pentan	0.5504	0.5222	5.12	147	0.00
61	S	SURRd8Tolule	1.0132	1.0235	-1.02	163	0.00
62	PT	Toluene	0.6308	0.7028	-11.41	177	0.00
63	PT	t13Dicloprop	0.3927	0.4191	-6.72	179	0.00
64	T	ethylmethacrylate	0.4041	0.4599	-13.81	185	0.00
65	PT	112Triclotha	0.2146	0.2353	-9.65	186	0.00
66	PT	Tetrachlorte	0.2541	0.2740	-7.83	165	0.00
67	T	13Diclorpropa	0.4416	0.4934	-11.73	176	0.00
68	I	d5-CHLOROBENZENE**ISTD**	1.0000	1.0000	0.00	169	0.00
69	PT	2Hexanone	0.6333	0.5598	11.61	146	0.00
70	PT	Clorodibrmta	0.3280	0.3406	-3.84	198	0.00
71	PT	12Dibrometha	0.3565	0.3535	0.84	177	0.00
72	PT	Chlorobenzen	0.9231	0.9247	-0.17	174	0.00
73	T	1Clhexane	0.4979	0.4797	3.66	168	0.00
74	T	1112Tetclota	0.3138	0.3168	-0.96	184	0.00
75	PT	Ethylbenzene	1.5869	1.6393	-3.30	171	0.00
76	PT	m p-Xylene	0.6124	0.6107	0.28	167	0.00
77	PT	o-Xylene	0.5913	0.5988	-1.27	173	0.00
78	PT	Styrene	0.9495	0.9779	-2.99	180	0.00
79	PT	Bromoform	0.2501	0.2620	-4.76	177	0.00
80	PT	Isopropylben	1.4325	1.4284	0.29	166	0.00
81	T	cyclohexanone	0.0362	0.0226#	37.57	110	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	1.0000	1.0000	0.00	186	0.00
83	S	SURR4BrFBenz	0.9222	0.9342	-1.30	180	0.00
84	T	Bromobenzene	0.6964	0.6890	1.06	181	0.00
85	PT	1122Tetrclta	1.1253	1.0651	5.35	175	0.00
86	T	123Triclproa	1.4022	1.3219	5.73	170	0.00
87	T	14dichloro2butene	0.4121	0.3584	13.03	167	0.00
88	T	n-Propylbenz	3.2694	3.2412	0.86	164	0.00
89	T	2chlorotolue	1.9982	1.9112	4.35	171	0.00
90	T	4chlorotolue	2.2133	2.2217	-0.38	175	0.00
91	T	135Trimebenz	2.2226	2.1747	2.16	168	0.00
92	T	tbutylbenzen	1.8354	1.7760	3.24	163	0.00
93	T	124Trimetben	2.2584	2.1557	4.55	162	0.00
94	T	sbutylbenzen	2.7323	2.6327	3.65	164	0.00
95	PT	13Diclorbenz	1.1623	1.1236	3.33	170	0.00
96	T	pIsopropylto	2.2606	2.0982	7.18	160	0.00
97	PT	14dichlorobe	1.2021	1.1640	3.17	172	0.00
98	PT	12dichlorobe	1.1259	1.0723	4.76	176	0.00
99	T	nButylbenzen	2.2118	2.0169	8.81	156	0.00
100	PT	12dibromo3cl	0.2489	0.2389	4.02	179	0.01
101	T	135Trichlorobenzene	0.7928	0.7411	6.52	161	0.00
102	PT	124Trichlobe	0.7254	0.6529	9.99	168	0.00
103	T	Hexachlorobu	0.3256	0.3124	4.05	171	0.00
104	T	Naphthalene	2.1515	2.0169	6.26	165	0.00
105	T	123Trichlben	0.6246	0.5869	6.04	175	0.00

(#) = Out of Range SPCC's out = 1 CCC's out = 0

W110816.M Wed Nov 30 15:56:45 2016

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\NOV2816\CCVF2.D Vial: 23
Acq On : 28 Nov 2016 21:33 Operator: AGK-RLD
Sample : 132949,CCVF, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
Integrator: RTE

Quant Time: Nov 28 21:53:39 2016

Quant Method : C:\INSTARCH\METHODS\W110816.M
Quant Title : 8260C Waters Method
Response via : Initial Calibration
DataAcq Meth:W110816.M

Min. RRF : 0.030 Min. Rel. Area : 50% Max. R.T. Dev 0.15min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE**ISTD**	20.0000	20.0000	0.00	161	0.00
2	PT	Dichlorodi	10.0000	9.4726	5.27	141	0.00
3	PT	Chloromethan	10.0000	7.2285	27.71	118	0.00
4	PT	VinylChlorid	10.0000	9.7667	2.33	153	0.00
5	PT	Bromomethane	10.0000	9.8682	1.32	170	0.02
6	PT	Chloroethane	10.0000	8.8958	11.04	148	0.01
7	T	Dichloroflmethane	10.0000	11.0090	-10.09	183	0.00
8	PT	Trichlorofma	10.0000	11.5897	-15.90	181	0.01
9	T	Ethylether	10.0000	11.5866	-15.87	195	0.00
10	T	dichlorotfluoroethan	10.0000	11.2400	-12.40	176	0.00
11	T	propyleneoxide	100.0000	96.7729	3.23	151	0.00
12	T	Acrolein	50.0000	52.1226	-4.25	176	0.00
13	PT	11dichlorthe	10.0000	10.8132	-8.13	175	0.00
14	PT	Trichlorotfluoroeth	20.0000	22.6387	-13.19	177	0.00
15	PT	Acetone	100.0000	87.2879	12.71	142	0.00
16	T	Iodomethane	20.0000	25.1886	-25.94	326	0.00
17	PT	Carbon Dislf	20.0000	21.7301	-8.65	175	0.00
18	T	allylchloride	20.0000	21.1357	-5.68	161	0.00
19	PT	methylacetate	10.0000	11.1036	-11.04	189	0.00
20	PT	Methylchlorid	10.0000	13.6948	-36.95	224	0.00
21	T	tbutylalcohol	500.0000	452.8758	9.42	145	-0.01
22	T	Acrylonitrile	50.0000	51.3993	-2.80	163	0.00
23	PT	t12dichlorte	10.0000	11.5398	-15.40	186	0.00
24	PT	MtBE	10.0000	11.3912	-13.91	190	0.00
25	T	Hexane	20.0000	20.1875	-0.94	150	0.00
26	PT	11dichlorota	10.0000	10.7490	-7.49	174	0.00
27	T	Vinylacetate	100.0000	90.3861	9.61	157	0.00
28	T	chloroprene	20.0000	23.0837	-15.42	172	0.00
29	T	Diisopether	10.0000	10.1127	-1.13	157	0.00
30	T	ETBE	10.0000	11.2482	-12.48	181	0.00
31	T	22dichloropr	10.0000	9.2884	7.12	149	0.01
32	PT	c12dichlorte	10.0000	10.8375	-8.38	180	0.00
33	PT	2Butanone	100.0000	101.7148	-1.71	170	0.00
34	T	propionitrile	100.0000	93.6327	6.37	155	0.00
35	T	Ethylacetate	50.0000	54.8753	-9.75	204	0.00
36	T	methacrylonitrile	20.0000	21.7880	-8.94	174	0.00
37	T	Bromochlorma	10.0000	11.2381	-12.38	180	0.00
38	T	Tetrahydofur	100.0000	93.2979	6.70	152	0.00
39	PT	Chloroform	10.0000	11.0172	-10.17	177	0.00
40	PT	111trichlota	10.0000	11.3350	-13.35	185	0.00
41	S	SURRDibrflma	20.0000	20.3283	-1.64	169	0.00
42	PT	Cyclohexane	10.0000	10.7859	-7.86	164	0.00
43	PT	Carbtetraclo	10.0000	10.9621	-9.62	180	0.00
44	T	11dicloprope	10.0000	11.0595	-10.59	165	0.00
45	S	SURR12DCAd4	20.0000	20.1640	-0.82	160	0.00
46	PT	Benzene	10.0000	11.1924	-11.92	172	0.00
47	PT	12dichlorota	10.0000	9.9429	0.57	167	0.00
48	T	TAME	10.0000	11.4520	-14.52	185	0.00

49	PT	trichloroete	10.0000	11.3022	-13.02	179	0.00
50	PT	methylcyclohexane	10.0000	9.9247	0.75	157	0.00
51	PT	12dicloropra	10.0000	10.6114	-6.11	166	0.00
52	T	23Dicl1propene	10.0000	10.9068	-9.07	172	0.00
53	T	Dibromometha	10.0000	10.5067	-5.07	178	0.00
54	T	methylmethacrylate	10.0000	10.9150	-9.15	178	0.00
55	T	14dioxane	500.0000	244.2535	51.15#	87	0.00
56	PT	Bromodiclrma	10.0000	11.1462	-11.46	177	0.00
57	T	2Nitropropane	100.0000	84.7268	15.27	144	0.00
58	T	2CLEVE	50.0000	54.0933	-8.19	216	0.00
59	PT	c13dicloproe	10.0000	10.6491	-6.49	179	0.00
60	PT	4Meth2Pentan	100.0000	91.2131	8.79	147	0.00
61	S	SURRd8Tolule	20.0000	20.2039	-1.02	163	0.00
62	PT	Toluene	10.0000	11.1405	-11.40	177	0.00
63	PT	t13Dicloprop	10.0000	10.6729	-6.73	179	0.00
64	T	ethylmethacrylate	20.0000	22.7610	-13.80	185	0.00
65	PT	112Triclotha	10.0000	10.9639	-9.64	186	0.00
66	PT	Tetrachlorte	10.0000	10.7803	-7.80	165	0.00
67	T	13Diclorpropa	10.0000	11.1736	-11.74	176	0.00
68	I	d5-CHLOROBENZENE**ISTD**	20.0000	20.0000	0.00	169	0.00
69	PT	2Hexanone	100.0000	83.5788	16.42	146	0.00
70	PT	Clorodibrmta	10.0000	10.3828	-3.83	198	0.00
71	PT	12Dibrometha	10.0000	9.9163	0.84	177	0.00
72	PT	Chlorobenzen	10.0000	10.0172	-0.17	174	0.00
73	T	1Clhexane	10.0000	9.6347	3.65	168	0.00
74	T	1112Tetclota	10.0000	10.0957	-0.96	184	0.00
75	PT	Ethylbenzene	10.0000	10.3299	-3.30	171	0.00
76	PT	m p-Xylene	20.0000	19.9422	0.29	167	0.00
77	PT	o-Xylene	10.0000	10.1273	-1.27	173	0.00
78	PT	Styrene	10.0000	10.2997	-3.00	180	0.00
79	PT	Bromoform	10.0000	10.4755	-4.76	177	0.00
80	PT	Isopropylben	10.0000	9.9713	0.29	166	0.00
81	T	cyclohexanone	200.0000	125.0094	37.50	110	0.00
82	I	d4-1,4-DICHLOROBENZENE**IS	20.0000	20.0000	0.00	186	0.00
83	S	SURR4BrFBenz	20.0000	20.2602	-1.30	180	0.00
84	T	Bromobenzene	10.0000	9.8942	1.06	181	0.00
85	PT	1122Tetrclta	10.0000	9.4650	5.35	175	0.00
86	T	123Triclproa	10.0000	9.4277	5.72	170	0.00
87	T	14dichloro2butene	10.0000	8.6969	13.03	167	0.00
88	T	n-Propylbenz	10.0000	9.9135	0.86	164	0.00
89	T	2chlorotolue	10.0000	9.5644	4.36	171	0.00
90	T	4chlorotolue	10.0000	10.0380	-0.38	175	0.00
91	T	135Trimebenz	10.0000	9.7841	2.16	168	0.00
92	T	tbutylbenzen	10.0000	9.6764	3.24	163	0.00
93	T	124Trimetben	10.0000	9.5452	4.55	162	0.00
94	T	sbutylbenzen	10.0000	9.6354	3.65	164	0.00
95	PT	13Diclorbenz	10.0000	9.6669	3.33	170	0.00
96	T	pIsopropylto	10.0000	9.2816	7.18	160	0.00
97	PT	14dichlorobe	10.0000	9.6830	3.17	172	0.00
98	PT	12dichlorobe	10.0000	9.5235	4.76	176	0.00
99	T	nButylbenzen	10.0000	9.1190	8.81	156	0.00
100	PT	12dibromo3cl	10.0000	9.5961	4.04	179	0.01
101	T	135Trichlorobenzene	10.0000	9.3484	6.52	161	0.00
102	PT	124Trichlobe	10.0000	9.0009	9.99	168	0.00
103	T	Hexachlorobu	10.0000	9.5943	4.06	171	0.00
104	T	Naphthalene	10.0000	9.3745	6.26	165	0.00
105	T	123Trichlben	10.0000	9.3957	6.04	175	0.00

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

W110816.M Wed Nov 30 15:33:54 2016

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\CCVF2.D Vial: 23
Acq On : 28 Nov 2016 21:33 Operator: AGK-RLD
Sample : 132949,CCVF, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 21:53:39 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	2163038	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1682911	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	921417	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	551143	20.328	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 102 %			
45) SURR12DCAd4	7.07	102	146628	20.164	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 101 %			
61) SURRd8Tolule	9.51	98	2213848	20.204	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 101 %			
83) SURR4BrFBenz	13.04	95	860760	20.260	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 101 %			
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	300988	9.4726	ug/L	97
3) Chloromethan	2.00	50	424456	7.2285	ug/L	99
4) VinylChlorid	2.15	62	473342	9.7667	ug/L	100
5) Bromomethane	2.60	94	124613	9.8682	ug/L	95
6) Chloroethane	2.76	64	254980	8.8958	ug/L	96
7) Dichloroflmethane	3.05	67	571572	11.0090	ug/L	97
8) Trichlorofma	3.13	101	413699	11.5897	ug/L	92
9) Ethylether	3.55	59	365180	11.5866	ug/L	96
10) dichlorotfluoroethan	3.57	67	360752	11.2400	ug/L	97
11) propyleneoxide	3.89	58	710189	96.7729	ug/L	91
12) Acrolein	3.68	56	752838	52.1226	ug/L	96
13) 11dichlorthe	3.83	96	269703	10.8132	ug/L	94
14) Trichlorotfluoroeth	3.87	101	500453	22.6387	ug/L	96
15) Acetone	3.89	43	2022625	87.2879	ug/L	96
16) Iodomethane	4.00	142	317737	25.1886	ug/L	97
17) Carbon Dislf	4.09	76	1495182	21.7301	ug/L	100
18) allylchloride	4.31	41	1115310	21.1357	ug/L	94
19) methylacetate	4.36	74	194783	11.1036	ug/L	99
20) Methylchlorid	4.46	84	383674	13.6948	ug/L #	84
21) tbutylalcohol	4.65	59	4516202	452.8758	ug/L	97
22) Acrylonitrile	4.75	53	1290576	51.3993	ug/L	99
23) t12dichlorte	4.84	96	285289	11.5398	ug/L	92
24) MtBE	4.87	73	899272	11.3912	ug/L	94
25) Hexane	5.23	57	1078215	20.1875	ug/L	99
26) 11dichlorota	5.35	63	654117	10.7490	ug/L	95
27) Vinylacetate	5.44	43	6788557	90.3861	ug/L	95
28) chloroprene	5.48	53	1371986	23.0837	ug/L	97
29) Diisopether	5.51	45	1317409	10.1127	ug/L	92
30) ETBE	5.96	59	1180031	11.2482	ug/L	99
31) 22dichloropr	6.09	77	374274	9.2884	ug/L	96
32) c12dichlorte	6.08	96	339567	10.8375	ug/L	92
33) 2Butanone	6.09	72	761307	101.7148	ug/L	98
34) propionitrile	6.12	54	1077232	93.6327	ug/L	98
35) Ethylacetate	6.21	88	104922	54.8753	ug/L #	71
36) methacrylonitrile	6.33	67	446261	21.7880	ug/L	93
37) Bromochlorma	6.36	128	137059	11.2381	ug/L #	80
38) Tetrahydofur	6.44	42	2406646	93.2979	ug/L	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\CCVF2.D Vial: 23
Acq On : 28 Nov 2016 21:33 Operator: AGK-RLD
Sample : 132949,CCVF, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 21:53:39 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39) Chloroform	6.47	83	524127	11.0172 ug/L	95
40) 111trichlota	6.72	97	479186	11.3350 ug/L	97
42) Cyclohexane	6.81	56	743720	10.7859 ug/L	98
43) Carbtetraclo	6.94	119	366149	10.9621 ug/L	99
44) 11dicloprope	6.92	110	145801	11.0595 ug/L	97
46) Benzene	7.17	78	1237989	11.1924 ug/L	98
47) 12dichlorota	7.16	62	476674	9.9429 ug/L	96
48) TAME	7.34	73	902261	11.4520 ug/L	99
49) trichloroete	7.98	95	311279	11.3022 ug/L	94
50) methylcyclohexane	8.24	83	473162	9.9247 ug/L	99
51) 12dicloropra	8.23	63	407901	10.6114 ug/L	91
52) 23Dicl1propene	8.29	75	471333	10.9068 ug/L	95
53) Dibromometha	8.37	93	195065	10.5067 ug/L	97
54) methylmethacrylate	8.40	69	325336	10.9150 ug/L	96
55) 14dioxane	8.41	88	119904	244.2535 ug/L	92
56) Bromodiclrma	8.57	83	386973	11.1462 ug/L	97
57) 2Nitropropane	8.82	43	1843143	84.7268 ug/L	99
58) 2CLEVE	8.96	63	187018	54.0933 ug/L	97
59) c13dicloproe	9.14	75	511112	10.6491 ug/L	99
60) 4Meth2Pentan	9.34	43	5648195	91.2131 ug/L	90
62) Toluene	9.59	92	760052	11.1405 ug/L	98
63) t13Dicloprop	9.85	75	453237	10.6729 ug/L	98
64) ethylmethacrylate	10.01	69	994818	22.7610 ug/L	92
65) 112Triclotha	10.08	83	254496	10.9639 ug/L	96
66) Tetrachlorte	10.33	166	296312	10.7803 ug/L	94
67) 13Diclorpropa	10.31	76	533656	11.1736 ug/L	100
69) 2Hexanone	10.43	43	4710578	83.5788 ug/L	90
70) Clorodibrmta	10.60	129	286586	10.3828 ug/L	91
71) 12Dibrometha	10.76	107	297441	9.9163 ug/L	95
72) Chlorobenzen	11.45	112	778062	10.0172 ug/L	97
73) 1Clhexane	11.43	91	403638	9.6347 ug/L	93
74) 1112Tetclota	11.56	131	266589	10.0957 ug/L	96
75) Ethylbenzene	11.61	91	1379396	10.3299 ug/L	100
76) m p-Xylene	11.77	106	1027679	19.9422 ug/L	99
77) o-Xylene	12.32	106	503859	10.1273 ug/L	98
78) Styrene	12.33	104	822883	10.2997 ug/L	98
79) Bromoform	12.56	173	220423	10.4755 ug/L	94
80) Isopropylben	12.84	105	1201950	9.9713 ug/L	98
81) cyclohexanone	12.92	55	380856	125.0094 ug/L	98
84) Bromobenzene	13.25	156	317446	9.8942 ug/L	93
85) 1122Tetrclta	13.21	83	490707	9.4650 ug/L	96
86) 123Triclproa	13.27	75	609019	9.4277 ug/L	98
87) 14dichloro2butene	13.30	53	165116	8.6969 ug/L	98
88) n-Propylbenz	13.43	91	1493240	9.9135 ug/L	97
89) 2chlorotolue	13.54	91	880505	9.5644 ug/L	97
90) 4chlorotolue	13.69	91	1023552	10.0380 ug/L	98
91) 135Trimebenz	13.69	105	1001885	9.7841 ug/L	94
92) tbutylbenzen	14.15	119	818213	9.6764 ug/L	96
93) 124Trimetben	14.22	105	993163	9.5452 ug/L	97
94) sbutylbenzen	14.47	105	1212905	9.6354 ug/L	97
95) 13Diclorbenz	14.61	146	517644	9.6669 ug/L	97
96) pIsopropylto	14.69	119	966642	9.2816 ug/L	97
97) 14dichlorobe	14.73	146	536274	9.6830 ug/L	99
98) 12dichlorobe	15.27	146	494005	9.5235 ug/L	94
99) nButylbenzen	15.28	91	929219	9.1190 ug/L	97
100) 12dibromo3cl	16.37	157	110053	9.5961 ug/L	88
101) 135Trichlorobenzene	16.71	180	341430	9.3484 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\CCVF2.D Vial: 23
Acq On : 28 Nov 2016 21:33 Operator: AGK-RLD
Sample : 132949,CCVF, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 21:53:39 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	300802	9.0009	ug/L	97
103) Hexachlorobu	17.78	225	143933	9.5943	ug/L	100
104) Naphthalene	17.82	128	929212	9.3745	ug/L	98
105) 123Trichlben	18.14	180	270380	9.3957	ug/L	96

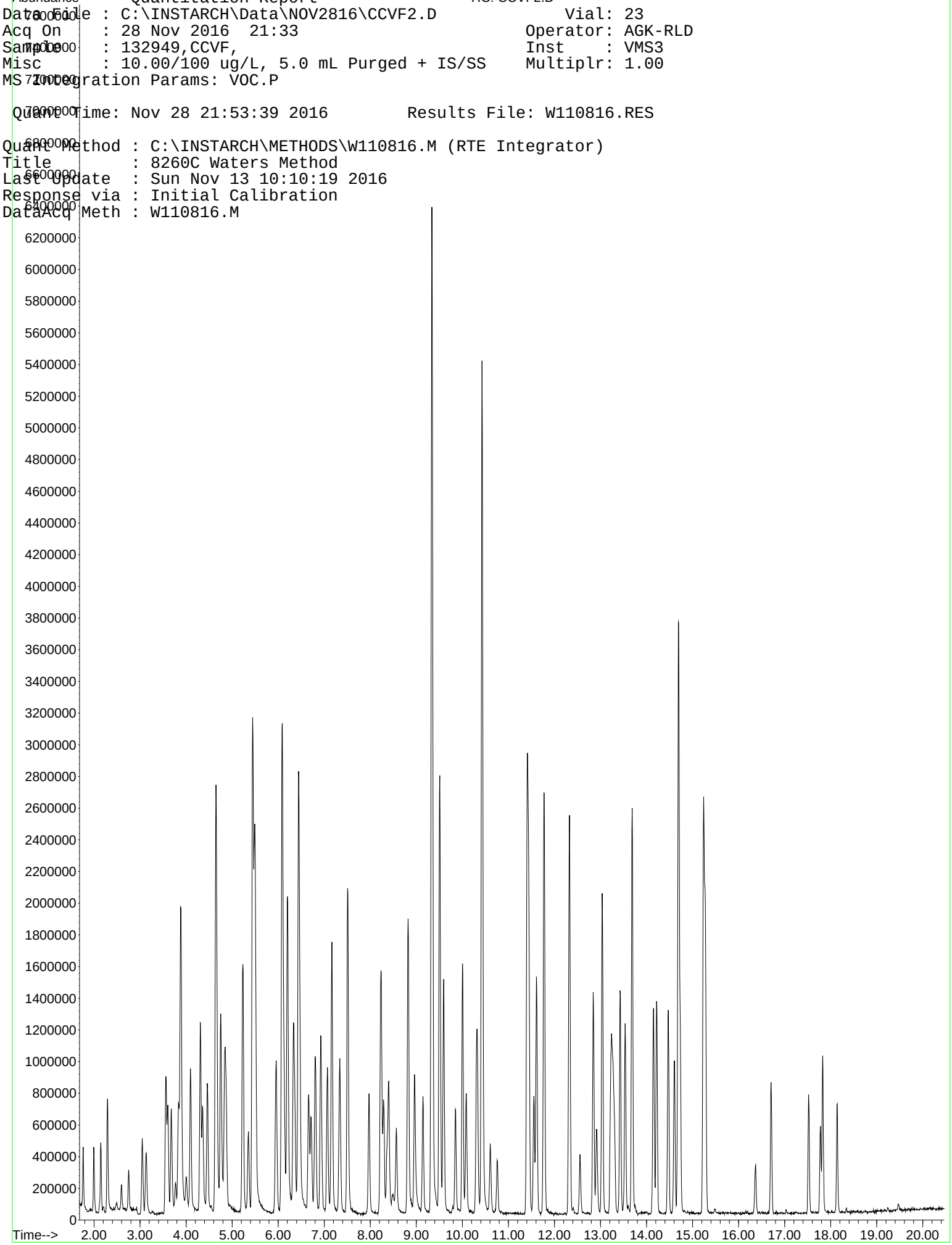
(#) = qualifier out of range (m) = manual integration

Quantitation Report (RTE Integrator)

Data File : C:\INSTARCH\Data\NOV2816\CCVF2.D Vial: 23
Acq On : 28 Nov 2016 21:33 Operator: AGK-RLD
Sample : 132949,CCVF, Inst : VMS3
Misc : 10.00/100 ug/L, 5.0 mL Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 21:53:39 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\TLCS1.D Vial: 4
Acq On : 28 Nov 2016 12:10 Operator: AGK-RLD
Sample : 133065,LCSW,100 Inst : VMS3
Misc : pH5, 10.00/100 ug/L, 5.0 mL Purged + IS/ Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:30:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	1193572	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	915603	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.69	152	494920	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	287554	19.221	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 96	%		
45) SURR12DCAd4	7.06	102	70093	17.468	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 87	%#		
61) SURRd8Tolule	9.51	98	1179838	19.513	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 98	%		
83) SURR4BrFBenz	13.04	95	447776	19.622	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 98	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	211305	12.0516	ug/L	98
3) Chloromethan	2.00	50	350323	11.0310	ug/L	96
4) VinylChlorid	2.15	62	298337	11.1556	ug/L	98
5) Bromomethane	2.59	94	66571	9.5537	ug/L	92
6) Chloroethane	2.74	64	137043	8.6647	ug/L	94
7) Dichloroflmethane	3.04	67	318216	11.1075	ug/L	95
8) Trichlorofma	3.13	101	219288	11.1331	ug/L	93
9) Ethylether	3.55	59	197343	11.3471	ug/L	95
10) dichlorotfluoroethan	3.56	67	183942	10.3862	ug/L	97
11) propyleneoxide	3.88	58	425070	104.9677	ug/L	94
12) Acrolein	3.67	56	384200	48.2056	ug/L	100
13) 11dichlorthe	3.83	96	153977	11.1876	ug/L	95
14) Trichlorotfluoroeth	3.87	101	271595	22.2652	ug/L	97
15) Acetone	3.89	43	1336430	106.2790	ug/L	98
16) Iodomethane	4.00	142	160117	23.4221	ug/L	98
17) Carbon Dislf	4.09	76	892918	23.5177	ug/L	99
18) allylchloride	4.31	41	796038	27.3382	ug/L	93
19) methylacetate	4.35	74	114244	11.8022	ug/L	98
20) Methylchlorid	4.45	84	264845	17.1318	ug/L	97
21) tbutylalcohol	4.65	59	2779221	516.0079	ug/L	98
22) Acrylonitrile	4.75	53	775439	55.9676	ug/L	100
23) t12dichlorte	4.83	96	152371	11.1694	ug/L	97
24) MtBE	4.86	73	471364	10.8206	ug/L	98
25) Hexane	5.23	57	692812	23.5076	ug/L	98
26) 11dichlorota	5.35	63	365441	10.8829	ug/L	99
27) Vinylacetate	5.44	43	4962516	126.9634	ug/L	97
28) chloroprene	5.48	53	813135	24.7933	ug/L	96
29) Diisopether	5.51	45	930061	12.9382	ug/L	93
30) ETBE	5.95	59	678114	11.7141	ug/L	99
31) 22dichloropr	6.08	77	243116	10.9340	ug/L	97
32) c12dichlorte	6.08	96	175088	10.1269	ug/L	97
33) 2Butanone	6.08	72	402063	97.3496	ug/L	99
34) propionitrile	6.11	54	655978	103.3292	ug/L	97
35) Ethylacetate	6.20	88	55813	52.9007	ug/L #	88
36) methacrylonitrile	6.33	67	238146	21.0711	ug/L #	79
37) Bromochlorma	6.36	128	72294	10.7424	ug/L	99
38) Tetrahydofur	6.44	42	1766830	124.1280	ug/L	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\TLCS1.D Vial: 4
Acq On : 28 Nov 2016 12:10 Operator: AGK-RLD
Sample : 133065,LCSW,100 Inst : VMS3
Misc : pH5, 10.00/100 ug/L, 5.0 mL Purged + IS/ Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:30:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	6.46	83	279322	10.6404	ug/L		97
40)	111trichlota	6.70	97	259239	11.1130	ug/L		93
42)	Cyclohexane	6.81	56	445532	11.7096	ug/L		98
43)	Carbtetraclo	6.94	119	199025	10.7984	ug/L		95
44)	11dicloprope	6.93	110	75530	10.3827	ug/L	#	89
46)	Benzene	7.16	78	699109	11.4543	ug/L		97
47)	12dichlorota	7.15	62	272282	10.2926	ug/L		96
48)	TAME	7.34	73	490615	11.2851	ug/L		97
49)	trichloroete	7.97	95	161230	10.6090	ug/L		96
50)	methylcyclohexane	8.24	83	273507	10.3966	ug/L		90
51)	12dicloropra	8.22	63	225827	10.6466	ug/L		96
52)	23Dicl1propene	8.29	75	265330	11.1269	ug/L		98
53)	Dibromometha	8.36	93	98077	9.5734	ug/L		98
54)	methylmethacrylate	8.40	69	176182	10.7119	ug/L		97
55)	14dioxane	8.41	88	72852	268.9454	ug/L		93
56)	Bromodiclrma	8.56	83	219146	11.4392	ug/L		95
57)	2Nitropropane	8.82	43	1210292	101.4998	ug/L		98
58)	2CLEVE	8.96	63	59499	34.1254	ug/L		96
59)	c13dicloproe	9.14	75	274126	10.3505	ug/L		93
60)	4Meth2Pentan	9.34	43	3986279	122.8281	ug/L		94
62)	Toluene	9.59	92	404666	10.7491	ug/L		98
63)	t13Dicloprop	9.85	75	248439	10.6021	ug/L		99
64)	ethylmethacrylate	10.01	69	520793	21.5937	ug/L		91
65)	112Triclotha	10.08	83	133110	10.3923	ug/L		93
66)	Tetrachlorte	10.32	166	165623	10.9199	ug/L		98
67)	13Diclorpropa	10.31	76	278670	10.5740	ug/L		99
69)	2Hexanone	10.43	43	3269525	111.1061	ug/L		94
70)	Clorodibrmta	10.61	129	143637	9.5649	ug/L		96
71)	12Dibrometha	10.76	107	152258	9.3301	ug/L		90
72)	Chlorobenzen	11.44	112	434627	10.2849	ug/L		98
73)	1Clhexane	11.44	91	228741	10.0356	ug/L		97
74)	1112Tetclota	11.56	131	138547	9.6438	ug/L		95
75)	Ethylbenzene	11.61	91	785775	10.8159	ug/L		99
76)	m p-Xylene	11.77	106	577217	20.5877	ug/L		96
77)	o-Xylene	12.32	106	278357	10.2835	ug/L		100
78)	Styrene	12.33	104	466058	10.7221	ug/L		96
79)	Bromoform	12.56	173	119855	10.4696	ug/L		93
80)	Isopropylben	12.84	105	703155	10.7219	ug/L		96
81)	cyclohexanone	12.91	55	261778	157.9315	ug/L		94
84)	Bromobenzene	13.24	156	172074	9.9850	ug/L		94
85)	1122Tetrclta	13.22	83	265516	9.5348	ug/L		98
86)	123Triclproa	13.27	75	333057	9.5988	ug/L		99
87)	14dichloro2butene	13.30	53	102292	10.0309	ug/L		91
88)	n-Propylbenz	13.43	91	869665	10.7491	ug/L		100
89)	2chlorotolue	13.53	91	494362	9.9975	ug/L		98
90)	4chlorotolue	13.69	91	547529	9.9970	ug/L		97
91)	135Trimebenz	13.69	105	580126	10.5475	ug/L		93
92)	tbutylbenzen	14.14	119	480405	10.5773	ug/L		96
93)	124Trimetben	14.22	105	573329	10.2587	ug/L		97
94)	sbutylbenzen	14.47	105	708306	10.4758	ug/L		96
95)	13Diclorbenz	14.60	146	305492	10.6213	ug/L		96
96)	pIsopropylto	14.69	119	573423	10.2507	ug/L		99
97)	14dichlorobe	14.73	146	290667	9.7710	ug/L		98
98)	12dichlorobe	15.26	146	280896	10.0816	ug/L		92
99)	nButylbenzen	15.28	91	548725	10.0255	ug/L		99
100)	12dibromo3cl	16.37	157	65204	10.5849	ug/L		87
101)	135Trichlorobenzene	16.71	180	187679	9.5669	ug/L		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\Data\NOV2816\TLCS1.D Vial: 4
Acq On : 28 Nov 2016 12:10 Operator: AGK-RLD
Sample : 133065,LCSW,100 Inst : VMS3
Misc : pH5, 10.00/100 ug/L, 5.0 mL Purged + IS/ Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:30:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.52	180	166860	9.2956	ug/L	95
103) Hexachlorobu	17.77	225	83670	10.3835	ug/L	97
104) Naphthalene	17.82	128	542331	10.1863	ug/L	97
105) 123Trichlben	18.14	180	151140	9.7781	ug/L	97

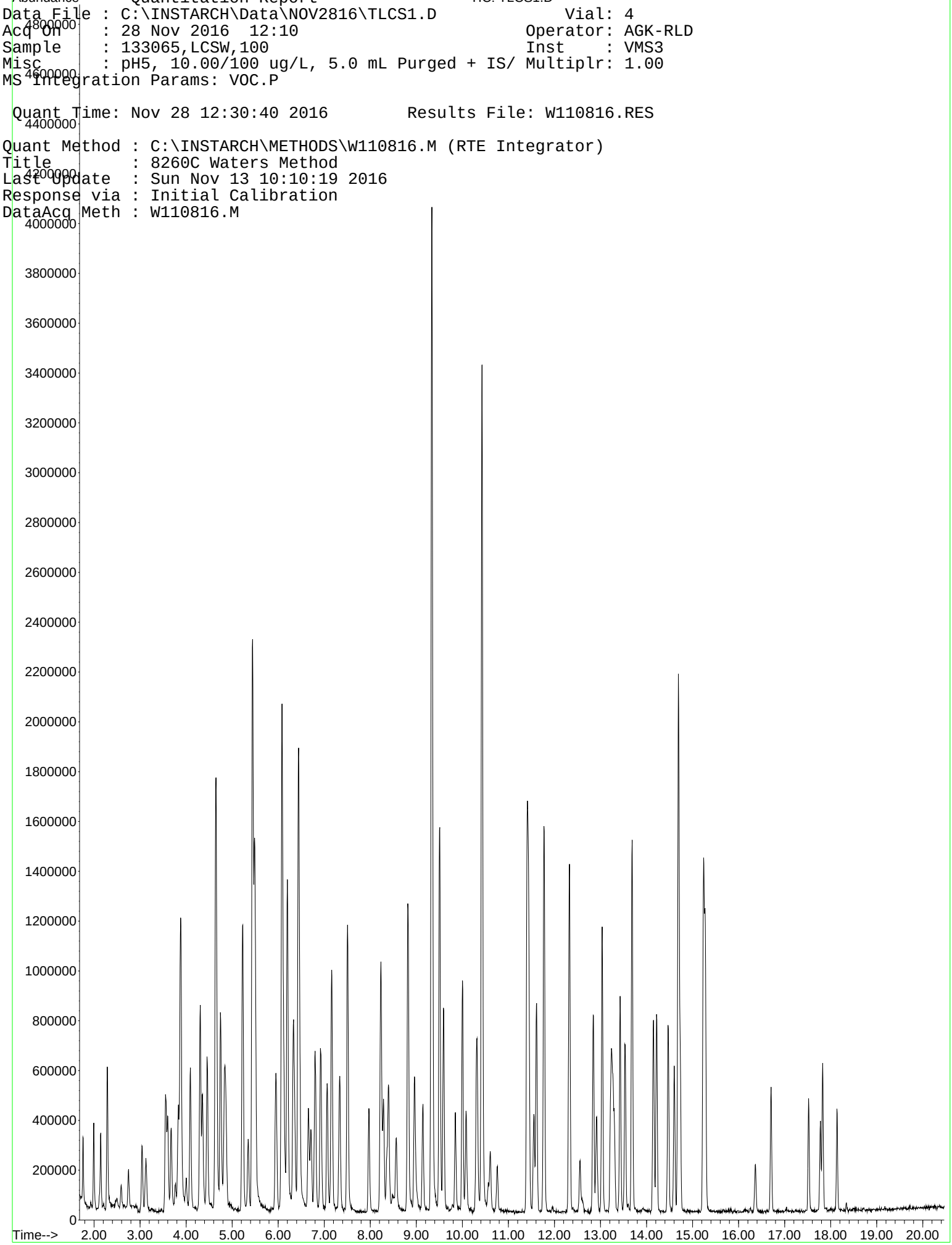
(#) = qualifier out of range (m) = manual integration
TLCS1.D W110816.M Wed Nov 30 15:34:38 2016

Abundance Quantitation Report TIC: TLCS1.D

Data File : C:\INSTARCH\Data\NOV2816\TLCS1.D Vial: 4
Acq On : 28 Nov 2016 12:10 Operator: AGK-RLD
Sample : 133065,LCSW,100 Inst : VMS3
Misc : pH5, 10.00/100 ug/L, 5.0 mL Purged + IS/ Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:30:40 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\TMB1.D Vial: 5
Acq On : 28 Nov 2016 12:38 Operator: AGK-RLD
Sample : 133065,MBW,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:59:20 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.50	96	1170163	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	917289	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	471137	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	295107	20.120	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 101	%		
45) SURR12DCAd4	7.07	102	79294	20.157	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 101	%		
61) SURRd8Tolule	9.50	98	1188013	20.041	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 100	%		
83) SURR4BrFBenz	13.04	95	430501	19.817	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 99	%		
Target Compounds						Qvalue
2) Dichlorodi	0.00	85	0	N.D.		
3) Chloromethan	2.00	50	9919	N.D.		
4) VinylChlorid	0.00	62	0	N.D.		
5) Bromomethane	0.00	94	0	N.D.		
6) Chloroethane	0.00	64	0	N.D.		
7) Dichloroflmethane	0.00	67	0	N.D.		
8) Trichlorofma	0.00	101	0	N.D.		
9) Ethylether	0.00	59	0	N.D.		
10) dichlorotfluoroethan	0.00	67	0	N.D.		
11) propyleneoxide	3.90	58	11246	N.D.		
12) Acrolein	3.68	56	4174	N.D.		
13) 11dichlorthe	0.00	96	0	N.D.		
14) Trichlorotfluoroeth	0.00	101	0	N.D.		
15) Acetone	3.90	43	38978	Below	Cal	93
16) Iodomethane	0.00	142	0	N.D.		
17) Carbon Dislf	4.09	76	13134	N.D.		
18) allylchloride	4.23	41	6954	N.D.		
19) methylacetate	0.00	74	0	N.D.		
20) Methylchlorid	4.45	84	74520	4.9168	ug/L	96
21) tbutylalcohol	4.65	59	32399	Below	Cal	98
22) Acrylonitrile	0.00	53	0	N.D.		
23) t12dichlorte	0.00	96	0	N.D.		
24) MtBE	0.00	73	0	N.D.		
25) Hexane	0.00	57	0	N.D.		
26) 11dichlorota	0.00	63	0	N.D.		
27) Vinylacetate	5.44	43	3484	Below	Cal #	78
28) chloroprene	0.00	53	0	N.D.		
29) Diisopether	0.00	45	0	N.D.		
30) ETBE	0.00	59	0	N.D.		
31) 22dichloropr	0.00	77	0	N.D.		
32) c12dichlorte	0.00	96	0	N.D.		
33) 2Butanone	0.00	72	0	N.D.		
34) propionitrile	0.00	54	0	N.D.		
35) Ethylacetate	0.00	88	0	N.D.		
36) methacrylonitrile	0.00	67	0	N.D.		
37) Bromochlorma	0.00	128	0	N.D.		
38) Tetrahydofur	6.45	42	13962	N.D.		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\TMB1.D Vial: 5
Acq On : 28 Nov 2016 12:38 Operator: AGK-RLD
Sample : 133065,MBW,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:59:20 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	Chloroform	0.00	83	0	N.D.			
40)	111trichlota	0.00	97	0	N.D.			
42)	Cyclohexane	0.00	56	0	N.D.			
43)	Carbtetraclo	0.00	119	0	N.D.			
44)	11dicloprope	0.00	110	0	N.D.			
46)	Benzene	0.00	78	0	N.D.			
47)	12dichlorota	0.00	62	0	N.D.			
48)	TAME	0.00	73	0	N.D.			
49)	trichloroete	0.00	95	0	N.D.			
50)	methylcyclohexane	0.00	83	0	N.D.			
51)	12dicloropra	0.00	63	0	N.D.			
52)	23Dicl1propene	0.00	75	0	N.D.			
53)	Dibromometha	0.00	93	0	N.D.			
54)	methylmethacrylate	0.00	69	0	N.D.			
55)	14dioxane	8.40	88	10758	40.5095	ug/L		86
56)	Bromodiclrma	0.00	83	0	N.D.			
57)	2Nitropropane	8.82	43	4258	1.5415	ug/L	#	59
58)	2CLEVE	0.00	63	0	N.D.			
59)	c13dicloproe	0.00	75	0	N.D.			
60)	4Meth2Pentan	9.35	43	10428	Below	Cal	#	39
62)	Toluene	0.00	92	0	N.D.			
63)	t13Dicloprop	0.00	75	0	N.D.			
64)	ethylmethacrylate	0.00	69	0	N.D.			
65)	112Triclotha	0.00	83	0	N.D.			
66)	Tetrachlorte	0.00	166	0	N.D.			
67)	13Diclorpropa	0.00	76	0	N.D.			
69)	2Hexanone	10.43	43	18733	Below	Cal	#	85
70)	Clorodibrmta	0.00	129	0	N.D.			
71)	12Dibrometha	0.00	107	0	N.D.			
72)	Chlorobenzen	0.00	112	0	N.D.			
73)	1Clhexane	0.00	91	0	N.D.			
74)	1112Tetclota	0.00	131	0	N.D.			
75)	Ethylbenzene	0.00	91	0	N.D.			
76)	m p-Xylene	0.00	106	0	N.D.			
77)	o-Xylene	0.00	106	0	N.D.			
78)	Styrene	0.00	104	0	N.D.			
79)	Bromoform	0.00	173	0	N.D.			
80)	Isopropylben	0.00	105	0	N.D.			
81)	cyclohexanone	12.92	55	15247	9.1817	ug/L	#	79
84)	Bromobenzene	0.00	156	0	N.D.			
85)	1122Tetrclta	0.00	83	0	N.D.			
86)	123Triclproa	0.00	75	0	N.D.			
87)	14dichloro2butene	0.00	53	0	N.D.			
88)	n-Propylbenz	0.00	91	0	N.D.			
89)	2chlorotolue	0.00	91	0	N.D.			
90)	4chlorotolue	0.00	91	0	N.D.			
91)	135Trimebenz	0.00	105	0	N.D.			
92)	tbutylbenzen	0.00	119	0	N.D.			
93)	124Trimetben	0.00	105	0	N.D.			
94)	sbutylbenzen	0.00	105	0	N.D.			
95)	13Diclorbenz	0.00	146	0	N.D.			
96)	pIsopropylto	0.00	119	0	N.D.			
97)	14dichlorobe	0.00	146	0	N.D.			
98)	12dichlorobe	0.00	146	0	N.D.			
99)	nButylbenzen	0.00	91	0	N.D.			
100)	12dibromo3cl	0.00	157	0	N.D.			
101)	135Trichlorobenzene	0.00	180	0	N.D.			

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\Data\NOV2816\TMB1.D Vial: 5
Acq On : 28 Nov 2016 12:38 Operator: AGK-RLD
Sample : 133065,MBW,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:59:20 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	0.00	180	0	N.D.		
103) Hexachlorobu	0.00	225	0	N.D.		
104) Naphthalene	17.83	128	10917	N.D.		
105) 123Trichlben	0.00	180	0	N.D.		

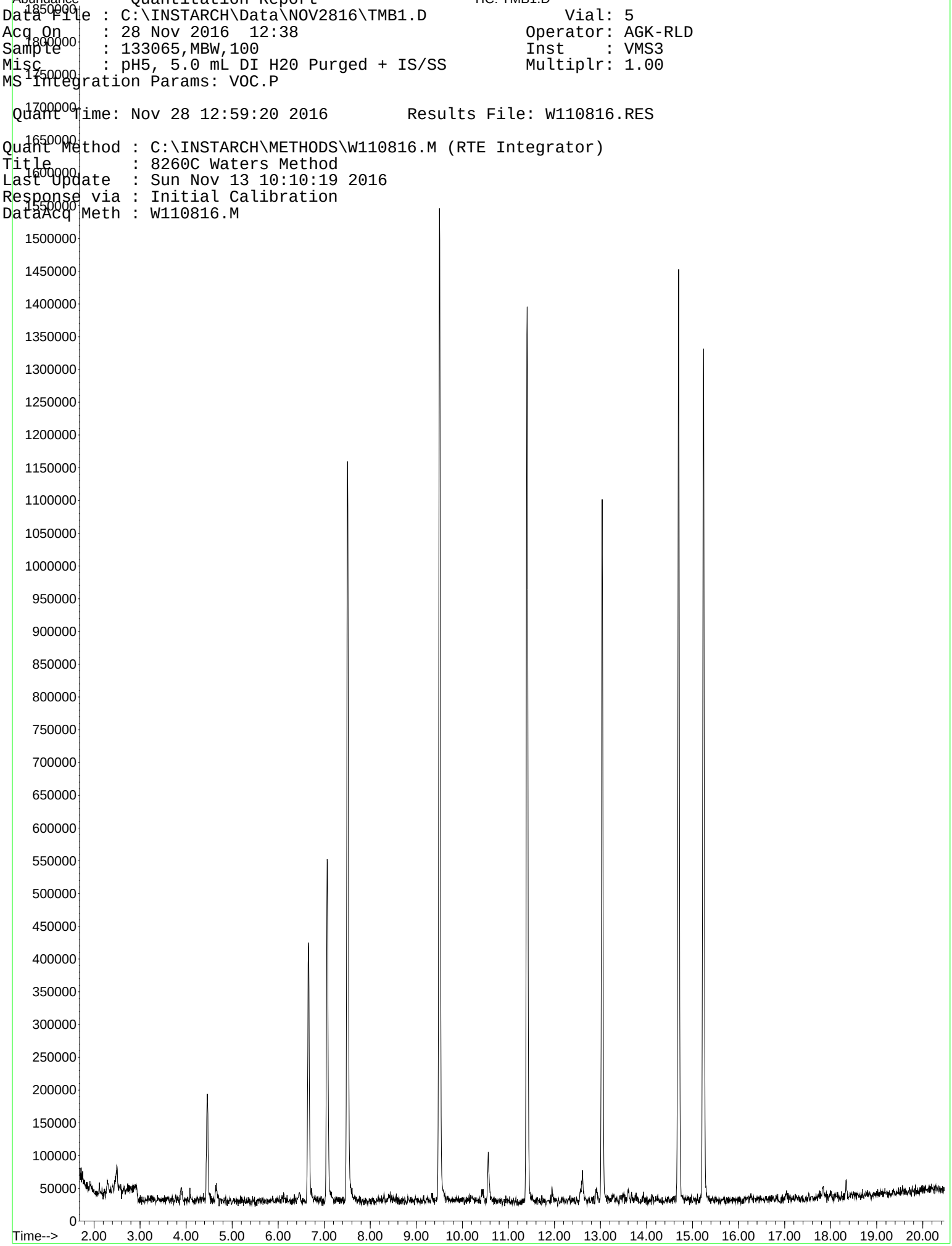
(#) = qualifier out of range (m) = manual integration

Abundance Quantitation Report TIC: TMB1.D

Data File : C:\INSTARCH\Data\NOV2816\TMB1.D Vial: 5
Acq On : 28 Nov 2016 12:38 Operator: AGK-RLD
Sample : 133065,MBW,100 Inst : VMS3
Misc : pH5, 5.0 mL DI H20 Purged + IS/SS Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 12:59:20 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809338MS.D Vial: 19
Acq On : 28 Nov 2016 19:32 Operator: AGK-RLD
Sample : 133083,MSW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 19:53:18 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	2136457	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1626115	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	899440	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	543812	20.307	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 102	%		
45) SURR12DCAd4	7.07	102	146665	20.420	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 102	%		
61) SURRd8Tolule	9.51	98	2164835	20.002	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 100	%		
83) SURR4BrFBenz	13.04	95	840771	20.273	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 101	%		
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	284390	9.0616	ug/L	99
3) Chloromethan	2.00	50	508106	8.8449	ug/L	99
4) VinylChlorid	2.15	62	456599	9.5384	ug/L	98
5) Bromomethane	2.59	94	140485	11.2635	ug/L	99
6) Chloroethane	2.75	64	243764	8.6104	ug/L	94
7) Dichloroflmethane	3.05	67	559104	10.9029	ug/L	95
8) Trichlorofma	3.13	101	375674	10.6553	ug/L	96
9) Ethylether	3.56	59	374865	12.0419	ug/L	92
10) dichlorotfluoroethan	3.57	67	337203	10.6370	ug/L	96
11) propyleneoxide	3.89	58	714204	98.5308	ug/L	91
12) Acrolein	3.68	56	603227	42.2839	ug/L	98
13) 11dichlorthe	3.83	96	252390	10.2449	ug/L	97
14) Trichlorotfluoroeth	3.88	101	432096	19.7897	ug/L	94
15) Acetone	3.89	43	2022933	88.4873	ug/L	96
16) Iodomethane	4.00	142	299422	24.2541	ug/L	98
17) Carbon Dislf	4.09	76	1405454	20.6802	ug/L	99
18) allylchloride	4.31	41	1159807	22.2523	ug/L	93
19) methylacetate	4.36	74	208750	12.0479	ug/L	97
20) Methylchlorid	4.47	84	358361	12.9505	ug/L #	82
21) tbutylalcohol	4.65	59	4749740	488.2396	ug/L	99
22) Acrylonitrile	4.75	53	1300089	52.4223	ug/L	100
23) t12dichlorte	4.84	96	276634	11.3289	ug/L	95
24) MtBE	4.87	73	896537	11.4979	ug/L	93
25) Hexane	5.23	57	1001939	18.9928	ug/L	98
26) 11dichlorota	5.35	63	639256	10.6355	ug/L	98
27) Vinylacetate	5.44	43	6800460	91.9040	ug/L	95
28) chloroprene	5.49	53	1281995	21.8380	ug/L	97
29) Diisopether	5.51	45	1437102	11.1687	ug/L	96
30) ETBE	5.95	59	1182580	11.4127	ug/L	99
31) 22dichloropr	6.08	77	377605	9.4877	ug/L	98
32) c12dichlorte	6.08	96	338336	10.9325	ug/L	93
33) 2Butanone	6.09	72	755955	102.2564	ug/L	98
34) propionitrile	6.13	54	1125806	99.0722	ug/L	98
35) Ethylacetate	6.20	88	107003	56.6600	ug/L #	66
36) methacrylonitrile	6.33	67	449751	22.2316	ug/L	91
37) Bromochlorma	6.36	128	141446	11.7421	ug/L #	73
38) Tetrahydofur	6.44	42	2498692	98.0714	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809338MS.D Vial: 19
Acq On : 28 Nov 2016 19:32 Operator: AGK-RLD
Sample : 133083,MSW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 19:53:18 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.47	83	519240	11.0503	ug/L	98
40)	111trichlota	6.72	97	435298	10.4250	ug/L	99
42)	Cyclohexane	6.81	56	682162	10.0163	ug/L	98
43)	Carbtetraclo	6.93	119	352470	10.6839	ug/L	100
44)	11dicloprope	6.92	110	139359	10.7024	ug/L	98
46)	Benzene	7.17	78	1213120	11.1040	ug/L	99
47)	12dichlorota	7.16	62	457122	9.6537	ug/L	99
48)	TAME	7.34	73	879819	11.3061	ug/L	99
49)	trichloroete	7.98	95	305388	11.2263	ug/L	92
50)	methylcyclohexane	8.24	83	461743	9.8057	ug/L	98
51)	12dicloropra	8.22	63	397986	10.4823	ug/L	99
52)	23Dicl1propene	8.29	75	474974	11.1278	ug/L	98
53)	Dibromometha	8.37	93	186064	10.1465	ug/L	94
54)	methylmethacrylate	8.40	69	314392	10.6791	ug/L	94
55)	14dioxane	8.41	88	149122	307.5522	ug/L	94
56)	Bromodiclrma	8.57	83	385524	11.2426	ug/L	99
57)	2Nitropropane	8.82	43	1803316	83.9021	ug/L	98
58)	2CLEVE	8.96	63	111576	35.3950	ug/L	98
59)	c13dicloproe	9.14	75	490959	10.3565	ug/L	97
60)	4Meth2Pentan	9.34	43	5563003	90.9079	ug/L	90
62)	Toluene	9.59	92	751246	11.1484	ug/L	95
63)	t13Dicloprop	9.85	75	424053	10.1099	ug/L	98
64)	ethylmethacrylate	10.00	69	989008	22.9096	ug/L	91
65)	112Triclotha	10.08	83	247703	10.8041	ug/L	97
66)	Tetrachlorte	10.32	166	280999	10.3504	ug/L	96
67)	13Diclorpropa	10.31	76	492726	10.4450	ug/L	100
69)	2Hexanone	10.43	43	4668400	86.0500	ug/L	89
70)	Clorodibrmta	10.60	129	269248	10.0953	ug/L	93
71)	12Dibrometha	10.76	107	288596	9.9575	ug/L	97
72)	Chlorobenzen	11.44	112	745395	9.9318	ug/L	97
73)	1Clhexane	11.44	91	359824	8.8889	ug/L	99
74)	1112Tetclota	11.55	131	251288	9.8486	ug/L	98
75)	Ethylbenzene	11.61	91	1343705	10.4141	ug/L	100
76)	m p-Xylene	11.77	106	984309	19.7677	ug/L	95
77)	o-Xylene	12.32	106	493345	10.2624	ug/L	99
78)	Styrene	12.33	104	793133	10.2740	ug/L	99
79)	Bromoform	12.56	173	208042	10.2325	ug/L	94
80)	Isopropylben	12.84	105	1157198	9.9354	ug/L	99
81)	cyclohexanone	12.92	55	434768	147.6894	ug/L	99
84)	Bromobenzene	13.24	156	316408	10.1028	ug/L	90
85)	1122Tetrclta	13.22	83	475373	9.3933	ug/L	94
86)	123Triclproa	13.27	75	588163	9.3273	ug/L	96
87)	14dichloro2butene	13.31	53	158602	8.5579	ug/L	99
88)	n-Propylbenz	13.43	91	1433095	9.7467	ug/L	100
89)	2chlorotolue	13.54	91	866909	9.6468	ug/L	98
90)	4chlorotolue	13.69	91	986882	9.9149	ug/L	97
91)	135Trimebenz	13.69	105	992265	9.9270	ug/L	95
92)	tbutylbenzen	14.16	119	807311	9.7807	ug/L	98
93)	124Trimetben	14.22	105	978643	9.6355	ug/L	100
94)	sbutylbenzen	14.47	105	1164436	9.4764	ug/L	98
95)	13Diclorbenz	14.61	146	509011	9.7380	ug/L	99
96)	pIsopropylto	14.69	119	932826	9.1757	ug/L	98
97)	14dichlorobe	14.73	146	506514	9.3691	ug/L	97
98)	12dichlorobe	15.26	146	479383	9.4674	ug/L	94
99)	nButylbenzen	15.28	91	892320	8.9708	ug/L	99
100)	12dibromo3cl	16.37	157	105441	9.4186	ug/L	88
101)	135Trichlorobenzene	16.71	180	330502	9.2703	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV2816\809338MS.D Vial: 19
Acq On : 28 Nov 2016 19:32 Operator: AGK-RLD
Sample : 133083,MSW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 19:53:18 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
102) 124Trichlobe	17.52	180	299070	9.1677 ug/L	97
103) Hexachlorobu	17.77	225	138881	9.4837 ug/L	95
104) Naphthalene	17.82	128	930707	9.6190 ug/L	98
105) 123Trichlben	18.14	180	250555	8.9195 ug/L	98

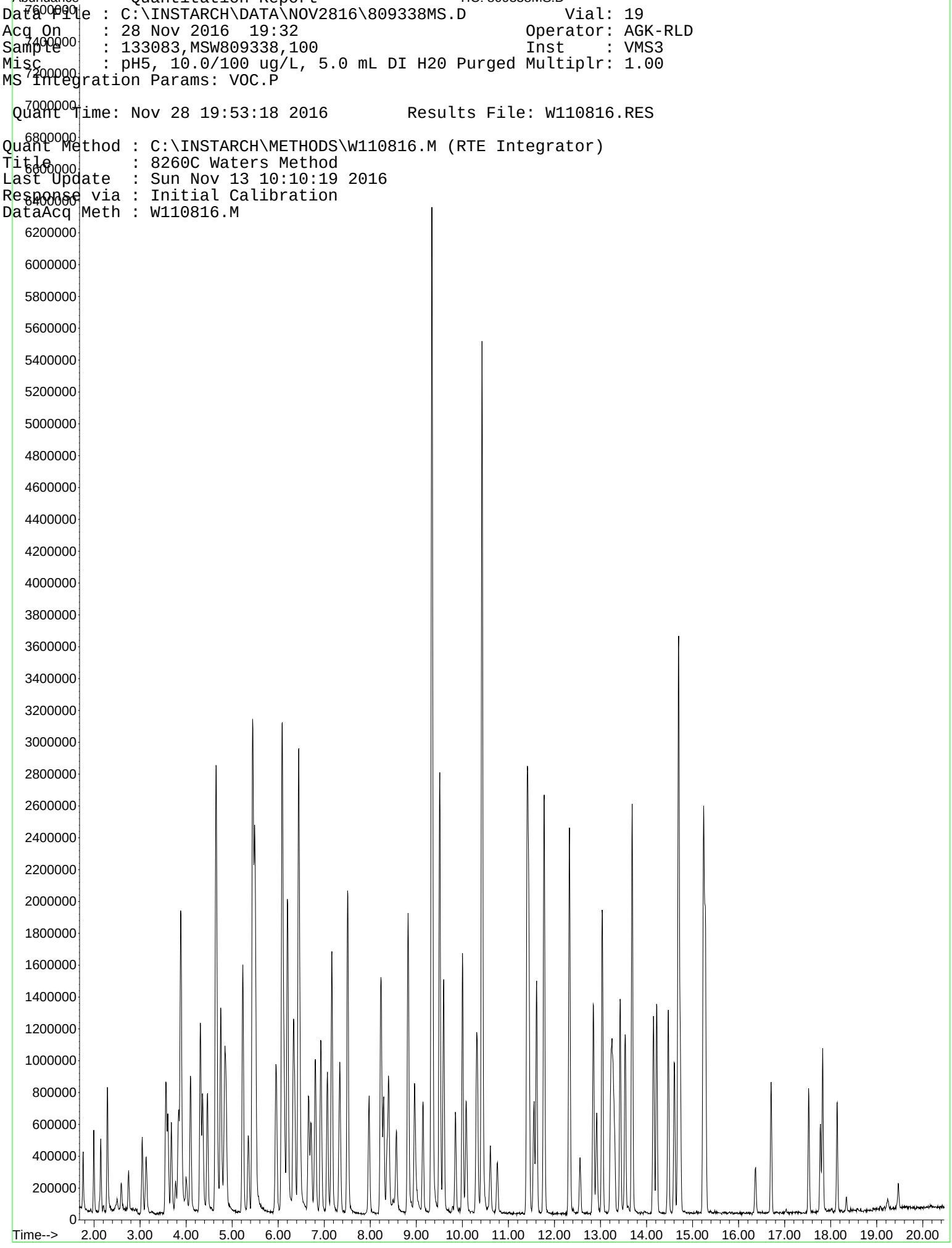
(#) = qualifier out of range (m) = manual integration
809338MS.D W110816.M Wed Nov 30 15:39:06 2016

Abundance Quantitation Report TIC: 809338MS.D

Data File : C:\INSTARCH\DATA\NOV2816\809338MS.D Vial: 19
Acq On : 28 Nov 2016 19:32 Operator: AGK-RLD
Sample : 133083,MSW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 19:53:18 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809338SD.D Vial: 20
Acq On : 28 Nov 2016 20:02 Operator: AGK-RLD
Sample : 133083,MSDW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 20:23:06 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) FLUOROBENZENE**ISTD**	7.51	96	2190989	20.00	ug/L	0.00 NA%
68) d5-CHLOROBENZENE**ISTD**	11.41	117	1684406	20.00	ug/L	0.00 NA%
82) d4-1,4-DICHLOROBENZENE**IS	14.70	152	914642	20.00	ug/L	0.00 NA%
System Monitoring Compounds						
41) SURRDibrflma	6.66	113	535042	19.483	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 97 %			
45) SURR12DCAd4	7.07	102	147505	20.026	ug/L	0.00
Spiked Amount 20.000	Range 89 - 112		Recovery = 100 %			
61) SURRd8Tolule	9.51	98	2207141	19.886	ug/L	0.00
Spiked Amount 20.000	Range 88 - 115		Recovery = 99 %			
83) SURR4BrFBenz	13.04	95	845921	20.058	ug/L	0.00
Spiked Amount 20.000	Range 80 - 125		Recovery = 100 %			
Target Compounds						Qvalue
2) Dichlorodi	1.76	85	294453	9.1487	ug/L	97
3) Chloromethan	2.00	50	510953	8.6647	ug/L	97
4) VinylChlorid	2.15	62	479862	9.7749	ug/L	100
5) Bromomethane	2.59	94	131027	10.2437	ug/L	91
6) Chloroethane	2.75	64	259484	8.9375	ug/L	96
7) Dichloroflmethane	3.05	67	590518	11.2289	ug/L	97
8) Trichlorofma	3.13	101	390641	10.8041	ug/L	93
9) Ethylether	3.56	59	372400	11.6649	ug/L	94
10) dichlorotfluoroethan	3.56	67	349849	10.7613	ug/L	96
11) propyleneoxide	3.89	58	756909	101.8234	ug/L #	85
12) Acrolein	3.68	56	646559	44.1933	ug/L	93
13) 11dichlorthe	3.83	96	264283	10.4607	ug/L	96
14) Trichlorotfluoroeth	3.88	101	459533	20.5225	ug/L	97
15) Acetone	3.89	43	2059838	87.8025	ug/L	93
16) Iodomethane	4.00	142	326370	25.4748	ug/L	97
17) Carbon Dislf	4.09	76	1474251	21.1526	ug/L	99
18) allylchloride	4.31	41	1141286	21.3520	ug/L	95
19) methylacetate	4.36	74	215633	12.1354	ug/L	100
20) Methylchlorid	4.46	84	341263	12.0256	ug/L #	88
21) tbutylalcohol	4.65	59	4819154	482.0322	ug/L	99
22) Acrylonitrile	4.75	53	1367070	53.7512	ug/L	100
23) t12dichlorte	4.84	96	290708	11.6090	ug/L	92
24) MtBE	4.86	73	889032	11.1179	ug/L	96
25) Hexane	5.23	57	1058935	19.5736	ug/L	98
26) 11dichlorota	5.35	63	659684	10.7022	ug/L	99
27) Vinylacetate	5.44	43	6868183	90.2607	ug/L	94
28) chloroprene	5.48	53	1357233	22.5442	ug/L	99
29) Diisopether	5.51	45	1411216	10.6946	ug/L	96
30) ETBE	5.95	59	1205326	11.3427	ug/L	98
31) 22dichloropr	6.08	77	390793	9.5746	ug/L	97
32) c12dichlorte	6.08	96	343784	10.8321	ug/L	92
33) 2Butanone	6.09	72	793881	104.7138	ug/L	96
34) propionitrile	6.12	54	1197781	102.7826	ug/L	100
35) Ethylacetate	6.21	88	106788	55.1388	ug/L #	76
36) methacrylonitrile	6.33	67	437859	21.1051	ug/L	97
37) Bromochlorma	6.36	128	135609	10.9773	ug/L #	84
38) Tetrahydofur	6.44	42	2569620	98.3450	ug/L	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\INSTARCH\DATA\NOV2816\809338SD.D Vial: 20
Acq On : 28 Nov 2016 20:02 Operator: AGK-RLD
Sample : 133083,MSDW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 20:23:06 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	Chloroform	6.47	83	530149	11.0016	ug/L	99
40)	111trichlota	6.72	97	477459	11.1501	ug/L	95
42)	Cyclohexane	6.80	56	722275	10.3413	ug/L	99
43)	Carbtetraclo	6.94	119	352390	10.4156	ug/L	96
44)	11dicloprope	6.92	110	141298	10.5812	ug/L	94
46)	Benzene	7.17	78	1268090	11.3183	ug/L	96
47)	12dichlorota	7.16	62	497746	10.2499	ug/L	100
48)	TAME	7.34	73	897315	11.2439	ug/L	100
49)	trichloroete	7.98	95	306907	11.0013	ug/L	95
50)	methylcyclohexane	8.24	83	453015	9.3809	ug/L	94
51)	12dicloropra	8.22	63	416501	10.6969	ug/L	99
52)	23Dicl1propene	8.29	75	470845	10.7565	ug/L	95
53)	Dibromometha	8.36	93	188556	10.0265	ug/L	94
54)	methylmethacrylate	8.40	69	328341	10.8753	ug/L	98
55)	14dioxane	8.41	88	137733	276.9932	ug/L	82
56)	Bromodiclrma	8.57	83	390345	11.0999	ug/L	99
57)	2Nitropropane	8.82	43	1922425	87.3286	ug/L	98
58)	2CLEVE	8.95	63	140683	41.8544	ug/L	96
59)	c13dicloproe	9.14	75	499403	10.2724	ug/L	98
60)	4Meth2Pentan	9.34	43	5677374	90.3878	ug/L	89
62)	Toluene	9.59	92	793172	11.4776	ug/L	100
63)	t13Dicloprop	9.85	75	446837	10.3880	ug/L	99
64)	ethylmethacrylate	10.00	69	997100	22.5222	ug/L	93
65)	112Triclotha	10.08	83	254793	10.8367	ug/L	96
66)	Tetrachlorte	10.32	166	307108	11.0305	ug/L	98
67)	13Diclorpropa	10.31	76	512176	10.5871	ug/L	99
69)	2Hexanone	10.43	43	4797747	85.2720	ug/L	89
70)	Clorodibrmta	10.60	129	283267	10.2534	ug/L	91
71)	12Dibrometha	10.76	107	298532	9.9439	ug/L	99
72)	Chlorobenzen	11.44	112	764065	9.8282	ug/L	97
73)	1Clhexane	11.43	91	389668	9.2930	ug/L	94
74)	1112Tetclota	11.56	131	264622	10.0123	ug/L	94
75)	Ethylbenzene	11.61	91	1371909	10.2647	ug/L	98
76)	m p-Xylene	11.78	106	1040741	20.1777	ug/L	100
77)	o-Xylene	12.32	106	526266	10.5683	ug/L	93
78)	Styrene	12.33	104	815886	10.2030	ug/L	98
79)	Bromoform	12.55	173	209054	9.9264	ug/L	89
80)	Isopropylben	12.84	105	1200217	9.9481	ug/L	99
81)	cyclohexanone	12.92	55	437684	143.5347	ug/L	98
84)	Bromobenzene	13.25	156	311822	9.7909	ug/L	95
85)	1122Tetrclta	13.22	83	494907	9.6167	ug/L	99
86)	123Triclproa	13.27	75	625087	9.7481	ug/L	99
87)	14dichloro2butene	13.30	53	160999	8.5429	ug/L	98
88)	n-Propylbenz	13.43	91	1473541	9.8552	ug/L	99
89)	2chlorotolue	13.54	91	892683	9.7685	ug/L	96
90)	4chlorotolue	13.69	91	1002810	9.9075	ug/L	99
91)	135Trimebenz	13.69	105	994218	9.7812	ug/L	96
92)	tbutylbenzen	14.16	119	804720	9.5873	ug/L	99
93)	124Trimetben	14.22	105	992715	9.6116	ug/L	98
94)	sbutylbenzen	14.47	105	1203940	9.6351	ug/L	97
95)	13Diclorbenz	14.60	146	500841	9.4224	ug/L	97
96)	pIsopropylto	14.69	119	963140	9.3164	ug/L	100
97)	14dichlorobe	14.73	146	502590	9.1420	ug/L	96
98)	12dichlorobe	15.26	146	475465	9.2339	ug/L	95
99)	nButylbenzen	15.28	91	929669	9.1910	ug/L	97
100)	12dibromo3cl	16.36	157	109021	9.5765	ug/L	91
101)	135Trichlorobenzene	16.71	180	330167	9.1070	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report
Data File : C:\INSTARCH\DATA\NOV2816\809338SD.D Vial: 20
Acq On : 28 Nov 2016 20:02 Operator: AGK-RLD
Sample : 133083,MSDW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 20:23:06 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102) 124Trichlobe	17.53	180	285969	8.6204	ug/L	96
103) Hexachlorobu	17.78	225	142186	9.5480	ug/L	99
104) Naphthalene	17.82	128	942888	9.5829	ug/L	100
105) 123Trichlben	18.14	180	259641	9.0894	ug/L	96

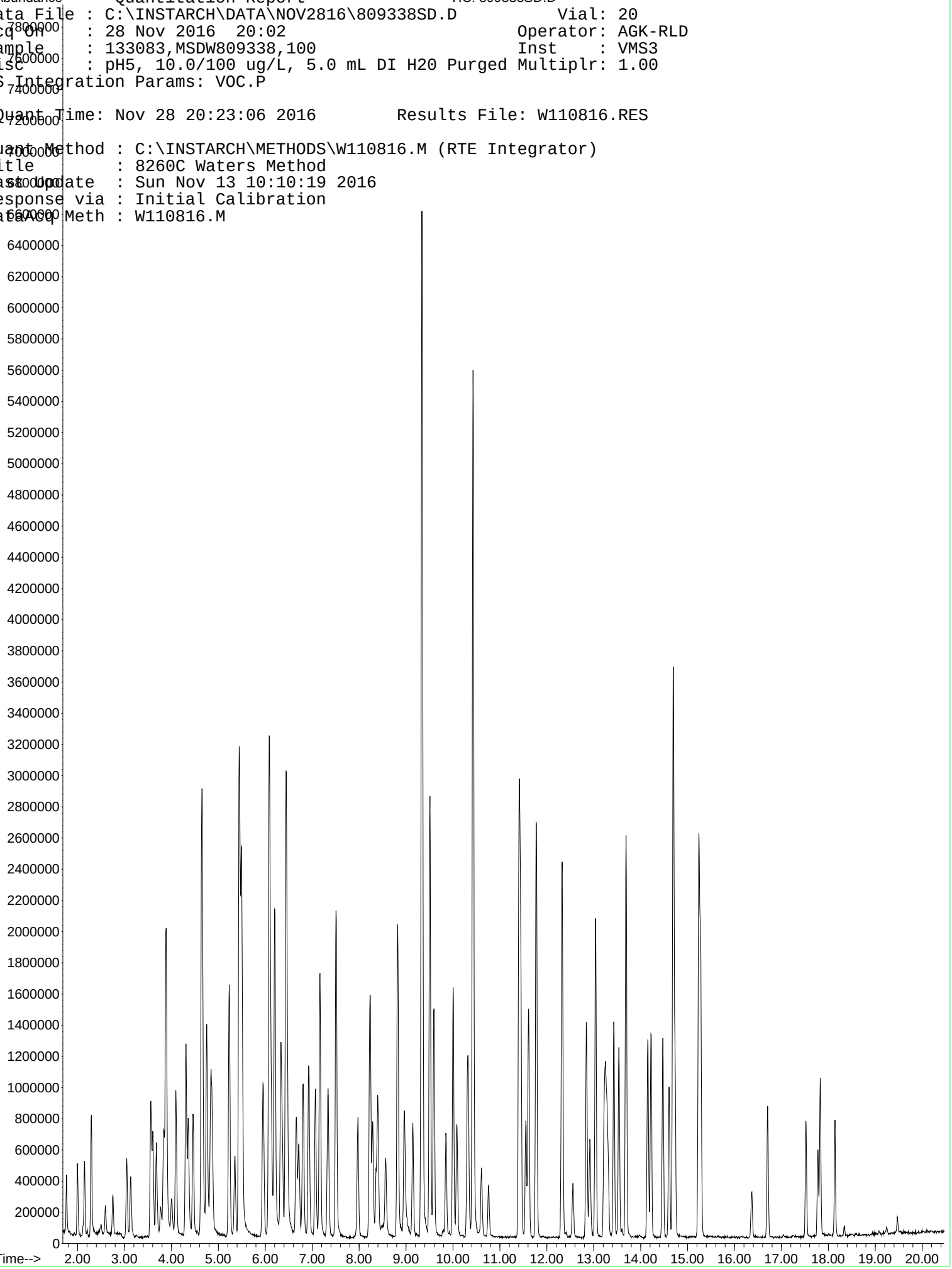
(#) = qualifier out of range (m) = manual integration
809338SD.D W110816.M Wed Nov 30 15:39:14 2016 Page 140 Page 3

Abundance Quantitation Report TIC: 809338SD.D

Data File : C:\INSTARCH\DATA\NOV2816\809338SD.D Vial: 20
Acq On : 28 Nov 2016 20:02 Operator: AGK-RLD
Sample : 133083,MSDW809338,100 Inst : VMS3
Misc : pH5, 10.0/100 ug/L, 5.0 mL DI H20 Purged Multiplr: 1.00
MS Integration Params: VOC.P

Quant Time: Nov 28 20:23:06 2016 Results File: W110816.RES

Quant Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Last Update : Sun Nov 13 10:10:19 2016
Response via : Initial Calibration
DataAcq Meth : W110816.M



VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

VOC 8260 QSM TCLP 5.0 Analytical Run
133083 on 11/30/2016

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME		QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	811387								VOC 8260 QSM TCLP 5.0				
					BFB					0			
	811384								VOC 8260 QSM TCLP 5.0				
					CCV					0			
	811251								VOC 8260 QSM TCLP 5.0				
					LCSW					0			
	811283								VOC 8260 QSM TCLP 5.0				
					MBW					0			
123805	809338		11/18/2016	1337			ERT	RVAAP FY16	VOC 8260 QSM TCLP 5.0		M	**4**	Y
		RVAAP-50-RT											
123805	809341		11/18/2016	1345			ERT	RVAAP FY16	VOC 8260 QSM TCLP 5.0		M	**4**	Y
		RVAAP-50-TD											
	811446		11/18/2016	1337					VOC 8260 QSM TCLP 5.0				
		RVAAP-50-RT			MSW	809338				0			
	811449		11/18/2016	1337					VOC 8260 QSM TCLP 5.0				
		RVAAP-50-RT			MSDW	811446				0			
	811444								VOC 8260 QSM TCLP 5.0				
					CCVF					0			

9 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

TCLP/SPLP/ASTM Extraction Summary

Batch: 27716 *Date:* 11/22/16 *Analyst (set up):* AGK *Analyst (take down):* AGK

Sample #	Parameter	Test			Vessel / ZHE	Buffer Determination			Sample wt.	**Free Liquids Present (Y/N)	Vol. Ext. Fluid	Initial pH	ZHE Initial Press	Time In	Date / Time Out	Ext. Time	End pH	ZHE End Press	Date / Time Filtered	Volume Filtered
	(M / SV / V / WC)	TCLP	SPLP	ASTM	#	Initial pH	End pH	*Ext. Fluid	(g)		(mL)		(psi)			(hrs)		(psi)		(mL)
MB	V	✓			2	-	-	1	—	N	500	5	10	15:36	11-23-16 9:30	18	5	10	11/23/16 / 9:38	—
809338	V	✓			3	-	-	1	25.00	N	500	5	10	15:30	11/23/16 / 9:30	18	5	10	11/23/16 / 9:47	—
809341	V	✓			7	-	-	1	24.98	N	500	5	10	15:30	11/23/16 / 9:30	18	5	10	11/23/16 / 9:54	—
808424	V	✓			6	-	-	1	24.74	N	500	5	10	15:30	11/23/16 / 9:30	18	5	10	11/23/16 / 9:44	—
808426	V	✓			1	-	-	1	25.04	N	500	5	10	15:30	11/23/16 / 9:30	18	5	10	11/23/16 / 10:00	—
808428	V	✓			4	-	-	1	25.00	N	500	5	10	15:30	11/23/16 / 9:30	18	5	10	11/23/16 / 9:51	—
808430	V	✓			5	-	-	1	25.01	N	500	5	10	15:30	11/23/16 / 9:30	18	7	10	11/23/16 / 9:35	—
									AGK 11/23/16						/				/	
															/				/	
															/				/	
															/				/	

**Extraction Fluid Used:* #1 *Ext. Fluid ID #:* M12986 *Ext. Fluid pH:* 4.93 ±05 *Ext. Start Temp (°C):* 21.0

Ext. End Temp(°C): 20.8 *(min:* 20.8 */ max:* 21.1) *Filter Manufacturer:* Environmental Express *Filter Lot #:* 40021-6251-APV

Balance: VUB01 *pH Meter:* — *1N HCL:* — *Tumbler Unit #(s):* #1 / #2

Acceptable rotation rate: 30 ±2 rpm *Verified Rotation rate:* 31 rpm

M=Metals, SV=Semi Volatiles, V=Volatiles, WC=Wet Chemistry

% Solids Calculation Worksheet

Tare weights (g) *Transfer weights (g)* *Separation weights (g)* *% Solids Calculations*

Sample #	A Filter wt.	B Filtrate Vessel wt.	C Transfer Vessel wt.	D Sample + Transfer Vessel	E Sample wt {D - C}	F Vessel wt. Post Transfer	G Residue wt. {F – C}	H Total Waste Amount {E – G}	I Filtrate Vessel + Filtrate	J Liquid Phase of Sample {I – B}	K Solid Phase of Sample {H – J}	L. % Solids (**) (K/H*100)	M Waste + Filter (Dry) wt. (g)	% Solids (Dry) ({M – A}/H)*100

(**) If Solids = <0.5%, treat filtrate as TCLP extract, if free liquid present use % Solids Calculation Worksheet

Reviewed By/Date: _____

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV2816\BFB1.D
Injection Date : 28 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 10:52 Total files within period : 28
Sample Directory : C:\INSTARCH\DATA\NOV2816\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name Misc Info	Date	Time
CCV1	1.00	1.00	1.00	133065,CCV, 10.00/100 ug/L, 5.0 mL Pu	28 Nov 2016	11:41
TLCS1	1.00	1.00	1.00	133065,LCSW,100 pH5, 10.00/100 ug/L, 5.0	28 Nov 2016	12:10
TMB1	1.00	1.00	1.00	133065,MBW,100 pH5, 5.0 mL DI H20 Purged	28 Nov 2016	12:38
809338	1.00	1.00	1.00	133083,809338,100 pH5, 5.0 mL DI H20 Purged	28 Nov 2016	13:36
809341	1.00	1.00	1.00	133083,809341,100 pH5, 5.0 mL DI H20 Purged	28 Nov 2016	14:05
809338MS	1.00	1.00	1.00	133083,MSW809338,100 pH5, 10.0/100 ug/L, 5.0 m	28 Nov 2016	19:32
809338SD	1.00	1.00	1.00	133083,MSDW809338,100 pH5, 10.0/100 ug/L, 5.0 m	28 Nov 2016	20:02
CCVF2	1.00	1.00	1.00	132949,CCVF, 10.00/100 ug/L, 5.0 mL Pu	28 Nov 2016	21:33

8260 ISTD/SSTD 20ug/ml VOC0248
8260 BFB STD. 50ug/ml VOC0247
8260 ICV STD. 100ug/ml VOC0249
8260 CCV/CALIB. 100ug/ml VOC0250

FVO4-01 Data Review Checklist

INDEPENDENT DATA REVIEW CHECKLIST		Method: GCMS (EPA SW-846 8260C)					
Analysis Date	LIMs Run #(s):	Analyst/Data Interpreter	Independent Reviewer	Date of Review	Approved? Yes	Approved? No	Instrument
11/28/2016	132065 132082 132083	AGK	RLD	11/30/2016	Yes		VMS3
Instructions: Complete one checklist per analytical sequence. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section and may require the initiation of a Nonconformance Report.							

Requirement:	Acceptance criteria	Analyst Review Yes	Analyst Review No	Independent Review Yes	Independent Review No	Comments:
I. BFB Tune Check						
Was a BFB tune check analyzed with acceptable results?	Relative abundance criteria met?	Yes		Yes		If no, Do not proceed with analyses.
II. Initial Calibration Verification (ICV)						
Was initial calibration performed using a minimum of five standard concentration levels (minimum of 6 levels for quadratic curves)?	Lowest standard at or below RL?	Yes		Yes		If no, recalibrate with required # of levels
Were the Average Relative Response Factors (ARRF) acceptable?	ARRF≥ specified limits (see SOP)	Yes		Yes		If no, analyses stopped, recalibrate.
Was a second-source ICV analyzed?	Required before sample analyses.	Yes		Yes		If no, analyze prior to sample analyses.
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		If no, reanalyzed ICV to address failures
Was Initial Calibration Blank (ICB) analyzed?	Required before sample analyses.	Yes		Yes		If no, analyzed ICB before sample analyses.
Were the ICB results for all target analytes less than the limit of detection (LOD).	<LOD or < project/program specific limits	Yes		Yes		If no, analyze another blank to address detects.
III. Continuing Calibration Verification (CCV)						
Was an acceptable BFB tune check run at the beginning of every twelve hour shift?	Relative abundance criteria met?	Yes		Yes		If no, reanalyze BFB until acceptable; re-tuning the instrument may be necessary.
Was a CCV analyzed after every 12 hour tune check?	Required before sample analyses.	Yes		Yes		If no, analyzed CCV after acceptable tune check.
Were all target compound %Deviation or %Drift acceptable?	%D < 20% or project/program specific	Yes		Yes		If no, reanalysis or recalibration may be required.
If necessary, were the results for outlying compounds qualified?						If yes, results qualified "Z"

IV. Blanks						
Was a Method Blank (MB) analyzed prior to analysis of samples?	1 per 20 samples or project/program specific.	Yes		Yes		If no, analyze a MB with each sample batch.
Were the MB results for all target analytes less than the limit of detection (LOD)?	*All target analytes <LOD or < project/program specific limits (<1/2 RL for DoD-QSM)	Yes		Yes		If no, reanalyze MB an all affected data if possible or see SOP for more detailed criteria
If analytes were detected in the MB with no associated positives in the samples, no further action is needed. If the analyte detects in the MB were greater than the acceptance criteria and there were detects in the samples, was the data qualified.?						If yes, affected results qualified "B"
V. Laboratory Control Spike (LCS)						
Was a LCS analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		If no, analyze a LCS with each sample batch.
Were the LCS recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		If no, Reanalyze LCS and all affected data if possible or data requires qualification.
If applicable, were associated sample detects (and non-detects for low recoveries) qualified?						If yes, affected results qualified "Q"
VI. Matrix Spike/Matrix Spike Duplicate (MS/MSD)						
Was a Martrix Spike (MS) and a Matrix Spike Duplicate (MSD) analyzed at the required frequency?	1 per 20 samples or project/program specific.	Yes		Yes		If no, analyze a MS/MSD pair with each sample batch.
Were the MS/MSD recoveries for all analytes within acceptance criteria?	Default 70-130%, or see internally generated limits, or project/program specified limits.	Yes		Yes		If no, qualify detects (with an "M" flag) in the parent sample, also qualify non-detects if MS/MSD recoveries were low.
Is the relative percent difference (RPD) for each analyte between the MS and MSD acceptable?	generated limits, or client specific limits.	Yes				If no, affected results qualified "Y"
VII. Sample Analyses						
Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		Yes		Yes		If no, instrument maintenance may be required to correct problems.
Were surrogate recoveries for all samples and QC within acceptance criteria?	Default 70-130%, or see internally generated program limits, or client specified limits.	Yes		Yes		If no, samples with high surrogate recoveries and no associated analyte detects were not reanalyzed. Low surrogate recoveries require reanalysis.
If possible, were the affected samples reanalyzed?						If no, see below **
**Were reported sample results with failing surrogate recoveries qualified?						If yes, affected results qualified "S"
Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed? If not qualify (X).	Target upper middle range of calibration curve.	Yes		Yes		
Did all samples meet hold time and preservation criteria as defined by method/program?	H2O sample: pH < 2 = 14 days, pH >2 = 7 days. Soil samples: 14 days (other criteria may apply)	Yes		Yes		If no, see below: If analyzed past hold, qualify "H" If improperly preserved qualify "T"
Were all samples and QC injected within 12 hours of BFB tune check?		Yes		Yes		If no, affected samples reanalyzed
Were internal standard recoveries acceptable relevant to associated ICAL?	Response = -50 to +200%; Ret. time = +/- 30 sec.	Yes		Yes		If no, affected samples reanalyzed

VIII. Records and Reporting						
Is sequence file / injection log present in the data package?		Yes		Yes		If no, include sequence run with raw data.
Were all data, calculations, and values verified in LIMS upon completion of data capture?		Yes		Yes		If no, recapture the data and verify data prior to validation.
Were manual integrations addressed properly and were the audit trails turned on (where applicable)?	Manual integration must be initialed, dated, and reason given, along with before & after chromatograms. Audit trail must be on (if available).	Yes		Yes		IF No, address manual integration and/or turn on audit trail feature and document reason why it may have been turned off.
Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, were any non-matrix related nonconformities documented in the NCR spreadsheet?		Yes		Yes		If No, include proper qualification(s) in LIMS and enter nonconformities into the NCR spreadsheet before data review/validation.

Non-applicable Yes/No cells are left blank

Comments:

Injection Log Summary Report

Method : C:\INSTARCH\METHODS\W110816.M (RTE Integrator)
Title : 8260C Waters Method
Start (Tune) File ID : C:\INSTARCH\DATA\NOV0816\BFB1.D
Injection Date : 8 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 15:49 Total files within period : 15
Sample Directory : C:\INSTARCH\DATA\NOV0816\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
WCAL1	1.00	1.00	1.00	INITIAL CALIB. PT1 0.50/5.00 ug/L, 5.0 mL Pu	8 Nov 2016	17:04
WCAL2	1.00	1.00	1.00	INITIAL CALIB. PT2 2.00/20.0 ug/L, 5.0 mL Pu	8 Nov 2016	17:34
WCAL3	1.00	1.00	1.00	INITIAL CALIB. PT3 5.00/50.0 ug/L, 5.0 mL Pu	8 Nov 2016	18:04
WCAL4	1.00	1.00	1.00	INITIAL CALIB. PT4 10.00/100 ug/L, 5.0 mL Pu	8 Nov 2016	18:34
WCAL5	1.00	1.00	1.00	INITIAL CALIB. PT5 20.00/200 ug/L, 5.0 mL Pu	8 Nov 2016	19:04
WCAL6	1.00	1.00	1.00	INITIAL CALIB. PT6 30.00/300 ug/L, 5.0 mL Pu	8 Nov 2016	19:34
WCAL7	1.00	1.00	1.00	INITIAL CALIB. PT7 40.00/400 ug/L, 5.0 mL Pu	8 Nov 2016	20:04
WCAL8	1.00	1.00	1.00	INITIAL CALIB. PT8 80.00/800 ug/L, 5.0 mL Pu	8 Nov 2016	20:34
ICV1	1.00	1.00	1.00	INITIAL CALIB. VERIF. 10.00/100 ug/L, 5.0 mL Pu	8 Nov 2016	21:33
ICV2	1.00	1.00	1.00	INITIAL CALIB. VERIF. 30.00/300 ug/L, 5.0 mL Pu	8 Nov 2016	22:03
ICB1	1.00	1.00	1.00	INITIAL CALIB. BLANK 5.0 mL DI H20 Purged + IS	8 Nov 2016	23:03

8260 ISTD/SSTD 20ug/ml VOC0248
8260 BFB STD. 50ug/ml VOC0247
8260 ICV STD. 100ug/ml VOC0249
8260 CCV/CALIB. 100ug/ml VOC0250

LPVO1-02 VOC
Volatiles Standards Prep Logbook
Logbook Created: 10/10/16
Balance used in reagent prep: VOB01

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Author: rdigmann on: 17.11.2016 08:10:05
Witness: akurth on: 21.11.2016 16:55:53
Project: Unassigned
Page Title: 110816

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0247	8260 BFB Std.	75uL of 2,000 ug/mL 4-Bromofluorobenzene Std. V726 into 2925uL of MeOH.	MeOH / OSolv/56029	50 ug/mL	11/08/2016	12/08/2016	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0248	8260 ISTD/SSTD	200uL of 2,500 ug/mL 8260 Istd./Sstd. Mix V0799 and 250uL of 2000 ug/mL 1,2-Dichlorobenzene-$_{d4}$ Std. V756 into 25mL of MeOH.	MeOH / OSolv/56029	20 ug/mL	11/08/2016	12/08/2016	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0249	8260 ICV/Spiking Std.	150uL of 2,000 ug/mL VOC Mix V0804, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0808, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0802 into 2250uL of MeOH.	MeOH / OSolv/56029	100 ug/mL	11/08/2016	11/15/2016	RLD

Standard ID #	Standard Prepped	Prep	Solvent / Lot #	Final Concentration	Prep Date	Expiration Date	Analyst
VOC0250	8260 CCV/Calib. Std.	150uL of 2,000 ug/mL VOC Mix V0800, 300uL of 1,000/10,000 ug/mL VOC 8260 Additions Std. V0807, and 300uL of 1,000/10,000 ug/mL 8260 Special Additions Std. V0801 into 2250uL of MeOH.	MeOH / OSolv/56029	100 ug/mL	11/08/2016	11/15/2016	RLD

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015

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Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0807	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	BW161011017
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
1,000 - 50,000 ug/mL	MeOH	04/19/2017	10/18/2016	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Standard.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0808	VOC 8260 Special Additions	SPEX CertiPrep	VO-CTWI-5	BW161011018
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
1,000 - 50,000 ug/mL	MeOH	04/09/2017	10/18/2016	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Standard.	

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015
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Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0804	8260 VOC Mix	AccuStandard	M-502-10X-PAK	216071115
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
2,000 ug/mL	MeOH	07/13/2019	09/26/2016	RLD
# of Ampules/Units:	5	Comments:	Used to prepare 8260 ICV/Spiking Std.	

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CT Laboratories, LLC

LSVO1-01
Volatiles Standards Logbook
Logbook Created: 12/08/2015
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Page Title: 083116

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0801	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	BW160824021
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
1,000 - 10,000 ug/mL	MeOH	11/22/2016	08/31/2016	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ICV/Spiking Std.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0802	VOC 8260 Additions	SPEX CertiPrep	VO-CTWI-12	BW160824022
Concentration	**Neat (% purity) or Solvent**	**Expiration Date**	**Date Received**	**Analyst**
1,000 - 10,000 ug/mL	MeOH	11/22/2016	08/31/2016	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 CCV/Calib. Std.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0799	8260 ISTD/SSTD Mix	Ultra Scientific	STM-540	CM-1098
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,500 ug/mL	MeOH	04/30/2018	08/22/2016	RLD
# of Ampules/Units:	2	Comments:	Used for 8260 ISTD/SSTD.	

Standard ID #	Compound/Standard Name	Supplier/Manufacturer	Standard Part #	Standard Lot #
V0800	8260 VOC Mix	Ultra Scientific	DWM-588-1	CP-2742
Concentration	Neat (% purity) or Solvent	Expiration Date	Date Received	Analyst
2,000 ug/mL	MeOH	07/31/2019	08/22/2016	RLD
# of Ampules/Units:	4	Comments:	Used for 8260 CCV/Calib. Std.	

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CT Laboratories, LLC

CTI VOLATILE STANDARDS LOGBOOK 1

CTI STANDARD NUMBER (EXAMPLE = CTIV001*)	COMPOUND or SOLUTION NAME	COMPOUND / SOLUTION SUPPLIER	STANDARD'S PART NUMBER	STANDARD'S LOT #	STANDARD CONCENTRATION [1] and EXPIRATION DATE	NEAT (N) or SOLUTION (S) (If neat list % purity, if solution list solvent)	DATE REC'D and ANALYST'S INITIALS	COMMENTS
V742	VOC 8260 Special Additions	SPEX	VO-CTWI-5	SM150526010	1000-50000 ug/mL, 11/22/15	MeOH	6/2/15, RD	2x1mL
V743	8260 VOC Mix.	Accu Standard	M-502-10X-PAK	21501040	2000 ug/mL, 1/12/18	MeOH	6/9/15, RD	5x1mL
V744	8260 VOC Mix	Ultra Sci.	DWM-588-1	CM-1859	2000 ug/mL, 5/31/18	MeOH	6/18/15, RD	2x1mL
V745	VOC 8260 Special Additions	SPEX	VO-CTWI-5	SM150526009	1000-50000 ug/mL, 11/22/15	MeOH	7/21/15, RD	2x1mL
V746	VOC 8260 Special Additions	SPEX	VO-CTWI-5	SM150526010	1000-50000 ug/mL, 11/22/15	MeOH	7/21/15, RD	2x1mL
V747	VOC 8260 Additions	SPEX	VO-CTWI-12	TS150721007	1000-10000 ug/mL, 10/19/15	MeOH	7/23/15, RD	2x1mL
V748	VOC 8260 Additions	SPEX	VO-CTWI-12	TS150721008	1000-10000 ug/mL, 10/19/15	MeOH	7/23/15, RD	2x1mL
V749	8260 VOC Mix	Ultra Sci.	DWM-588-1	CM-3808	2000 ug/mL, 8/31/18	MeOH	8/6/15, RD	2x1mL
V750	VOC 8260 Special Additions	SPEX	VO-CTWI-12	TS150901001	1000-50000 ug/mL, 11/30/15	MeOH	9/1/15, RD	2x1mL
V751	VOC 8260 Special Additions	SPEX	VO-CTWI-12	TS150904001	1000-50000 ug/mL, 12/3/15	MeOH	9/10/15, RD	2x1mL
V752	Fluorobenzene	Ultra Sci	STS-160-1	CL-3264	2000 ug/mL 9/30/18	MeOH	9/25/15 RD	4x1mL
V753	a,a,a-TFT	Ultra Sci	STS-220N-1	CM-5040	2000 ug/mL 10/31/19	MeOH	9/25/15 RD	4x1mL
V754	VOC 8360 Special Addition	SPEX	VO-CTWI-5	BW150925015	1,000-50,000 ug/mL 03/23/16	MeOH	10/02/15 Bms	2x1mL
V755	VOC 8260 Special Additions	SPEX	VO-CTWI-5	SM150925016	1,000-50,000 ug/mL 03/23/16	MeOH	10/02/15 Bms	2x1mL
V756	12-Dichlorobenzene-d4	Ultra Sci	STS-210-1	CG-1939Z	2000 ug/mL 9/30/18	MeOH	10/6/15 RD	4x1mL
V757	8260 VOC Mix	Ultra Sci	DWM-588-1	CM-3956	2000 ug/mL 8/31/18	MeOH	10/15/15 RD	4x1mL
V758	8260 VOC Mix.	Accustandard	M-502-10X-PAK	21508111	2000 ug/mL 8/25/18	MeOH	11/3/15 RD	5x1mL
V759	PVOC/GRO Mix	RESTEK	30095	A0112470	1,000/10,000 ug/mL 08/31/22	MeOH	11/10/15 Bms	2x1mL
V760	PVOC/GRO Mix	ULTRA	UST-100-1	CK-2547A	1,000/10,000 ug/mL 09/30/17	MeOH	11/10/15 Bms	4x1mL

* = If multiple vials of the same lot number and expiration date are received the standard will be given one CTI Standard # and each vial will have a alpha designation asigned to it. (Example = Three vials of DRO standard solution, CTI001A-C)

1 = If multiple analytes and all of the concentrations vary, mark VARIES.

RD 11/23/15

CTI VOLATILE STANDARDS LOGBOOK 1

CTI STANDARD NUMBER (EXAMPLE = CTIV001*)	COMPOUND or SOLUTION NAME	COMPOUND / SOLUTION SUPPLIER	STANDARD'S PART NUMBER	STANDARD'S LOT #	STANDARD CONCENTRATION [1] and EXPIRATION DATE	NEAT (N) or SOLUTION (S) (If neat list % purity, if solution list solvent)	DATE REC'D and ANALYST'S INITIALS	COMMENTS
V723	8260 Special Addition	SPEX	VO-CTWI-5	C114111900B	1000-50000 ug/mL 5/18/15	MeOH	RD 12/16/14	2 x 1mL
V724	8260 Special Addition	SPEX	VO-CTWI-5	C114111900G	1000-50000 ug/mL 5/18/15	MeOH	RD 12/16/14	2 x 1mL
V725	8260 ISTD/SSTD Mix	Ultra Sci.	STM-540	CK-2154	2500 ug/mL 7/31/16	MeOH	RD 12/18/14	4 x 1mL
V726	BFB Stn.	Ultra Sci.	STS-110N	CH-3248A	2000 ug/mL 11/30/17	MeOH	RD 12/18/14	2 x 1mL
V727	Acetylene Std.	AIRGAS	X03HE99C33A0037	54-124467791-1	200 PPMV 12/17/17	Helium	Bms 12/22/14	1 cylinder @ 28.7CF
V728	1,4-Dioxane Std.	SPEX	S-1715	C112121901Z	1000 ug/mL, 12/19/15	MeOH	RD 12/31/14	2 x 1mL
V729	VOC Mix	Ultra Sci	DWM-588-1	CL-5325	2000 ug/mL, 1/31/18	MeOH	RD 1/31/15	2 x 1mL
V730	Methane, Ethene, Ethane Std.	AIRGAS	X04HE99C353080	54-124292800-1	200 ppmV 02/03/16	He	Bms 02/03/15	Re-certified V619
V731	VOC 8260 Additions	SPEX	VO-CTWI-12	C115020 2012	1000-10000 ug/mL, 5/31/15	MeOH	RD 2/6/15	2 x 1mL
V732	VOC 8260 Additions	SPEX	VOCTWI-12	C115020 2013	1000-10000 ug/mL, 5/31/15	MeOH	RD 2/6/15	2 x 1mL
V733	8260 Special Additions	SPEX	VO-CTWI-5	C115030300.1	1000-50000 ug/mL, 8/30/15	MeOH	RD 3/11/15	2 x 1mL
V734	8260 Special Additions	SPEX	VO-CTWI-5	C115030 4006	1000-50000 ug/mL, 8/31/15	MeOH	RD 3/11/15	2 x 1mL
V735	VOC Mix	Accu Std.	M-502-10X	214111094	2000 ug/mL 11/12/17	MeOH	RD 3/31/15	2 x 1mL
V736	VOC Mixture	ULTRA SCI.	DWM-588-1	CM-0137	2000 ug/mL 02/28/18	MeOH	Bms 04/09/15	2 x 1mL
V737	Unleaded Gasoline	ULTRA SCI.	RGO-601-1	CH-0979A	5000 ug/mL 05/31/17	MeOH	Bms 04/09/15	2 x 1mL
V738	Unleaded Gasoline	RESTEK	30205	A0101022	50,000 ug/mL 03/28/21	MeOH	Bms 04/10/15	2 x 1mL
V739	VOC 8260 Additions	SPEX	VO-CTWI-12	TS150506001	1000-10000 ug/mL, 8/4/15	MeOH	RD 5/11/15	2 x 1mL
V740	VOC 8260 Additions	SPEX	VO-CTWI-12	TS150506002	1000-10000 ug/mL, 8/4/15	MeOH	RD 5/11/15	2 x 1mL
V741	VOC 8260 Special Additions	SPEX	VO-CTWI-5	SM150526009	1000-50000 ug/mL 11/22/15	MeOH	RD 6/2/15	2 x 1mL

* = If multiple vials of the same lot number and expiration date are received the standard will be given one CTI Standard # and each vial will have a alpha designation asigned to it. (Example = Three vials of DRO standard solution, CTI001A-C)

1 = If multiple analytes and all of the concentrations vary, mark VARIES.

RD 6/2/15

SEMI-VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL SUMMARY
DOCUMENTS

CT LABORATORIES
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1B

SEMIVOLATILE ORGANICS ANALYSIS

Sample Description: **RVAAP-50-RT**

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:	TCLP	SDG No.:	123805
Sample wt/vol:	0.100 (g/L)	CTL Sample ID:	809338
% Solids:		Date Received:	11/19/2016
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	11/28/2016 / 09:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	60339
Analytical Run #:	133118	Dilution Factor:	1.00
Date & Time Analyzed:	11/28/2016 / 18:09	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			11/23/2016 / 09:30
ICAL Calibration #:	1S110916	Concentration Units:	mg/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
106-46-7	1,4-Dichlorobenzene	0.0040	U	0.0019	0.0040	0.010	0.010
95-95-4	2,4,5-Trichlorophenol	0.020	U	0.011	0.020	0.050	0.050
88-06-2	2,4,6-Trichlorophenol	0.020	U	0.010	0.020	0.050	0.050
121-14-2	2,4-Dinitrotoluene	0.0040	U	0.0021	0.0040	0.010	0.010
95-48-7	2-Methylphenol	0.020	U	0.0086	0.020	0.050	0.050
1319-77-3	3 & 4-Methylphenol	0.036	U	0.014	0.036	0.090	0.090
118-74-1	Hexachlorobenzene	0.0040	U	0.0027	0.0040	0.010	0.010
87-68-3	Hexachlorobutadiene	0.0040	U	0.0018	0.0040	0.010	0.010
67-72-1	Hexachloroethane	0.0040	U	0.0022	0.0040	0.010	0.010
98-95-3	Nitrobenzene	0.0040	U	0.0016	0.0040	0.010	0.010
87-86-5	Pentachlorophenol	0.020	U	0.011	0.020	0.050	0.050
110-86-1	Pyridine	0.010	U	0.0062	0.010	0.030	0.040

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1B

SEMIVOLATILE ORGANICS ANALYSIS

Sample Description: **RVAAP-50-TD**

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:	TCLP	SDG No.:	123805
Sample wt/vol:	0.100 (g/L)	CTL Sample ID:	809341
% Solids:		Date Received:	11/19/2016
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	11/28/2016 / 09:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	60339
Analytical Run #:	133118	Dilution Factor:	1.00
Date & Time Analyzed:	11/28/2016 / 18:28	GPC Cleanup Date/Time:	/
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			11/23/2016 / 09:30
ICAL Calibration #:	1S110916	Concentration Units:	mg/L

CAS NO.	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
106-46-7	1,4-Dichlorobenzene	0.0040	U	0.0019	0.0040	0.010	0.010
95-95-4	2,4,5-Trichlorophenol	0.020	U	0.011	0.020	0.050	0.050
88-06-2	2,4,6-Trichlorophenol	0.020	U	0.010	0.020	0.050	0.050
121-14-2	2,4-Dinitrotoluene	0.0040	U	0.0021	0.0040	0.010	0.010
95-48-7	2-Methylphenol	0.020	U	0.0086	0.020	0.050	0.050
1319-77-3	3 & 4-Methylphenol	0.036	U	0.014	0.036	0.090	0.090
118-74-1	Hexachlorobenzene	0.0040	U	0.0027	0.0040	0.010	0.010
87-68-3	Hexachlorobutadiene	0.0040	U	0.0018	0.0040	0.010	0.010
67-72-1	Hexachloroethane	0.0040	U	0.0022	0.0040	0.010	0.010
98-95-3	Nitrobenzene	0.0040	U	0.0016	0.0040	0.010	0.010
87-86-5	Pentachlorophenol	0.014	J	0.011	0.020	0.050	0.050
110-86-1	Pyridine	0.010	U	0.0062	0.010	0.030	0.040

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Sample Description

METHOD BLANK

1B-2

SEMIVOLATILE ORGANICS ANALYSIS (MB or CC

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:		SDG No.:	123805
Sample wt/vol:	0.100 (g/L)	CTL Sample ID:	810945
% Solids:		Date Received:	11/19/2016
Conc. Extract Vol:	1.0 (mL)	Date/Time Prepared:	11/28/2016 / 09:30
Analytical Method:	EPA 8270D	Analytical Prep Batch #	60339
Analytical Run #:	133118	Dilution Factor:	1.00
Cleanup Date/Time/Type:	. . ,		
TCLP / SPLP / MLP or ASTM Procedure Extraction Date (*if applicable*):			11/23/2016 / 09:30
ICAL Calibration #:	1S110916	Concentration Units:	mg/L

CAS NO.	Analyte	Analysis Date/Time		Concentration	Qualifiers	DL/LOD	RL	*Control Limit*
106-46-7	1,4-Dichlorobenzene	11/28/2016	16:35	0.00019	U	0.00019	0.00100	***0.00050***
95-95-4	2,4,5-Trichlorophenol	11/28/2016	16:35	0.0011	U	0.0011	0.0050	***0.0025***
88-06-2	2,4,6-Trichlorophenol	11/28/2016	16:35	0.0010	U	0.0010	0.0050	***0.0025***
121-14-2	2,4-Dinitrotoluene	11/28/2016	16:35	0.00021	U	0.00021	0.00100	***0.00050***
95-48-7	2-Methylphenol	11/28/2016	16:35	0.00086	U	0.00086	0.00500	***0.002500***
1319-77-3	3 & 4-Methylphenol	11/28/2016	16:35	0.0014	U	0.0014	0.0090	***0.0045***
118-74-1	Hexachlorobenzene	11/28/2016	16:35	0.00027	U	0.00027	0.00100	***0.00050***
87-68-3	Hexachlorobutadiene	11/28/2016	16:35	0.00018	U	0.00018	0.00100	***0.00050***
67-72-1	Hexachloroethane	11/28/2016	16:35	0.00022	U	0.00022	0.00100	***0.00050***
98-95-3	Nitrobenzene	11/28/2016	16:35	0.00016	U	0.00016	0.00100	***0.00050***
87-86-5	Pentachlorophenol	11/28/2016	16:35	0.0011	U	0.0011	0.0050	***0.0025***
110-86-1	Pyridine	11/28/2016	16:35	0.00062	U	0.00062	0.00400	***0.00200***

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2C

WATER SEMI VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Analytical Method:	EPA 8270D	SDG:	123805
Analytical Run #:	133118	ICAL Calibration #:	1S110916

CTLab #	804535				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	78	43	140	
Surr: 2-Fluorobiphenyl	100	82	44	119	
Surr: 2-Fluorophenol	100	62	19	119	
Surr: Nitrobenzene-d5	100	73	44	120	
Surr: Phenol-d5	100	55	1	114	
Surr: Terphenyl-d14	100	81	50	134	

CTLab #	804567				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	71	43	140	
Surr: 2-Fluorobiphenyl	100	75	44	119	
Surr: 2-Fluorophenol	100	49	19	119	
Surr: Nitrobenzene-d5	100	66	44	120	
Surr: Phenol-d5	100	48	1	114	
Surr: Terphenyl-d14	100	79	50	134	

CTLab #	805712				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	35	43	140	*FAIL*
Surr: 2-Fluorobiphenyl	100	37	44	119	*FAIL*
Surr: 2-Fluorophenol	100	33	19	119	
Surr: Nitrobenzene-d5	100	32	44	120	*FAIL*
Surr: Phenol-d5	100	22	1	114	
Surr: Terphenyl-d14	100	42	50	134	*FAIL*

CTLab #	809338				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	73	43	140	
Surr: 2-Fluorobiphenyl	100	73	44	119	
Surr: 2-Fluorophenol	100	53	19	119	
Surr: Nitrobenzene-d5	100	64	44	120	
Surr: Phenol-d5	100	48	1	114	
Surr: Terphenyl-d14	100	77	50	134	

CTLab #	809341				
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	84	43	140	
Surr: 2-Fluorobiphenyl	100	82	44	119	
Surr: 2-Fluorophenol	100	56	19	119	
Surr: Nitrobenzene-d5	100	68	44	120	
Surr: Phenol-d5	100	48	1	114	
Surr: Terphenyl-d14	100	92	50	134	

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2C

WATER SEMI VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Analytical Method:	EPA 8270D	SDG:	123805
Analytical Run #:	133118	ICAL Calibration #:	1S110916

CTLab #	810945	Sample Type:		Method Blank	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	74.6	43	140	
Surr: 2-Fluorobiphenyl	100	77.7	44	119	
Surr: 2-Fluorophenol	100	55.5	19	119	
Surr: Nitrobenzene-d5	100	72.9	44	120	
Surr: Phenol-d5	100	50.0	1	114	
Surr: Terphenyl-d14	100	85.0	50	134	

CTLab #	810946	Sample Type:		Lab Control Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	81.6	43	140	
Surr: 2-Fluorobiphenyl	100	95.0	44	119	
Surr: 2-Fluorophenol	100	83.6	19	119	
Surr: Nitrobenzene-d5	100	85.3	44	120	
Surr: Phenol-d5	100	76.3	1	114	
Surr: Terphenyl-d14	100	96.9	50	134	

CTLab #	810948	Sample Type:		Matrix Spike	
Surrogate	**Spike Amount**	**% Recovery**	**Lower Limit**	**Upper Limit**	**Qualifier**
Surr: 2,4,6-Tribromophenol	100	72.0	43	140	
Surr: 2-Fluorobiphenyl	100	85.3	44	119	
Surr: 2-Fluorophenol	100	74.6	19	119	
Surr: Nitrobenzene-d5	100	76.5	44	120	
Surr: Phenol-d5	100	69.3	1	114	
Surr: Terphenyl-d14	100	87.3	50	134	

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3C

Sample Description

LCS

WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

Sample No.: 810946 SDG No.: 123805

Analytical Method: EPA 8270D Concentration Units: mg/L

Sample No.: 810946 Parent Sample No.: 0

Analytical Prep Batch #: 60339 Analytical Preparation Date/Time: 11/28/2016 09:30

Analytical Run #: 133118 ICAL Calibration #: 1S110916

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,4-Dichlorobenzene	11/28/2016	17:13	29-112	0.164		0.200	82
2,4,5-Trichlorophenol	11/28/2016	17:13	53-123	0.183		0.200	92
2,4,6-Trichlorophenol	11/28/2016	17:13	50-125	0.177		0.200	88
2,4-Dinitrotoluene	11/28/2016	17:13	57-128	0.203		0.200	102
2-Methylphenol	11/28/2016	17:13	30-117	0.191		0.200	96
3 & 4-Methylphenol	11/28/2016	17:13	29-110	0.192		0.200	96
Hexachlorobenzene	11/28/2016	17:13	53-125	0.168		0.200	84
Hexachlorobutadiene	11/28/2016	17:13	22-124	0.139		0.200	70
Hexachloroethane	11/28/2016	17:13	21-115	0.160		0.200	80
Nitrobenzene	11/28/2016	17:13	45-121	0.159		0.200	80
Pentachlorophenol	11/28/2016	17:13	35-138	0.189		0.200	94
Pyridine	11/28/2016	17:13	0-106	0.113		0.200	56

Spike Recovery: 0 out of 12 outside limits

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

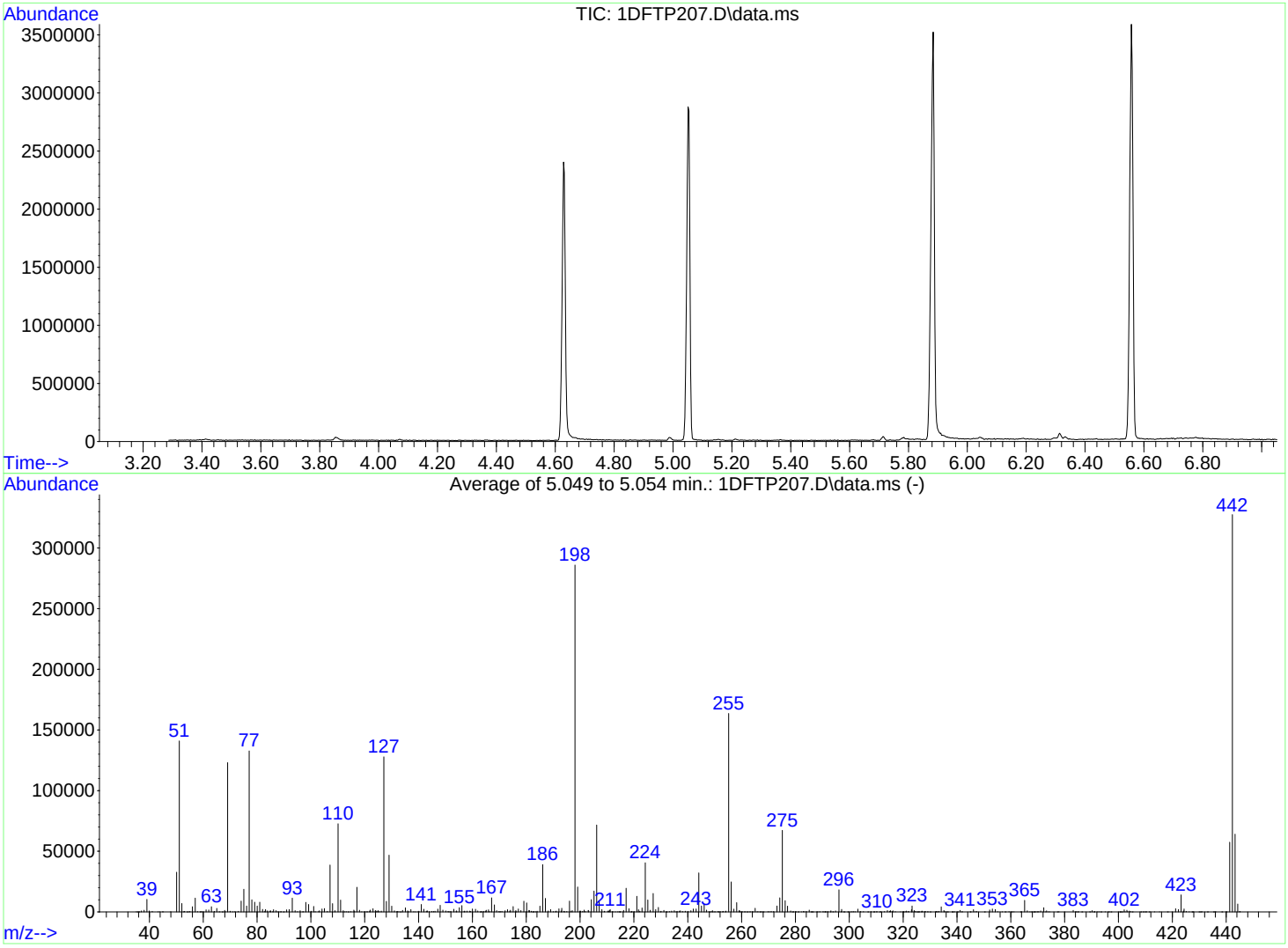
Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Sample ID:	810945	SDG No.:	123805
Matrix:	LIQUID	Date Extracted:	11/28/2016
Date Analyzed:	11/28/2016	Time Analyzed:	16:35
Analytical Method:	EPA 8270D	Extraction Method:	SW3510
Analytical Run #:	133118	Extraction Batch #:	60339
		ICAL Calibration #:	1S110916

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

SEQUENCE	SAMPLE DESCRIPTION	SAMPLE ID	DATE/TIME ANALYZED	CALIBRATION # ID
1	MBW	810945	11/28/2016 16:35	1S110916
2	LCSW	810946	11/28/2016 17:13	1S110916
3	RVAAP-50-RT	809338	11/28/2016 18:09	1S110916
4	RVAAP-50-TD	809341	11/28/2016 18:28	1S110916
5	F1-IDW-BINMSW	810948	11/28/2016 19:06	1S110916

Data File : C:\INSTARCH\Data\1S110916\1DFTP207.D Vial: 1
Acq On : 9 Nov 2016 10:49 Operator: JJY
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE

Method : C:\INSTARCH\Methods\1DFTPP.M
Title : DFTPP TUNE Method
Last Update : Fri Nov 04 12:05:16 2016



AutoFind: Scans 621, 622, 623; Background Corrected with Scan 610

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	43.0	140970	PASS
68	69	0.00	2	1.1	1338	PASS
70	69	0.00	2	0.5	584	PASS
127	442	10	80	39.0	127829	PASS
197	198	0.00	2	0.3	996	PASS
198	442	50	100	87.3	285973	PASS
199	198	5	9	7.2	20509	PASS
275	442	10	60	20.5	67229	PASS
365	198	1	100	3.3	9562	PASS
441	442	0.01	24	17.6	57528	PASS
442	442	50	100	100.0	327509	PASS
443	442	15	24	19.6	64053	PASS

Injection Log Summary Report

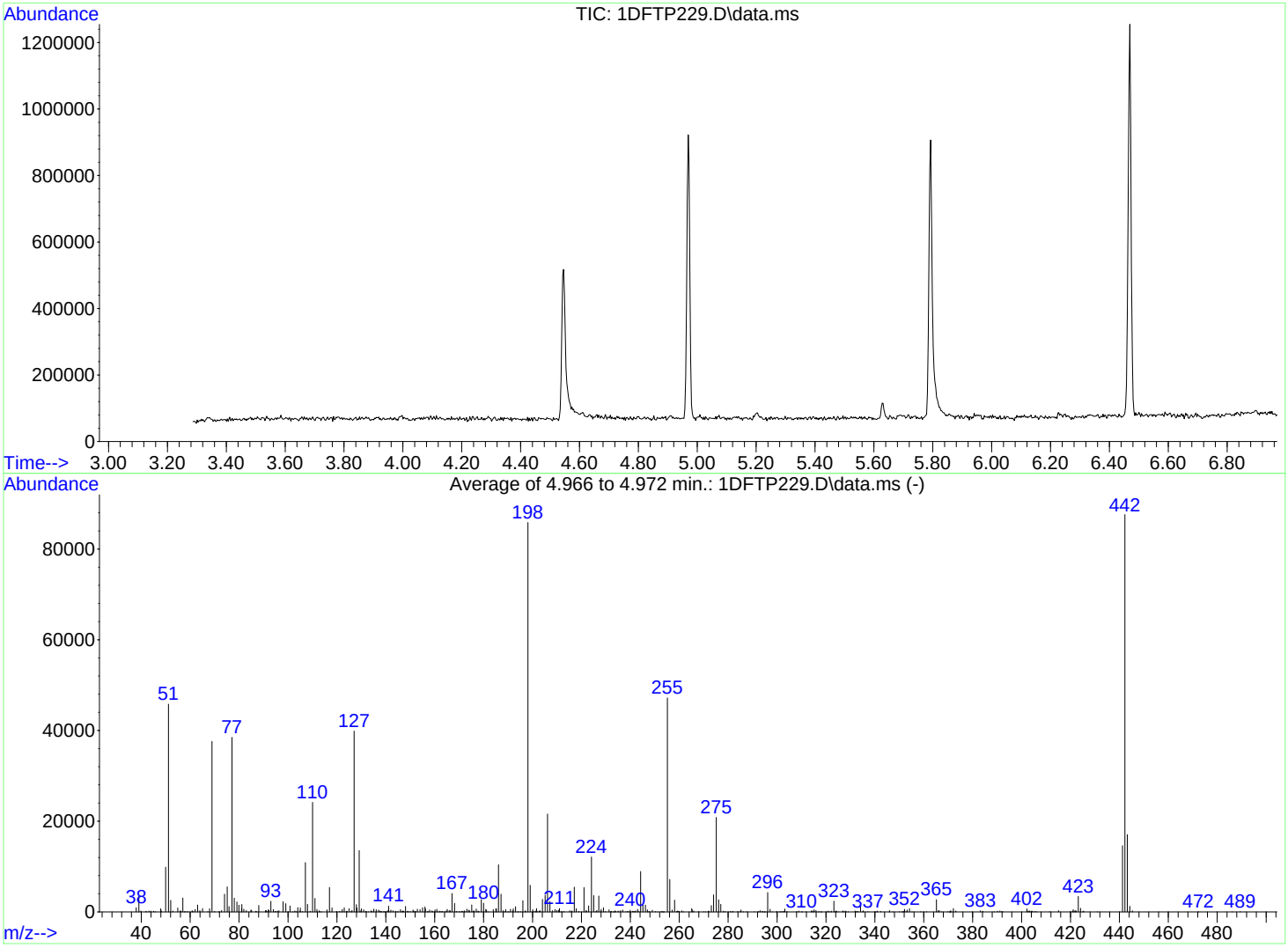
Method : X:\METHODS\1A110916.M (RTE Integrator)
Title : Method for 8270 analysis
Start (Tune) File ID : X:\DATA\1S110916\1DFTP207.D
Injection Date : 9 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 10:49 Total files within period : 53
Sample Directory : X:\DATA\1S110916\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
				500uL+5ul IS S3553C		
1IB02	1.00	1.00	1.00	InstrumentBlank 500uL+5ul IS S3553C	9 Nov 2016	14:22
1ICAL7	1.00	1.00	1.00	ICAL 50ug/ml SVMS7214 500uL+5ul IS S3553C	9 Nov 2016	14:41
1ICAL6	1.00	1.00	1.00	ICAL 40ug/ml SVMS7213 500uL+5ul IS S3553C	9 Nov 2016	15:01
1ICAL5	1.00	1.00	1.00	ICAL 30ug/ml SVMS7212 500uL+5ul IS S3553C	9 Nov 2016	15:45
1ICAL4	1.00	1.00	1.00	ICAL 20ug/ml SVMS7211 500uL+5ul IS S3553C	9 Nov 2016	16:05
1ICAL3	1.00	1.00	1.00	ICAL 10ug/ml SVMS7210 500uL+5ul IS S3553C	9 Nov 2016	16:24
1ICAL2	1.00	1.00	1.00	ICAL 5ug/ml SVMS7209 500uL+5ul IS S3553C	9 Nov 2016	16:44
1ICAL1	1.00	1.00	1.00	ICAL 1ug/ml SVMS7208 500uL+5ul IS S3553C	9 Nov 2016	17:03
1ICV1	1.00	1.00	1.00	ICV 20ug/ml SVMS7215 500uL+5ul IS S3553C	9 Nov 2016	17:22
1ICV2	1.00	1.00	1.00	ICV 40ug/ml SVMS7216 500uL+5ul IS S3553C	9 Nov 2016	17:42
1DFTP208	1.00	1.00	1.00	DFTPP TUNE SVMS7269 SVMS1,25 ug DFTPP	9 Nov 2016	17:58
1CCV244	1.00	1.00	1.00	CCV 20ug/ml SVMS7217 500uL+5ul IS S3553C	9 Nov 2016	18:14

Data File : C:\INSTARCH\Data\1S112816\1DFTP229.D Vial: 1
Acq On : 28 Nov 2016 11:31 Operator: RPN
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE

Method : C:\INSTARCH\Methods\1DFTPP.M
Title : DFTPP TUNE Method
Last Update : Mon Nov 28 11:42:17 2016



AutoFind: Scans 592, 593, 594; Background Corrected with Scan 585

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	52.3	45800	PASS
68	69	0.00	2	1.9	702	PASS
70	69	0.00	2	0.4	141	PASS
127	442	10	80	45.5	39870	PASS
197	198	0.00	2	0.3	250	PASS
198	442	50	100	98.0	85869	PASS
199	198	5	9	6.8	5882	PASS
275	442	10	60	23.8	20829	PASS
365	198	1	100	3.2	2714	PASS
441	442	0.01	24	16.7	14594	PASS
442	442	50	100	100.0	87594	PASS
443	442	15	24	19.5	17059	PASS

Injection Log Summary Report

Method : Y:\METHODS\1S110916.M (RTE Integrator)
Title : Method for 8270 analysis
Start (Tune) File ID : Y:\DATA\1S112816\1DFTP229.D
Injection Date : 28 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 11:31 Total files within period : 65
Sample Directory : Y:\DATA\1S112816\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
1CCV277	1.00	1.00	1.00	CCV 20ug/ml SVMS7217 500uL+5ul IS S3553B	28 Nov 2016	11:46
1CCV278	1.00	1.00	1.00	CCV 20ug/ml SVMS7283 500uL+5ul IS S3553B	28 Nov 2016	12:05
1MBS01	1.00	1.00	1.00	133061,MBS, 798889,500uL+5ul IS S3553	28 Nov 2016	12:24
1LCSS03	1.00	1.00	1.00	133061,LCSS, 798890,500uL+5ul IS S3553	28 Nov 2016	12:43
790948D	1.00	1.00	1.00	133061,790948,10 500uL+5ul IS S3553D	28 Nov 2016	13:02
790948	1.00	1.00	1.00	133061,790948, 500uL+5ul IS S3553D	28 Nov 2016	13:21
1IB02	1.00	1.00	1.00	INSTRUMENT BLANK 500uL+5ul IS S3553D	28 Nov 2016	13:41
1MBS02	1.00	1.00	1.00	133056,MBS, 809130,500uL+5ul IS S3553	28 Nov 2016	14:00
1LCSS02	1.00	1.00	1.00	133056,LCSS, 809131,500uL+5ul IS S3553	28 Nov 2016	14:19
1IB03	1.00	1.00	1.00	INSTRUMENT BLANK 500uL+5ul IS S3553D	28 Nov 2016	14:38
790948D2	1.00	1.00	1.00	133061,790948,4 500uL+5ul IS S3553D	28 Nov 2016	14:57
808740	1.00	1.00	1.00	133056,808740, 500uL+5ul IS S3553D	28 Nov 2016	15:16
808741	1.00	1.00	1.00	133056,808741, 500uL+5ul IS S3553D	28 Nov 2016	15:36
808742	1.00	1.00	1.00	133056,808742, 500uL+5ul IS S3553D	28 Nov 2016	15:55
1MBTS01	1.00	1.00	1.00	133118,MBTS 2715,500uL+5ul IS S3553D	28 Nov 2016	16:14
1MBTV01	1.00	1.00	1.00	133118,MBTV 2715,500uL+5ul IS S3553D	28 Nov 2016	16:35
1MBW01	1.00	1.00	1.00	133118,MBW, 810945,500uL+5ul IS S3553	28 Nov 2016	16:54
1LCSW01	1.00	1.00	1.00	133118,LCSW, 810946,500uL+5ul IS S3553	28 Nov 2016	17:13
804567	1.00	1.00	1.00	133118,804567, 500uL+5ul IS S3553D	28 Nov 2016	17:32
805712	1.00	1.00	1.00	133118,805712, 500uL+5ul IS S3553D	28 Nov 2016	17:50
809338	1.00	1.00	1.00	133118,809338, 500uL+5ul IS S3553D	28 Nov 2016	18:09
809341	1.00	1.00	1.00	133118,809341, 500uL+5ul IS S3553D	28 Nov 2016	18:28

Injection Log Summary Report

Method : Y:\METHODS\1S110916.M (RTE Integrator)
Title : Method for 8270 analysis
Start (Tune) File ID : Y:\DATA\1S112816\1DFTP229.D
Injection Date : 28 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 11:31 Total files within period : 65
Sample Directory : Y:\DATA\1S112816\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
804535	1.00	1.00	1.00	133118,804535, 500uL+5ul IS S3553D	28 Nov 2016	18:47
804535MS	1.00	1.00	1.00	133118,MSW804535, 810948,500uL+5ul IS S3553	28 Nov 2016	19:06
1MBTS02	1.00	1.00	1.00	133119,MBTS 2715,500uL+5ul IS S3553D	28 Nov 2016	19:25
1MBTV02	1.00	1.00	1.00	133119,MBTV 2715,500uL+5ul IS S3553D	28 Nov 2016	19:44
1MBW02	1.00	1.00	1.00	133119,MBW, 810951,500uL+5ul IS S3553	28 Nov 2016	20:03
1LCSW02	1.00	1.00	1.00	133119,LCSW, 810952,500uL+5ul IS S3553	28 Nov 2016	20:22
807696	1.00	1.00	1.00	133119,807696, 500uL+5ul IS S3553D	28 Nov 2016	20:41
808426	1.00	1.00	1.00	133119,808426, 500uL+5ul IS S3553D	28 Nov 2016	21:00
808434	1.00	1.00	1.00	133119,808434, 500uL+5ul IS S3553D	28 Nov 2016	21:18
1CCV279	1.00	1.00	1.00	CCV 20ug/ml SVMS7217 500uL+5ul IS S3553B	28 Nov 2016	21:37
1DFTP230	1.00	1.00	1.00	DFTPP TUNE SVMS7269 SVMS1,25 ug DFTPP	29 Nov 2016	08:54
1CCV280	1.00	1.00	1.00	CCV 20ug/ml SVMS7217 500uL+5ul IS S3553B	29 Nov 2016	09:09
808745	1.00	1.00	1.00	133056,808745, 500uL+5ul IS S3553D	29 Nov 2016	09:28
808746	1.00	1.00	1.00	133056,808746, 500uL+5ul IS S3553D	29 Nov 2016	09:47
808747	1.00	1.00	1.00	133056,808747, 500uL+5ul IS S3553D	29 Nov 2016	10:07
808748	1.00	1.00	1.00	133056,808748, 500uL+5ul IS S3553D	29 Nov 2016	10:26
808749	1.00	1.00	1.00	133056,808749, 500uL+5ul IS S3553D	29 Nov 2016	10:45
808750	1.00	1.00	1.00	133056,808750, 500uL+5ul IS S3553D	29 Nov 2016	11:04
808738D	1.00	1.00	1.00	133056,808738,10 500uL+5ul IS S3553D	29 Nov 2016	11:23
808739D	1.00	1.00	1.00	133056,808739,10 500uL+5ul IS S3553D	29 Nov 2016	11:42
808743D	1.00	1.00	1.00	133056,808743,10 500uL+5ul IS S3553D	29 Nov 2016	12:01
805712R	1.00	1.00	1.00	133118,805712, 500uL+5ul IS S3553D	29 Nov 2016	12:21

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 9 Nov 2016
Instrument ID : SVMS1 Time Analyzed : 16:05
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	191851	3.85	867715	5.49	386418	7.15
UPPER LIMIT	383702	4.35	1735430	5.99	772836	7.65
LOWER LIMIT	95926	3.35	433858	4.99	193209	6.65
File ID Sample						
1CCV277 CCV 20ug/	241912	3.75	1292507	5.37	530991	7.07
1CCV278 CCV 20ug/	245834	3.75	1340639	5.36	562795	7.06
1CCV279 CCV 20ug/	243224	3.75	1345682	5.36	599967	7.07
1CCV280 CCV 20ug/	287576	3.75	1520416	5.36	593092	7.06
1CCV281 CCV 20ug/	279823	3.75	1502788	5.36	612493	7.07
1LCSS02 133056,LC	241008	3.74	1265654	5.36	537174	7.07
1LCSS03 133061,LC	230115	3.74	1272484	5.36	516407	7.07
1LCSW01 133118,LC	225024	3.75	1223087	5.36	509512	7.06
1LCSW02 133119,LC	240105	3.75	1327058	5.36	544622	7.07
1MBS01 133061,MB	241436	3.74	1327063	5.36	569221	7.07
1MBS02 133056,MB	232935	3.74	1238275	5.36	527702	7.06
1MBTS01 133118,MB	221687	3.75	1133096	5.36	511548	7.06
1MBTS02 133119,MB	225029	3.75	1216946	5.36	520701	7.06
1MBTV01 133118,MB	227403	3.75	1194342	5.36	516669	7.07
1MBTV02 133119,MB	230473	3.75	1233569	5.36	526028	7.06
1MBW01 133118,MB	226072	3.75	1211008	5.36	514050	7.06
1MBW02 133119,MB	231971	3.75	1237273	5.36	524215	7.06
790948 133061,79	136608	3.75	812350	5.36	447297	7.06
790948D 133061,79	228903	3.75	1236727	5.36	505922	7.07
790948D2 133061,79	236276	3.75	1238211	5.36	519948	7.07
804535 133118,80	237261	3.75	1286209	5.36	537984	7.06
804535MS 133118,MS	237636	3.75	1287283	5.36	543105	7.07
804567 133118,80	243164	3.75	1280508	5.36	537498	7.06
805712 133118,80	226414	3.75	1234131	5.36	520335	7.06
805712R 133118,80	257063	3.75	1418775	5.36	582990	7.07

IS1 (DCB) = 14Diclbenzd4
IS2 (NPT) = Naphthalened8
IS3 (ANT) = Acenaphthened10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 9 Nov 2016
Instrument ID : SVMS1 Time Analyzed : 16:05
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	191851	3.85	867715	5.49	386418	7.15
UPPER LIMIT	383702	4.35	1735430	5.99	772836	7.65
LOWER LIMIT	95926	3.35	433858	4.99	193209	6.65
File ID Sample						
807696 133119,80	224233	3.75	1206239	5.36	506742	7.07
808426 133119,80	227095	3.75	1265437	5.37	499805	7.07
808426D 133119,80	233622	3.75	1378669	5.36	586331	7.07
808434 133119,80	242701	3.75	1316908	5.36	552106	7.07
808737D 133056,80	238777	3.75	1308797	5.36	543088	7.06
808737DR 133056,MS	154482	3.75	942490	5.36	421445	7.06
808737MS 133056,MS	170642	3.75	933811	5.36	410224	7.06
808737R 133056,80	242262	3.75	1399159	5.36	591933	7.07
808737SD 133056,MS	163199	3.75	932937	5.36	404228	7.06
808737SR 133056,MS	253425	3.75	1420016	5.36	612470	7.07
808738 133056,80	240292	3.75	1368352	5.36	580784	7.06
808738D 133056,80	225352	3.75	1292159	5.36	531948	7.06
808739 133056,80	253369	3.75	1413276	5.36	600574	7.07
808739D 133056,80	219833	3.75	1279708	5.36	527474	7.07
808740 133056,80	225720	3.75	1205596	5.36	504971	7.06
808741 133056,80	238025	3.75	1284767	5.36	543625	7.07
808742 133056,80	227629	3.75	1249965	5.36	534088	7.07
808743 133056,80	225054	3.75	1233544	5.36	533090	7.07
808743D 133056,80	229405	3.75	1287949	5.36	561084	7.06
808744 133056,80	247937	3.75	1410445	5.36	584392	7.07
808744D 133056,80	229101	3.75	1308652	5.36	554498	7.07
808745 133056,80	242747	3.75	1281959	5.36	555870	7.06
808746 133056,80	245851	3.74	1381308	5.36	577958	7.06
808747 133056,80	245372	3.75	1324608	5.36	546860	7.06
808748 133056,80	225085	3.75	1226233	5.36	507539	7.06

IS1 (DCB) = 14Diclbenzd4
IS2 (NPT) = Naphthalened8
IS3 (ANT) = Acenaphthened10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 9 Nov 2016
Instrument ID : SVMS1 Time Analyzed : 16:05
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	191851	3.85	867715	5.49	386418	7.15
UPPER LIMIT	383702	4.35	1735430	5.99	772836	7.65
LOWER LIMIT	95926	3.35	433858	4.99	193209	6.65
File ID Sample						
808748R 133056,80	227860	3.75	1291549	5.36	555698	7.06
808749 133056,80	231596	3.75	1253284	5.36	531314	7.06
808750 133056,80	237149	3.75	1293795	5.36	544534	7.06
808751 133056,80	244427	3.75	1338979	5.36	577193	7.06
808751D 133056,80	207156	3.75	1333499	5.36	571369	7.07
808752 133056,80	244985	3.74	1358949	5.36	595208	7.07
808753 133056,80	233450	3.75	1322957	5.36	568823	7.06
808754 133056,80	236432	3.75	1329526	5.36	559904	7.06
808755 133056,80	224553	3.75	1258772	5.36	551707	7.07
808757 133056,80	222413	3.75	1292313	5.36	551108	7.07
809338 133118,80	220972	3.75	1193503	5.36	521748	7.06
809341 133118,80	228804	3.75	1221247	5.36	530438	7.06

IS1 (DCB) = 14Diclbenzd4
IS2 (NPT) = Naphthalened8
IS3 (ANT) = Acenaphthened10

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 9 Nov 2016
Instrument ID : SVMS1 Time Analyzed : 16:05
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	874898	8.09	554927	9.49	566082	10.37
UPPER LIMIT	1749796	8.59	1109854	9.99	1132164	10.87
LOWER LIMIT	437449	7.59	277464	8.99	283041	9.87
File ID Sample						
1CCV277 CCV 20ug/	1083447	8.02	633480	9.42	639373	10.29
1CCV278 CCV 20ug/	1165531	8.02	725582	9.42	688655	10.29
1CCV279 CCV 20ug/	1146709	8.02	606366	9.42	611952	10.29
1CCV280 CCV 20ug/	1268166	8.01	713957	9.42	770264	10.29
1CCV281 CCV 20ug/	1288938	8.02	698152	9.42	673196	10.29
1LCSS02 133056,LC	1099682	8.02	643398	9.41	544172	10.29
1LCSS03 133061,LC	1064723	8.02	610174	9.42	581370	10.29
1LCSW01 133118,LC	1061395	8.01	602461	9.42	544385	10.29
1LCSW02 133119,LC	1154196	8.02	640709	9.42	575859	10.29
1MBS01 133061,MB	1143566	8.02	685133	9.41	596457	10.29
1MBS02 133056,MB	1090722	8.01	655113	9.41	557673	10.29
1MBTS01 133118,MB	1088718	8.01	641039	9.42	555109	10.29
1MBTS02 133119,MB	1069945	8.02	626235	9.41	525699	10.29
1MBTV01 133118,MB	1073882	8.02	621442	9.41	535664	10.29
1MBTV02 133119,MB	1122738	8.02	645601	9.41	542698	10.28
1MBW01 133118,MB	1071484	8.01	640310	9.42	554463	10.29
1MBW02 133119,MB	1111459	8.01	664639	9.41	581568	10.29
790948 133061,79	1014607	8.01	617095	9.42	573422	10.29
790948D 133061,79	1068026	8.02	635753	9.41	538550	10.29
790948D2 133061,79	1085017	8.02	624252	9.41	531824	10.29
804535 133118,80	1156038	8.02	684319	9.42	562167	10.29
804535MS 133118,MS	1089957	8.02	605628	9.42	523941	10.29
804567 133118,80	1135658	8.01	667111	9.41	572742	10.29
805712 133118,80	1090841	8.01	682908	9.42	599583	10.29
805712R 133118,80	1282112	8.02	754024	9.41	600009	10.29

IS4 (PHN) = Phenanthrd10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 9 Nov 2016
Instrument ID : SVMS1 Time Analyzed : 16:05
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	874898	8.09	554927	9.49	566082	10.37
UPPER LIMIT	1749796	8.59	1109854	9.99	1132164	10.87
LOWER LIMIT	437449	7.59	277464	8.99	283041	9.87
File ID Sample						
807696 133119,80	1054517	8.02	623540	9.41	518662	10.28
808426 133119,80	1051474	8.01	669144	9.42	557882	10.29
808426D 133119,80	1236978	8.02	725526	9.41	599199	10.29
808434 133119,80	1147292	8.02	676958	9.41	596243	10.29
808737D 133056,80	1149759	8.02	630344	9.41	445543	10.29
808737DR 133056,MS	892573	8.02	440416	9.42	142686 *	10.29
808737MS 133056,MS	852351	8.01	481233	9.42	357626	10.29
808737R 133056,80	1280302	8.02	646858	9.42	214641 *	10.29
808737SD 133056,MS	830755	8.01	494311	9.42	362362	10.29
808737SR 133056,MS	1261684	8.02	628381	9.42	186070 *	10.29
808738 133056,80	1200996	8.01	664688	9.42	302545	10.30
808738D 133056,80	1166753	8.01	671316	9.42	511607	10.29
808739 133056,80	1260175	8.02	643023	9.42	242388 *	10.29
808739D 133056,80	1147243	8.02	668021	9.41	532102	10.29
808740 133056,80	1079628	8.02	638560	9.41	550138	10.29
808741 133056,80	1143237	8.02	681162	9.41	578282	10.29
808742 133056,80	1104316	8.02	657562	9.41	562207	10.29
808743 133056,80	1085841	8.02	541432	9.42	227863 *	10.29
808743D 133056,80	1179420	8.02	699761	9.41	546249	10.29
808744 133056,80	1234766	8.02	625273	9.42	214697 *	10.29
808744D 133056,80	1127212	8.02	678760	9.41	506809	10.29
808745 133056,80	1148222	8.01	692068	9.42	576817	10.29
808746 133056,80	1189812	8.01	669227	9.41	548603	10.29
808747 133056,80	1129154	8.01	631797	9.42	424014	10.29
808748 133056,80	1087402	8.02	635480	9.41	513318	10.28

IS4 (PHN) = Phenanthrd10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Contract :
Project : Site : Location : Group :
Lab File ID (Standard): 1ICAL4.D Date Analyzed : 9 Nov 2016
Instrument ID : SVMS1 Time Analyzed : 16:05
GC Column : ID : (mm) Heated Purge (Y:N) :

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	874898	8.09	554927	9.49	566082	10.37
UPPER LIMIT	1749796	8.59	1109854	9.99	1132164	10.87
LOWER LIMIT	437449	7.59	277464	8.99	283041	9.87
File ID Sample						
808748R 133056,80	1184297	8.01	705365	9.41	552213	10.29
808749 133056,80	1088719	8.02	632954	9.41	501753	10.29
808750 133056,80	1146101	8.01	663534	9.41	533434	10.29
808751 133056,80	1196870	8.01	622878	9.42	401587	10.30
808751D 133056,80	1210237	8.02	619546	9.42	219058 *	10.29
808752 133056,80	1241224	8.02	697990	9.42	432523	10.29
808753 133056,80	1175768	8.01	687305	9.42	460413	10.29
808754 133056,80	1115454	8.02	564932	9.43	331437	10.30
808755 133056,80	1135479	8.02	582287	9.42	298319	10.29
808757 133056,80	1127382	8.02	614775	9.42	309292	10.29
809338 133118,80	1086787	8.01	662381	9.41	586702	10.29
809341 133118,80	1110420	8.01	642642	9.42	529235	10.29

IS4 (PHN) = Phenanthrd10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

CT LABORATORIES
delivering more than data from your environmental analyses

3C

Sample Description

WATER SEMIVOLATILE MATRIX SPIKE RECOVERY

F1-IDW-BIN

Lab Name: CT Laboratories Contract: GEO CONSULTANTS, LLC-FORBES S-1

Matrix: TCLP SDG No.: 123578

Analytical Method: EPA 8270D Concentration Units: mg/L

Analytical Run #: 133118 Sample No.: 810948 Parent Sample No.: 804535

Analytical Prep Batch #: 60339 Analytical Preparation Date/Time: 11/28/2016 09:30

ICAL Calibration #: 1S110916

Analyte	Analysis Date/Time		Control Limit (%R)	Spike Result	Parent Result	Spike Amount	%R
1,4-Dichlorobenzene	11/28/2016	19:06	29-112	0.149	BDL	0.200	74
2,4,5-Trichlorophenol	11/28/2016	19:06	53-123	0.168	BDL	0.200	84
2,4,6-Trichlorophenol	11/28/2016	19:06	50-125	0.161	BDL	0.200	80
2,4-Dinitrotoluene	11/28/2016	19:06	57-128	0.175	BDL	0.200	88
2-Methylphenol	11/28/2016	19:06	30-117	0.178	BDL	0.200	89
3 & 4-Methylphenol	11/28/2016	19:06	29-110	0.172	BDL	0.200	86
Hexachlorobenzene	11/28/2016	19:06	53-125	0.157	BDL	0.200	78
Hexachlorobutadiene	11/28/2016	19:06	22-124	0.121	BDL	0.200	60
Hexachloroethane	11/28/2016	19:06	21-115	0.146	BDL	0.200	73
Nitrobenzene	11/28/2016	19:06	45-121	0.147	BDL	0.200	74
Pentachlorophenol	11/28/2016	19:06	35-138	0.177	BDL	0.200	88
Pyridine	11/28/2016	19:06	0-106	0.0573	BDL	0.200	29

Spike Recovery: 0 out of 12 outside QC limits

SEMI - VOLATILE ORGANIC ANALYSIS
SAMPLE DATA
DOCUMENTS

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\809338.D Vial: 20
Acq On : 28 Nov 2016 18:09 Operator: RPN
Sample : 133118,809338, Inst : SVMS1
Misc : 500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:39:27 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

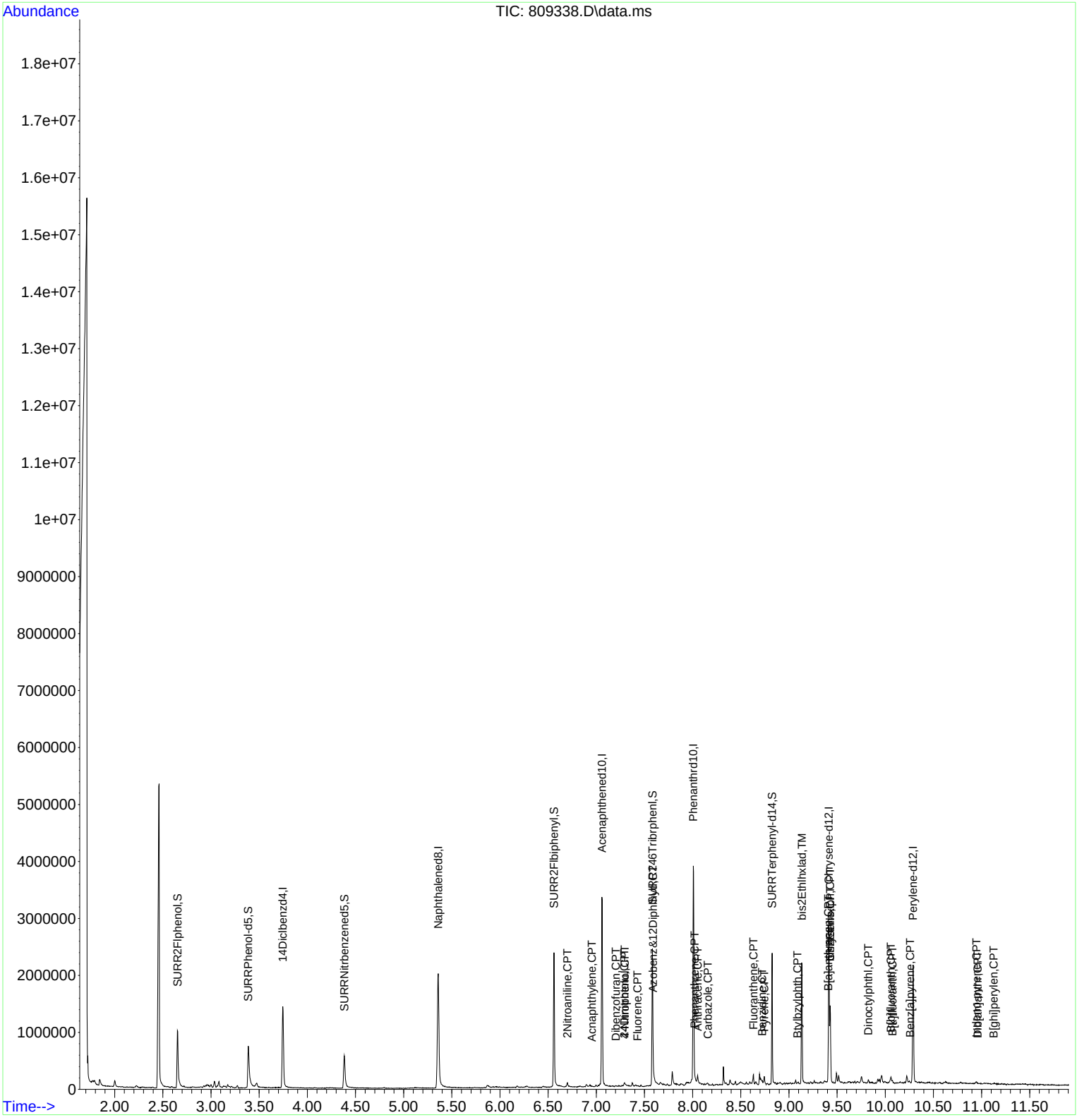
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.745	152	220972	20.00	ug/mL	0.00
21) Naphthalened8	5.359	136	1193503	20.00	ug/mL	0.00
39) Acenaphthened10	7.058	164	521748	20.00	ug/mL	-0.01
63) Phenanthrd10	8.007	188	1086787	20.00	ug/mL	-0.01
75) Chrysene-d12	9.414	240	662381	20.00	ug/mL	0.00
86) Perylene-d12	10.289	264	586702	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	262476	52.58	%REC	0.01
Spiked Amount 100.000	Range 20 - 110		Recovery = 52.58%			
7) SURRPhenol-d5	3.387	99	276711	48.28	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 48.28%			
22) SURRNitrbenzened5	4.384	82	215234	63.91	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 63.91%			
44) SURR2Flbiphenyl	6.561	172	624717	72.87	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 72.87%			
62) SURR246Tribrphenl	7.584	330	238399	72.62	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 72.62%			
78) SURRTerphenyl-d14	8.826	244	422811	76.92	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 76.92%			
Target Compounds						Qvalue
46) 2Nitroaniline	6.700	65	929	0.2892	ug/mL#	33
47) Acnaphthylene	6.956	152	2240	0.0382	ug/mL	97
53) Dibenzofuran	7.203	168	1623	0.0312	ug/mL	58
54) 24Dinitrotolu	7.291	165	2399	0.2121	ug/mL#	43
55) 4-Nitrophenol	7.297	65	1056	0.1226	ug/mL#	14
58) Fluorene	7.428	166	2005	0.0486	ug/mL#	67
66) Azobenz&12Diphlhyd	7.590	182	15229	1.3611	ug/mL#	1
70) Phenanthrene	8.021	178	7488	0.1341	ug/mL	71
71) Anthracene	8.053	178	32026	0.5590	ug/mL	96
72) Carbazole	8.158	167	8927	0.1933	ug/mL	73
74) Fluoranthene	8.632	202	39408	0.8526	ug/mL	95
76) Benzidine	8.723	184	2768	4.0643	ug/mL	90
77) Pyrene	8.746	202	30110	0.6774	ug/mL	89
79) Btylbzylphth	9.090	149	1049	0.0537	ug/mL	75
80) bis2Ethlhxlad	9.135	129	223465	15.2883	ug/mL	93
82) B[a]anthracen	9.408	228	10782	0.2704	ug/mL	94
83) Chrysene	9.428	228	22229	0.6062	ug/mL	97
84) bis2Ethlhxlph	9.428	149	252234	9.5539	ug/mL	97
85) Dinoctylphthl	9.826	149	21359	0.4392	ug/mL	97
87) B[b]fluoranth	10.059	252	31617	0.9091	ug/mL	92
88) B[k]fluoranth	10.076	252	6451	0.1997	ug/mL	74
89) Benz[a]pyrene	10.258	252	6782	0.2021	ug/mL	87
90) Indeno-pyrene	10.948	276	7773	0.2091	ug/mL	81
91) Dib[ah]anthr	10.960	278	2512	0.0830	ug/mL	57
92) B[ghi]perylen	11.127	276	5549	0.1742	ug/mL#	69

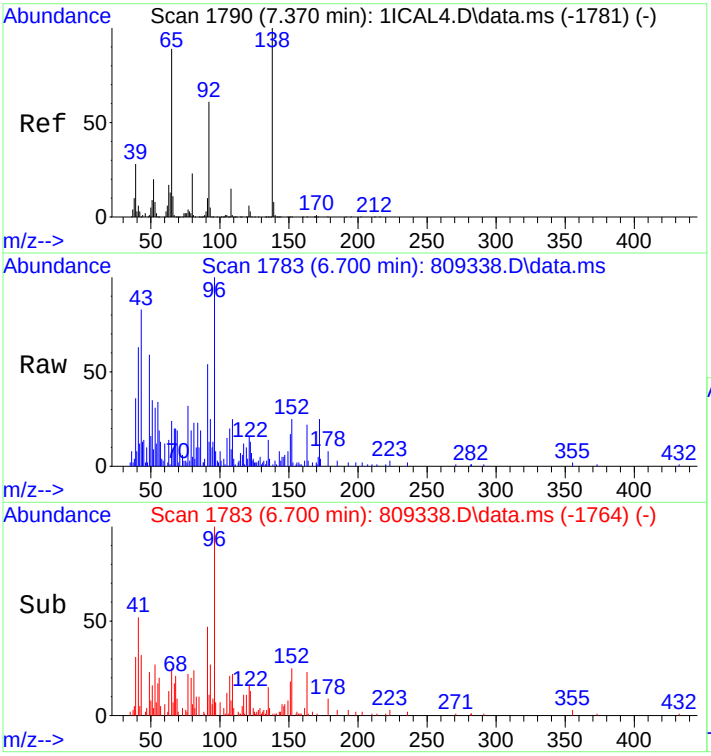
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\809338.D Vial: 20
Acq On : 28 Nov 2016 18:09 Operator: RPN
Sample : 133118,809338, Inst : SVMS1
Misc : 500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:39:27 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

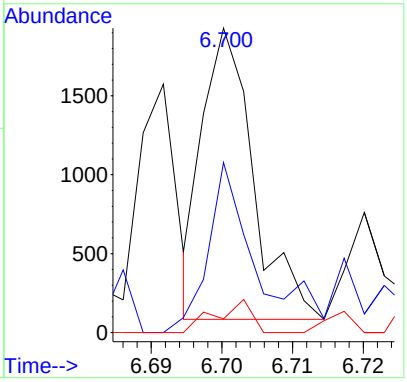


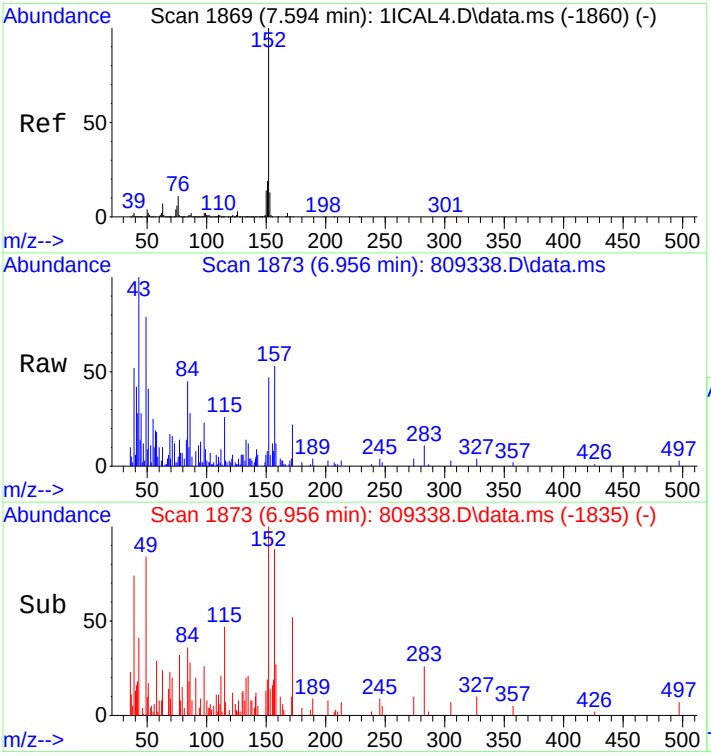


#46
2Nitroaniline
Concen: 0.29 ug/mL
RT: 6.700 min Scan# 1783
Delta R.T. -0.045 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion: 65 Resp: 929

Ion	Ratio	Lower	Upper
65	100		
92	53.6	32.9	92.9
138	4.7	77.9	137.9#

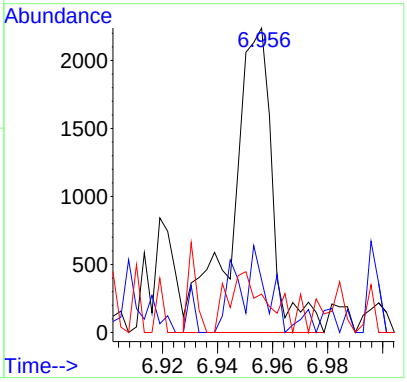


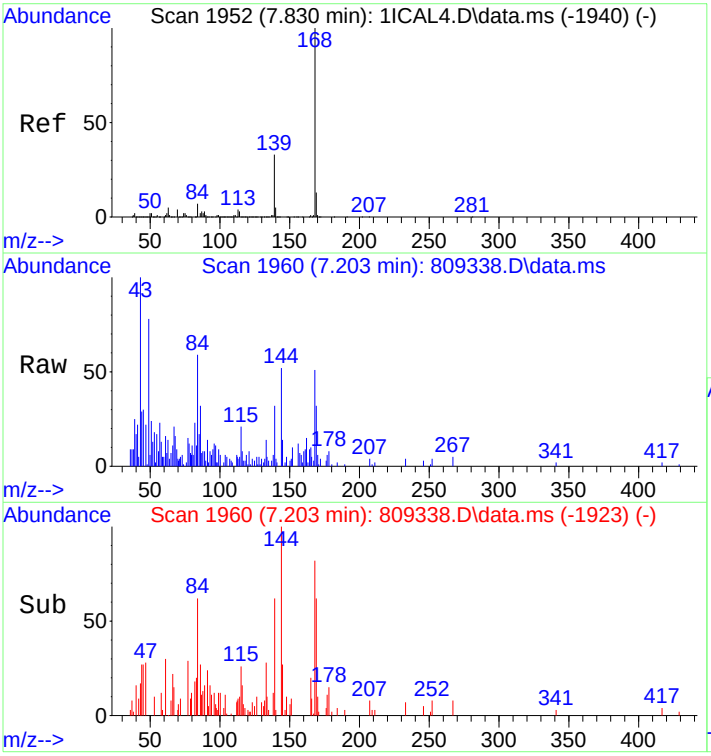


#47
Acnaphthylene
Concen: 0.04 ug/mL
RT: 6.956 min Scan# 1873
Delta R.T. -0.006 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:152 Resp: 2240

Ion	Ratio	Lower	Upper
152	100		
151	17.2	0.0	49.6
153	12.6	0.0	42.8

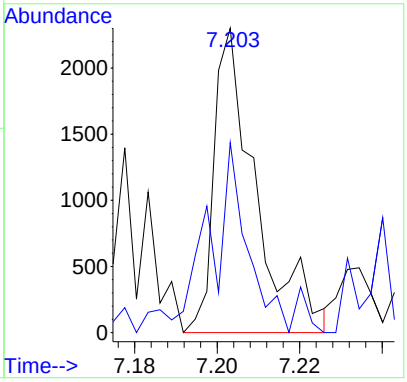


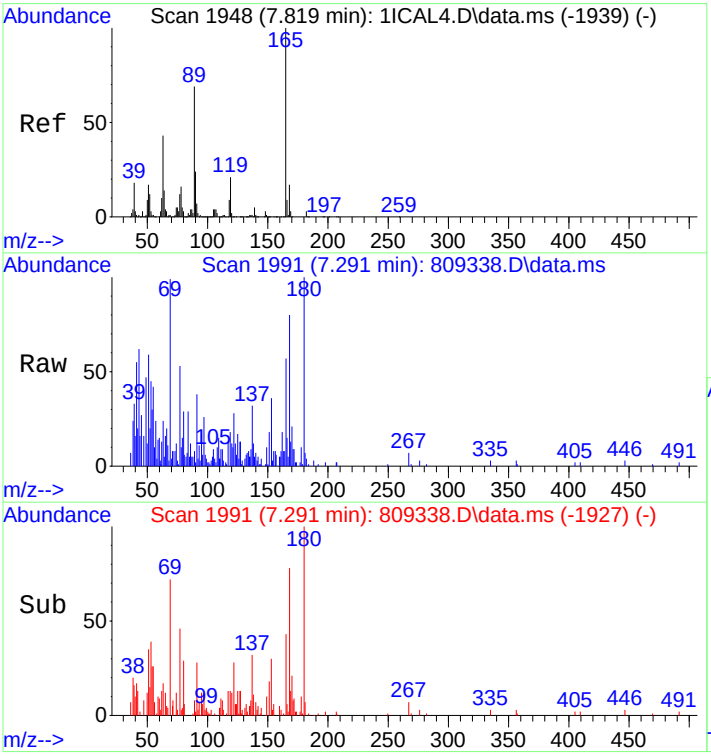


#53
Dibenzofuran
Concen: 0.03 ug/mL
RT: 7.203 min Scan# 1960
Delta R.T. -0.009 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:168 Resp: 1623

Ion	Ratio	Lower	Upper
168	100		
139	62.4	7.1	67.1

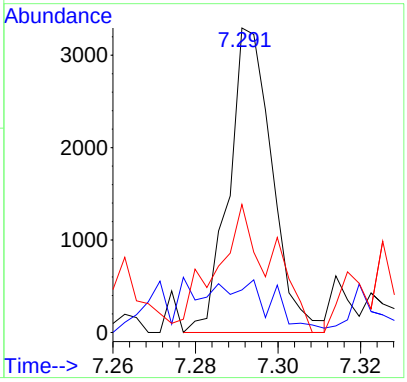


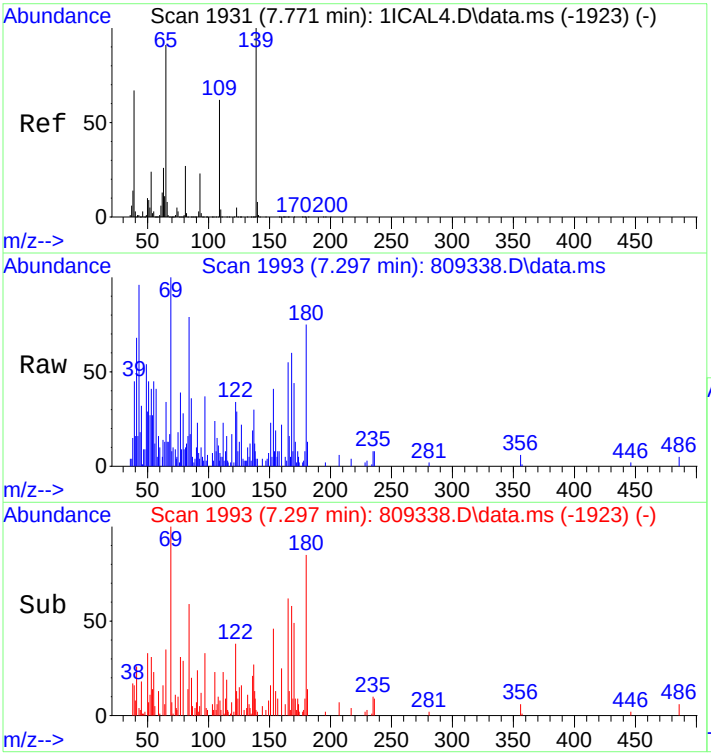


#54
24Dinitrotolu
Concen: 0.21 ug/mL
RT: 7.291 min Scan# 1991
Delta R.T. 0.068 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:165 Resp: 2399

Ion	Ratio	Lower	Upper
165	100		
89	12.5	50.8	110.8#
63	42.0	49.9	89.9#

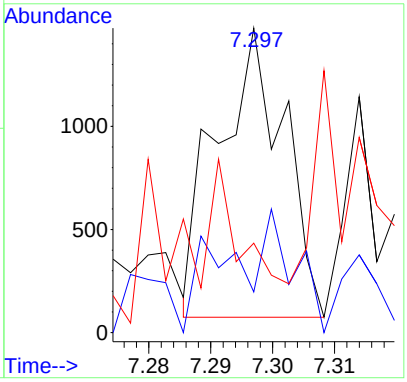


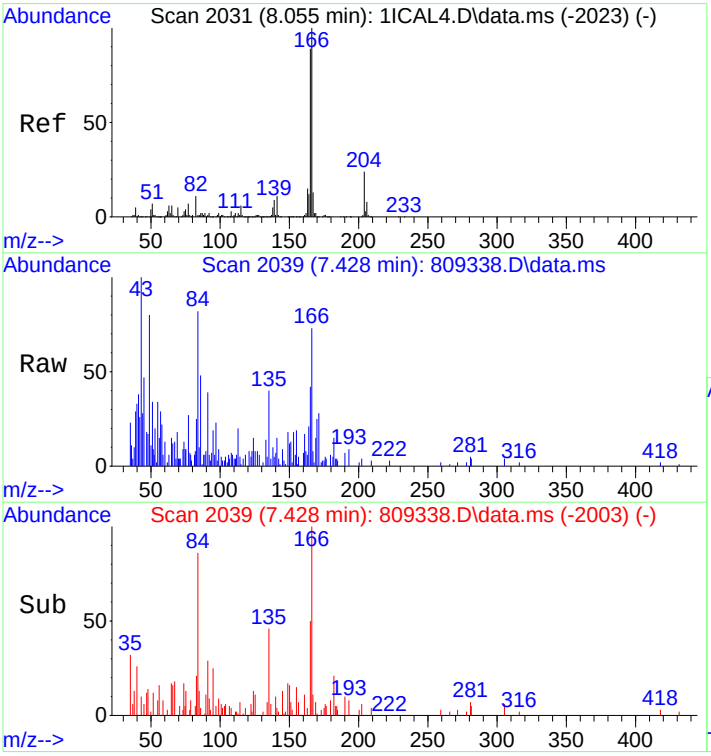


#55
4-Nitrophenol
Concen: 0.12 ug/mL
RT: 7.297 min Scan# 1993
Delta R.T. 0.099 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion: 65 Resp: 1056

Ion	Ratio	Lower	Upper
65	100		
139	14.1	65.3	125.3#
109	0.0	55.1	95.1#

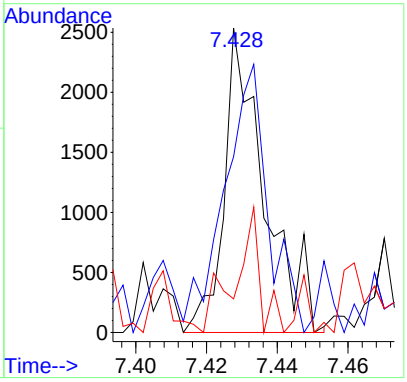


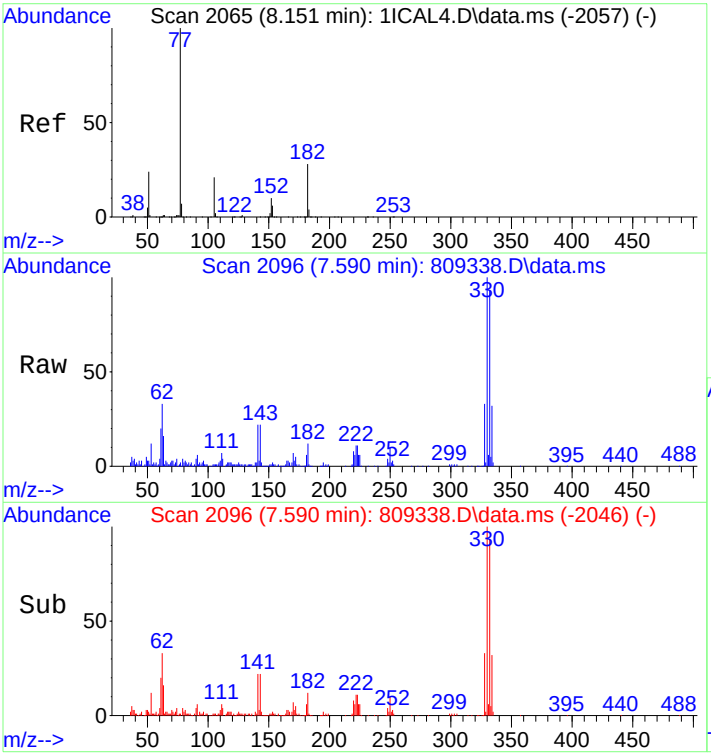


#58
Fluorene
Concen: 0.05 ug/mL
RT: 7.428 min Scan# 2039
Delta R.T. -0.011 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:166 Resp: 2005

Ion	Ratio	Lower	Upper
166	100		
165	54.1	57.2	117.2#
167	7.3	0.0	44.0

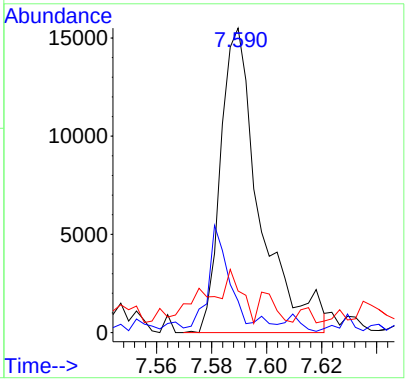


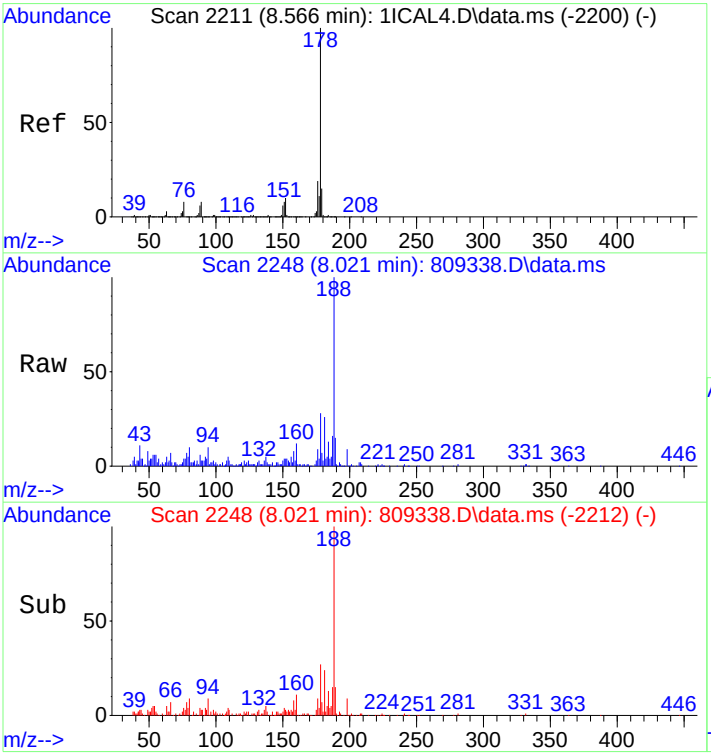


#66
Azobenz&12Diphlhyd
Concen: 1.36 ug/mL
RT: 7.590 min Scan# 2096
Delta R.T. 0.043 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:182 Resp: 15229

Ion	Ratio	Lower	Upper
182	100		
152	9.1	9.6	69.6#
77	9.9	385.6	445.6#

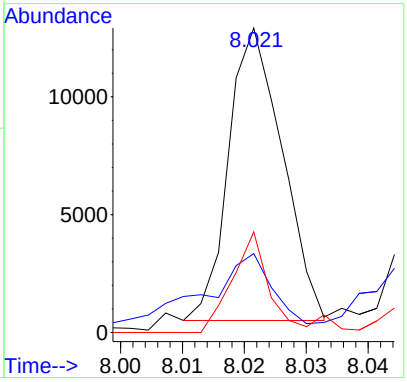


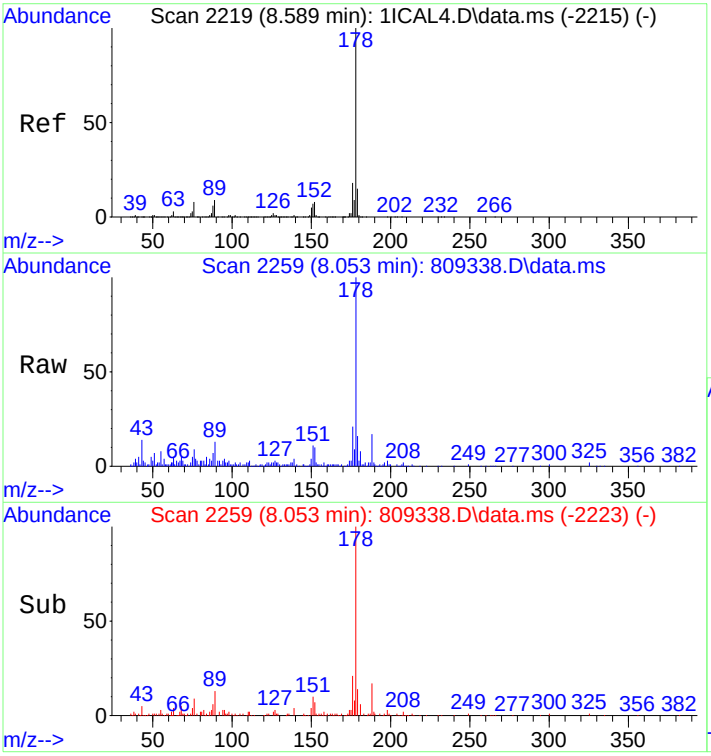


#70
Phenanthrene
Concen: 0.13 ug/mL
RT: 8.021 min Scan# 2248
Delta R.T. -0.011 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:178 Resp: 7488

Ion	Ratio	Lower	Upper
178	100		
179	23.5	0.0	44.1
176	34.4	0.0	49.4

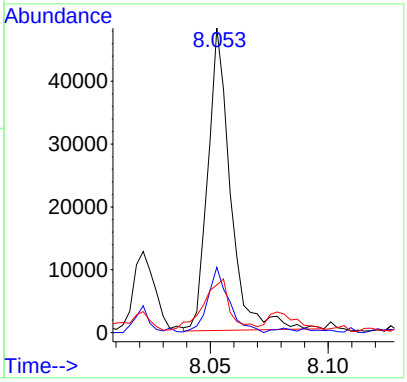


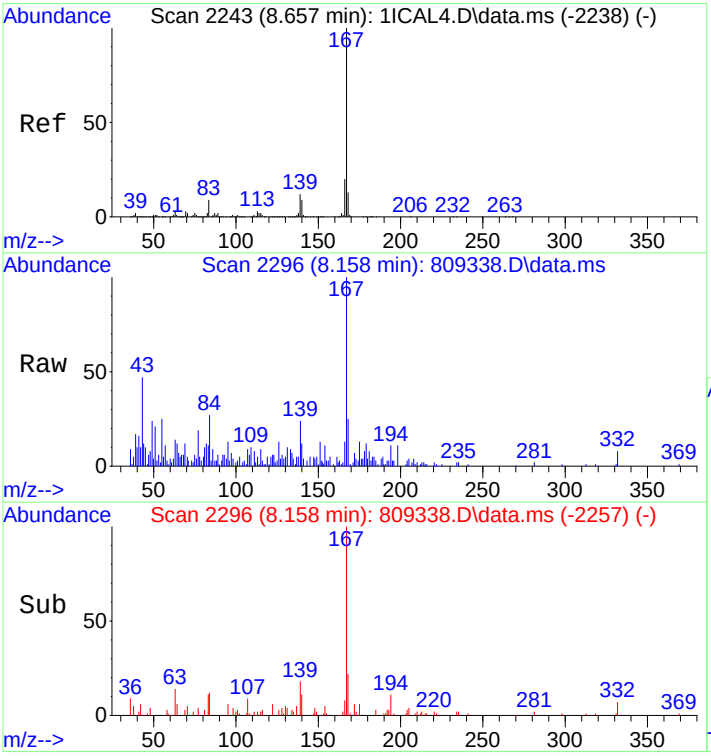


#71
Anthracene
Concen: 0.56 ug/mL
RT: 8.053 min Scan# 2259
Delta R.T. -0.011 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:178 Resp: 32026

Ion	Ratio	Lower	Upper
178	100		
176	21.5	0.0	48.4
179	14.8	0.0	44.3

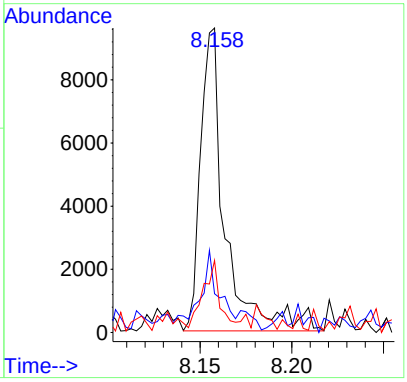


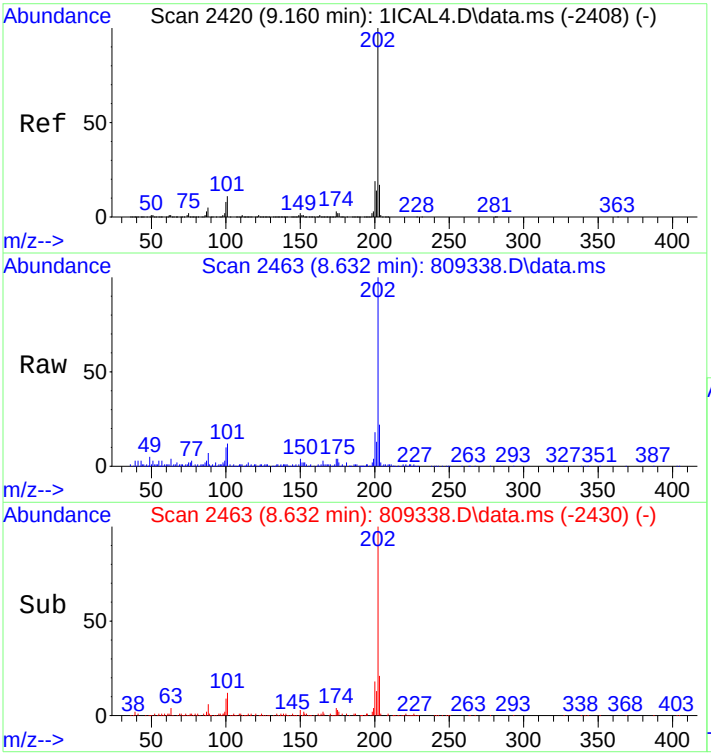


#72
Carbazole
Concen: 0.19 ug/mL
RT: 8.158 min Scan# 2296
Delta R.T. -0.003 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:167 Resp: 8927

Ion	Ratio	Lower	Upper
167	100		
166	8.1	0.0	50.1
139	22.9	0.0	41.8

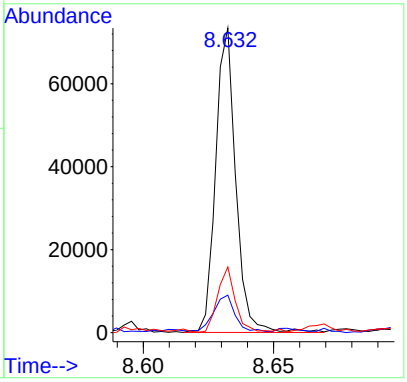


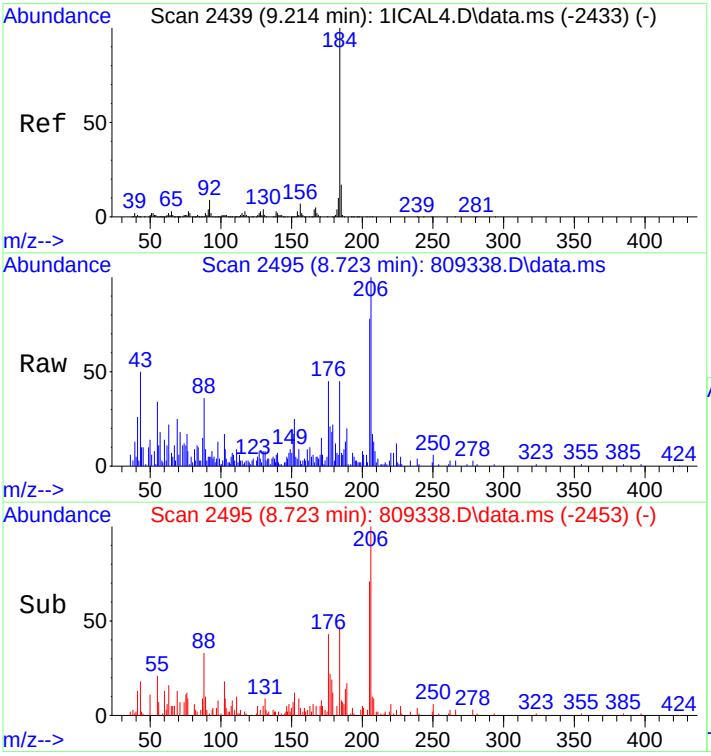


#74
Fluoranthene
Concen: 0.85 ug/mL
RT: 8.632 min Scan# 2463
Delta R.T. -0.006 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:202 Resp: 39408

Ion	Ratio	Lower	Upper
202	100		
101	11.6	0.0	42.6
203	20.4	0.0	37.4

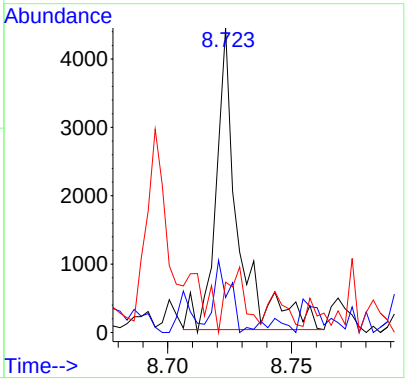


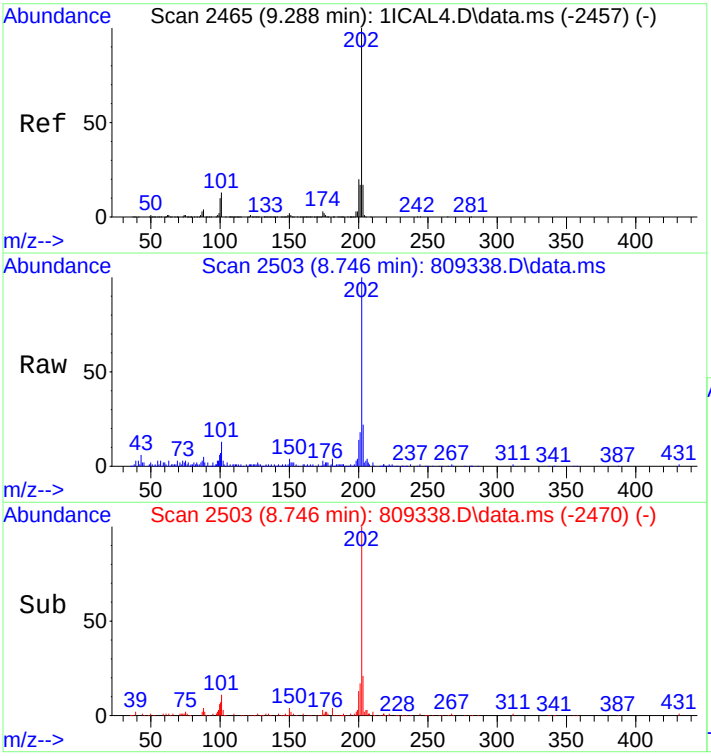


#76
Benzidine
Concen: 4.06 ug/mL
RT: 8.723 min Scan# 2495
Delta R.T. 0.020 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:184 Resp: 2768

Ion	Ratio	Lower	Upper
184	100		
92	9.2	0.0	37.5
185	10.2	0.0	45.5

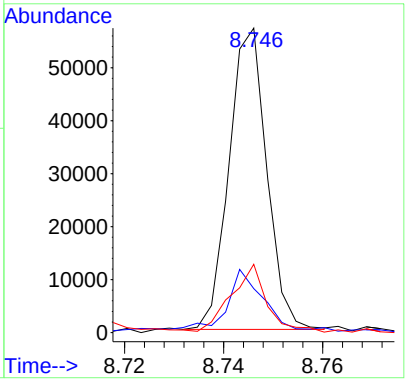


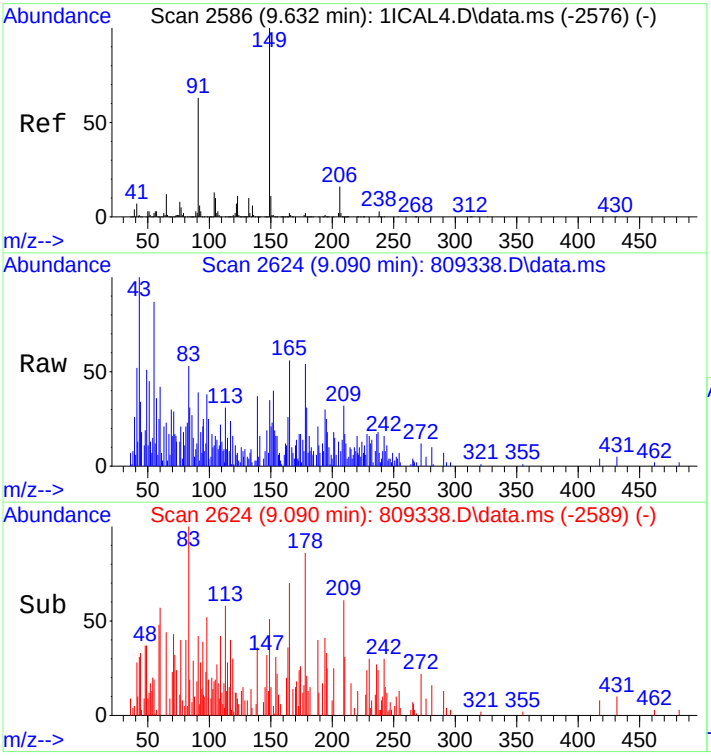


#77
Pyrene
Concen: 0.68 ug/mL
RT: 8.746 min Scan# 2503
Delta R.T. -0.006 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:202 Resp: 30110

Ion	Ratio	Lower	Upper
202	100		
200	12.9	0.0	47.8
203	22.5	0.0	47.4

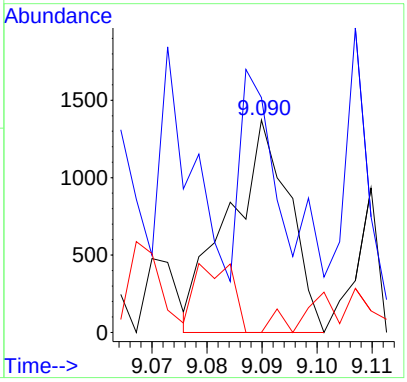


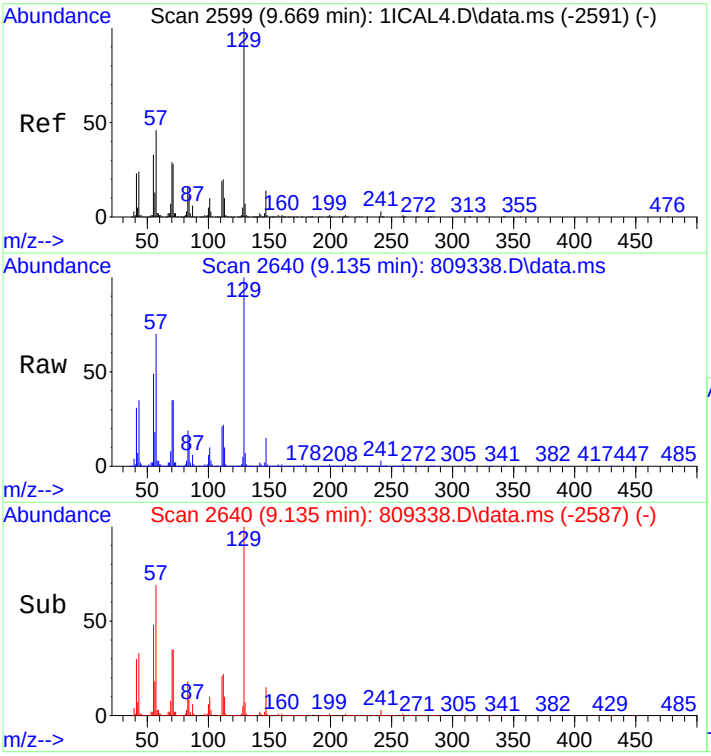


#79
Btylbzylphth
Concen: 0.05 ug/mL
RT: 9.090 min Scan# 2624
Delta R.T. 0.000 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:149 Resp: 1049

Ion	Ratio	Lower	Upper
149	100		
91	84.4	37.5	97.5
206	0.0	0.0	47.1

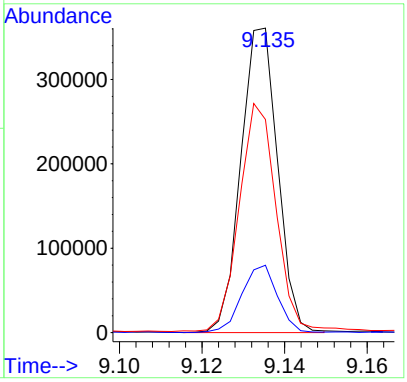


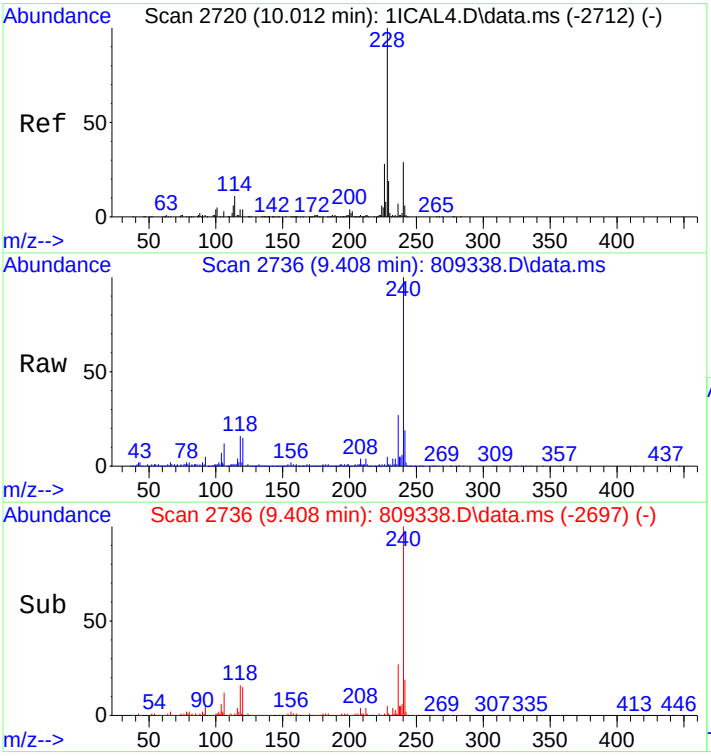


#80
bis2Ethlhxlad
Concen: 15.29 ug/mL
RT: 9.135 min Scan# 2640
Delta R.T. 0.000 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:129 Resp: 223465

Ion	Ratio	Lower	Upper
129	100		
112	21.3	17.5	26.3
57	74.5	53.9	80.9

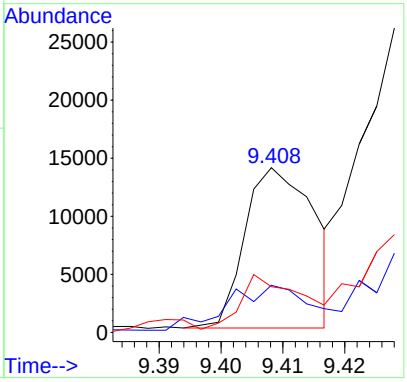


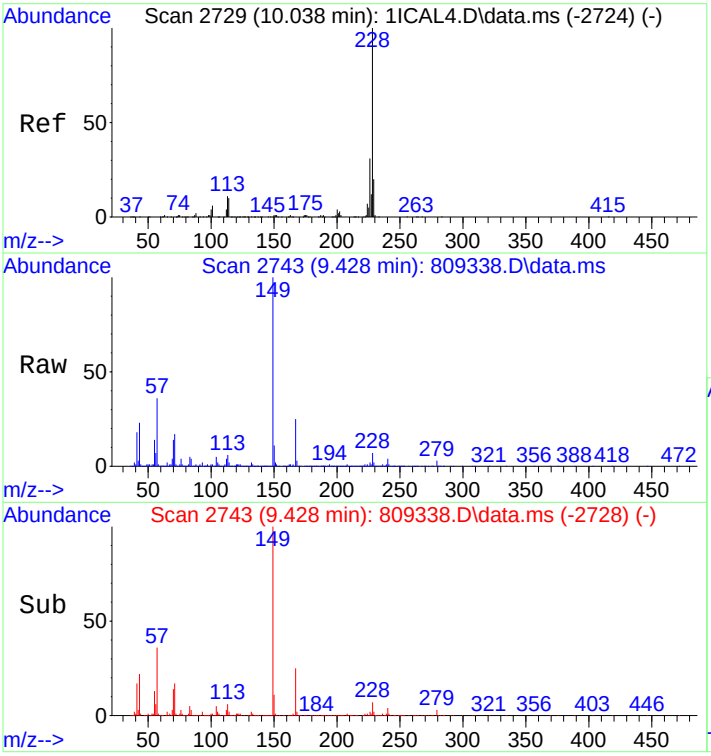


#82
B[a]anthracen
Concen: 0.27 ug/mL
RT: 9.408 min Scan# 2736
Delta R.T. -0.003 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:228 Resp: 10782

Ion	Ratio	Lower	Upper
228	100		
229	20.0	0.0	49.8
226	20.8	0.0	56.3

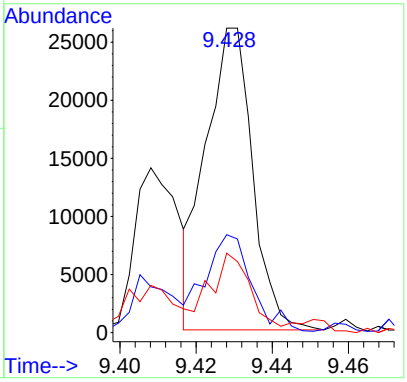


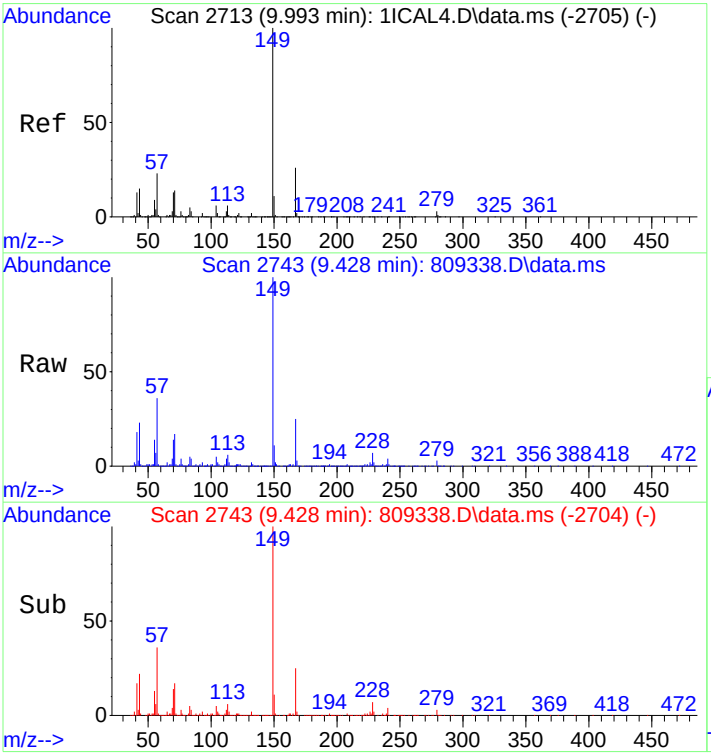


#83
Chrysene
Concen: 0.61 ug/mL
RT: 9.428 min Scan# 2743
Delta R.T. -0.009 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:228 Resp: 22229

Ion	Ratio	Lower	Upper
228	100		
226	31.4	1.3	61.3
229	22.4	0.0	48.5

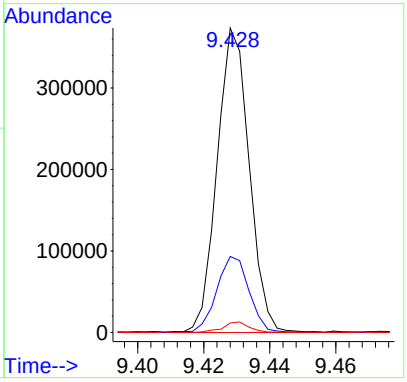


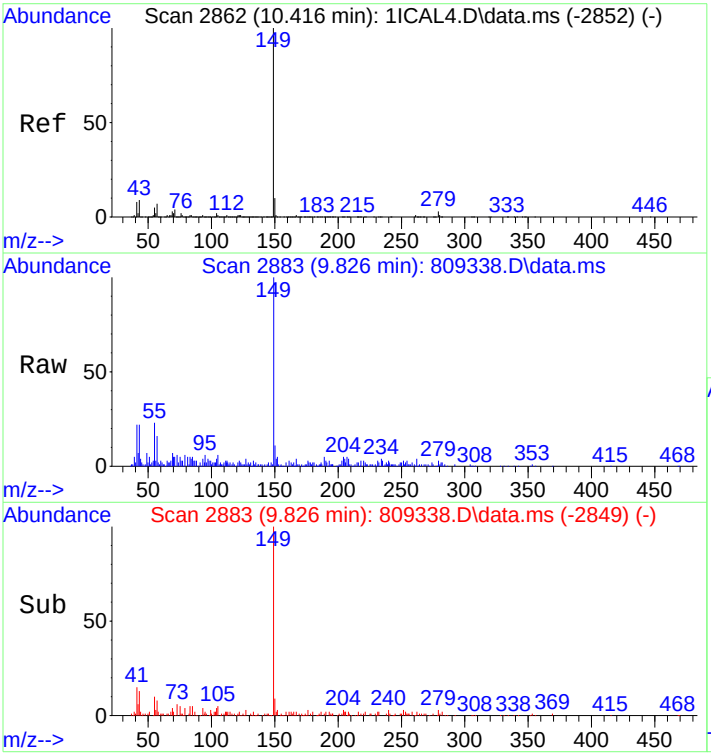


#84
bis2Ethlhxlph
Concen: 9.55 ug/mL
RT: 9.428 min Scan# 2743
Delta R.T. -0.003 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:149 Resp: 252234

Ion	Ratio	Lower	Upper
149	100		
167	24.9	0.0	53.4
279	3.1	0.0	32.4

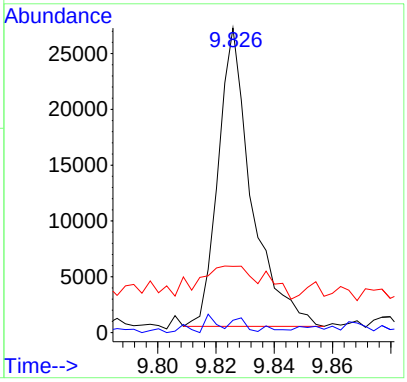


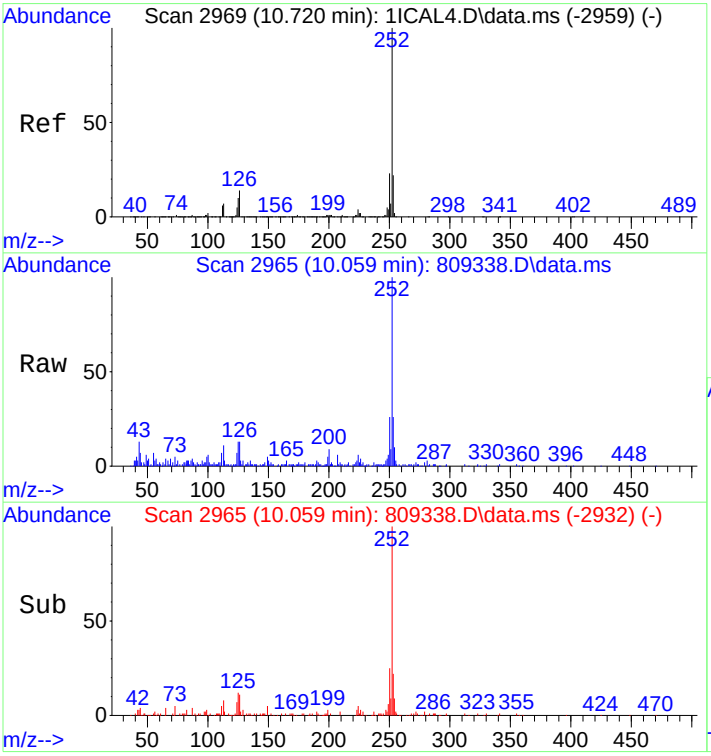


#85
Dinoctylphthl
Concen: 0.44 ug/mL
RT: 9.826 min Scan# 2883
Delta R.T. -0.003 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:149 Resp: 21359

Ion	Ratio	Lower	Upper
149	100		
167	3.0	0.0	31.2
43	10.1	0.0	31.2

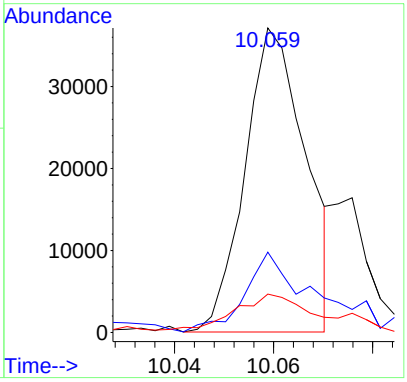


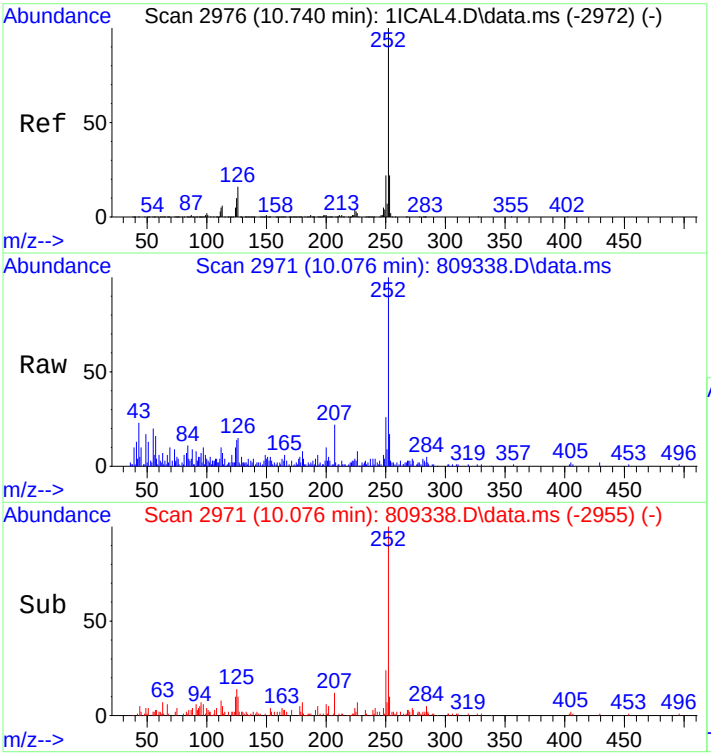


#87
B[b]fluoranth
Concen: 0.91 ug/mL
RT: 10.059 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:252 Resp: 31617

Ion	Ratio	Lower	Upper
252	100		
253	26.2	0.0	51.6
125	11.0	0.0	39.8

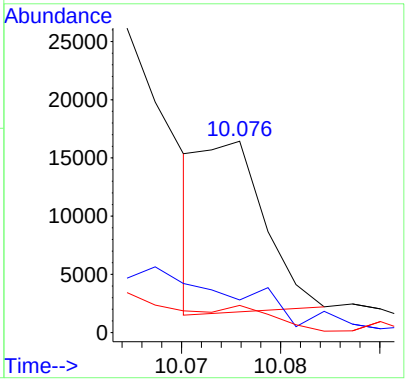


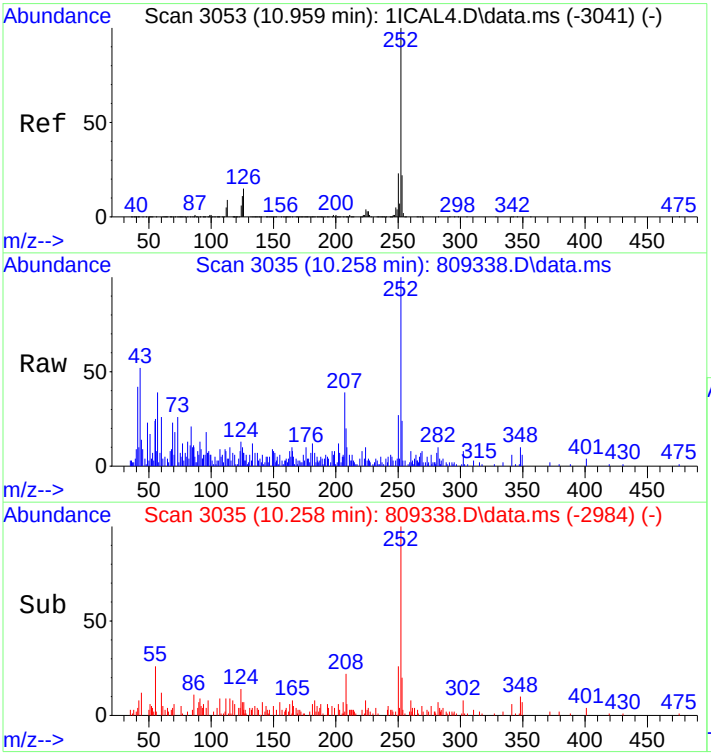


#88
B[k]fluoranth
Concen: 0.20 ug/mL
RT: 10.076 min Scan# 2971
Delta R.T. -0.006 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:252 Resp: 6451

Ion	Ratio	Lower	Upper
252	100		
253	6.8	0.0	50.6
125	15.5	0.0	39.0

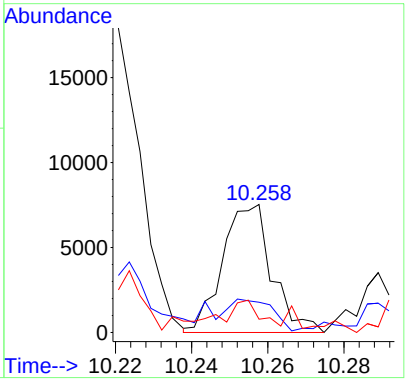


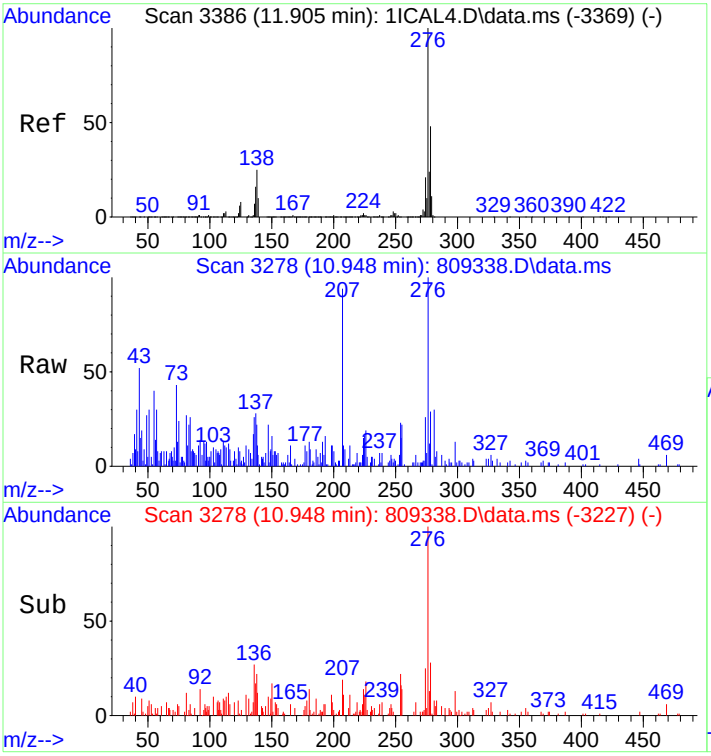


#89
Benz[a]pyrene
Concen: 0.20 ug/mL
RT: 10.258 min Scan# 3035
Delta R.T. 0.000 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:252 Resp: 6782

Ion	Ratio	Lower	Upper
252	100		
253	15.5	0.0	51.4
125	5.7	0.0	40.9

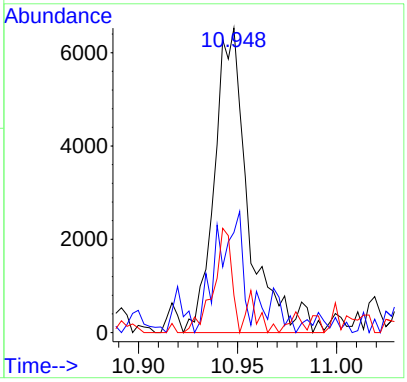


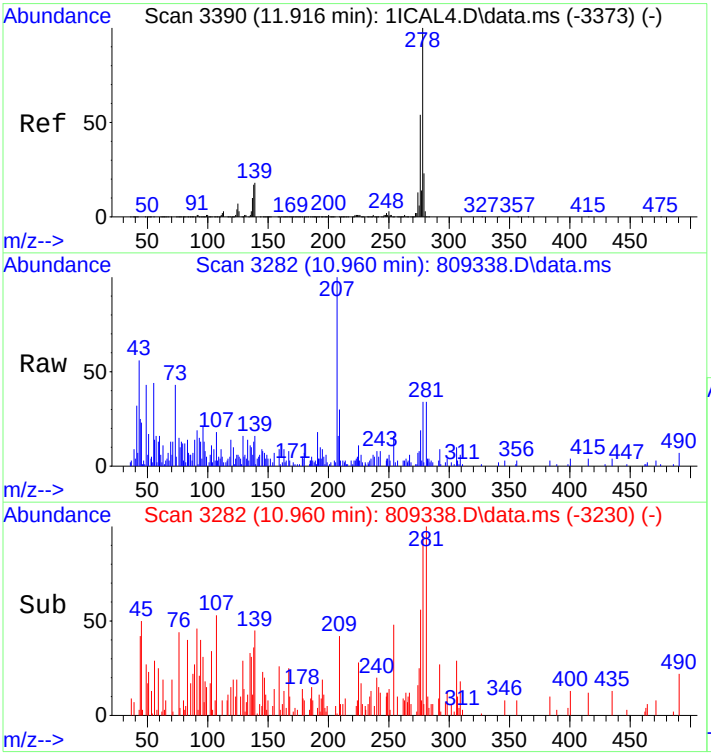


#90
Indeno-pyrene
Concen: 0.21 ug/mL
RT: 10.948 min Scan# 3278
Delta R.T. -0.006 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:276 Resp: 7773

Ion	Ratio	Lower	Upper
276	100		
138	29.1	0.0	52.5
277	12.3	4.1	44.1

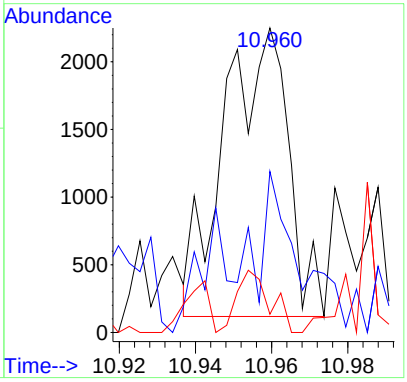


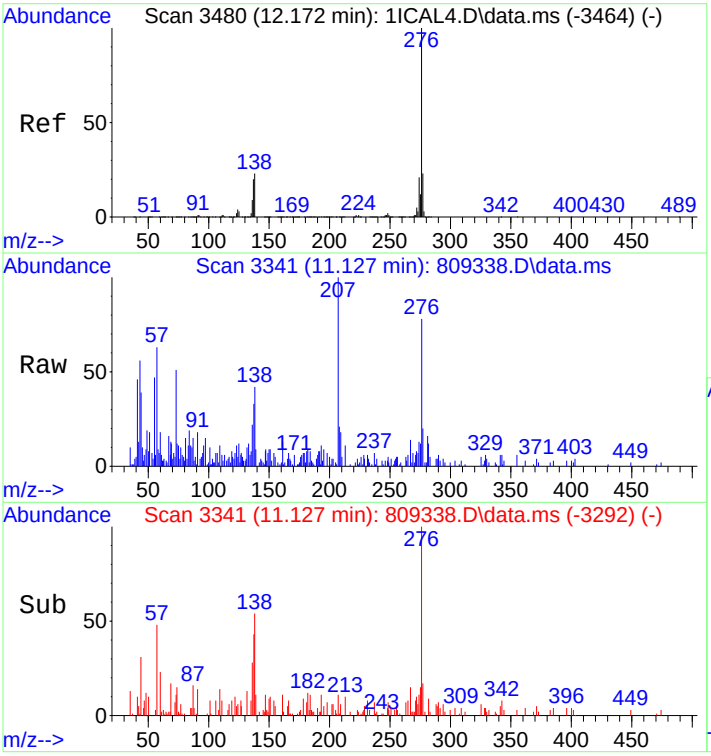


#91
Dib[ah]anthr
Concen: 0.08 ug/mL
RT: 10.960 min Scan# 3282
Delta R.T. -0.003 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:278 Resp: 2512

Ion	Ratio	Lower	Upper
278	100		
139	39.1	0.0	50.8
279	1.1	0.0	54.1

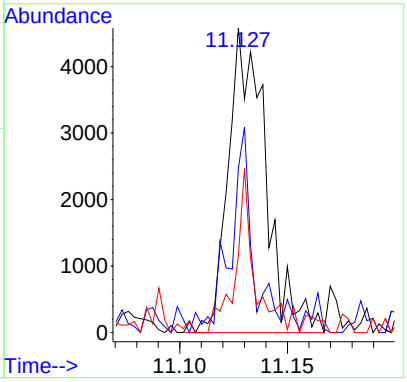




#92
B[ghi]perylen
Concen: 0.17 ug/mL
RT: 11.127 min Scan# 3341
Delta R.T. -0.011 min
Lab File: 809338.D
Acq: 28 Nov 16 6:09 pm

Tgt Ion:276 Resp: 5549

Ion	Ratio	Lower	Upper
276	100		
138	52.7	0.0	52.5#
277	24.0	0.0	53.9



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\809341.D Vial: 21
Acq On : 28 Nov 2016 18:28 Operator: RPN
Sample : 133118,809341, Inst : SVMS1
Misc : 500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:39:32 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

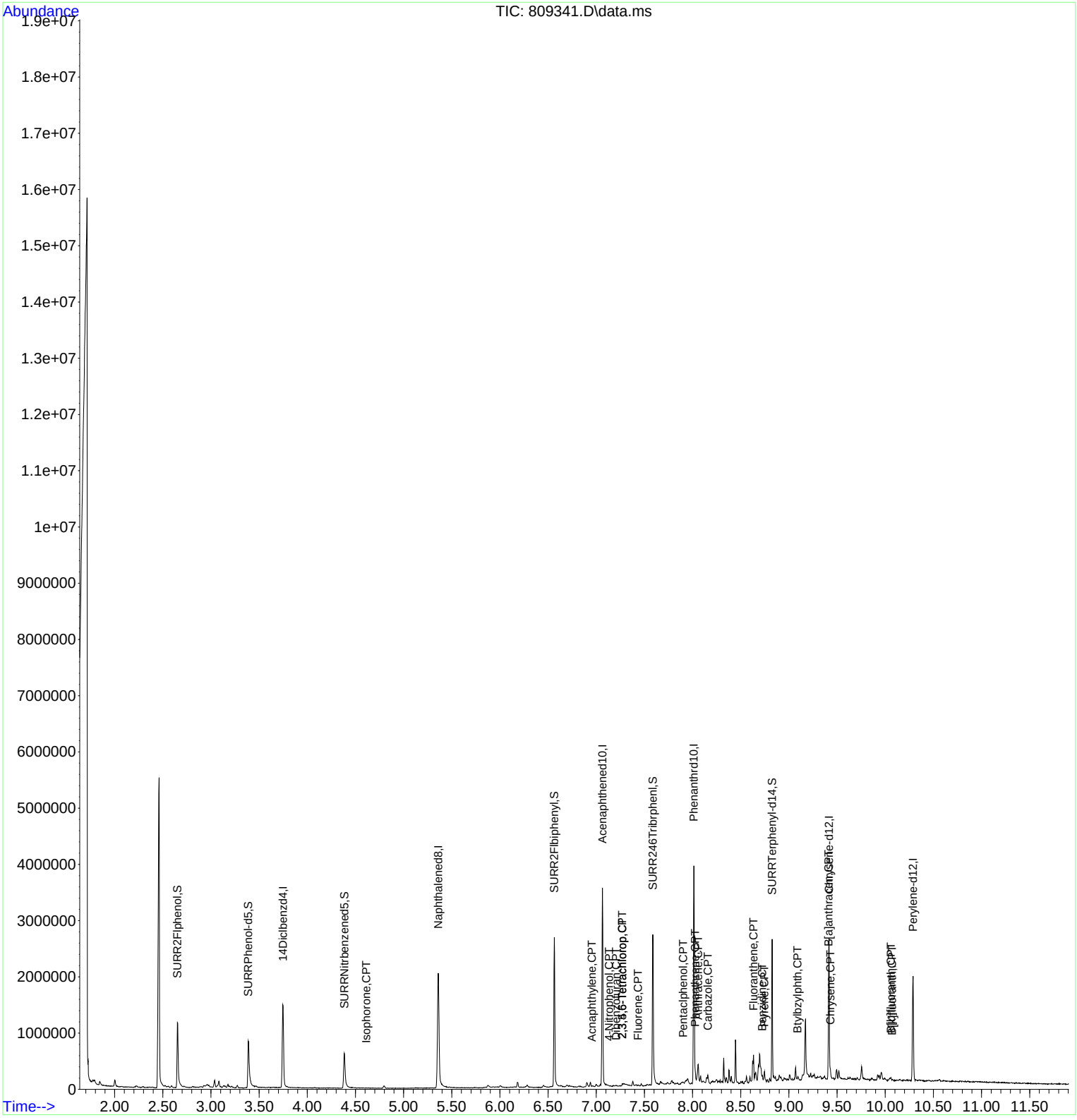
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.748	152	228804	20.00	ug/mL	0.00
21) Naphthalened8	5.359	136	1221247	20.00	ug/mL	0.00
39) Acenaphthened10	7.064	164	530438	20.00	ug/mL	0.00
63) Phenanthrd10	8.013	188	1110420	20.00	ug/mL	0.00
75) Chrysene-d12	9.417	240	642642	20.00	ug/mL	0.00
86) Perylene-d12	10.289	264	529235	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.651	112	291337	56.37	%REC	0.01
Spiked Amount 100.000	Range 20 - 110		Recovery = 56.37%			
7) SURRPhenol-d5	3.387	99	285535	48.11	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 48.11%			
22) SURRNitrbenzened5	4.385	82	234528	68.06	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 68.06%			
44) SURR2Flbiphenyl	6.564	172	718547	82.44	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 82.44%			
62) SURR246Tribrphenl	7.587	330	278711	83.51	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 83.51%			
78) SURRTerphenyl-d14	8.826	244	488295	91.56	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 91.56%			
Target Compounds						Qvalue
24) Isophorone	4.612	82	908	0.0288	ug/mL	69
47) Acnaphthylene	6.956	152	2298	0.0385	ug/mL	64
53) Dibenzofuran	7.206	168	2440	0.0462	ug/mL	57
55) 4-Nitrophenol	7.132	65	1040	0.1188	ug/mL#	21
56) 2,3,5,6-Tetrachlorop	7.271	232	2419	0.2065	ug/mL	94
57) 2,3,4,6-Tetrachlorop	7.271	232	2419	0.1860	ug/mL	85
58) Fluorene	7.433	166	3531	0.0841	ug/mL	84
69) Pentaclphenol	7.902	266	1781	1.3546	ug/mL	69
70) Phenanthrene	8.027	178	27894	0.4888	ug/mL	95
71) Anthracene	8.059	178	89714	1.5325	ug/mL	96
72) Carbazole	8.158	167	44010	0.9325	ug/mL	94
74) Fluoranthene	8.632	202	107790	2.2825	ug/mL	99
76) Benzidine	8.723	184	15333	4.8140	ug/mL	94
77) Pyrene	8.746	202	38765	0.8989	ug/mL	98
79) Btylbzylphth	9.090	149	884	0.0466	ug/mL#	33
82) B[a]anthracen	9.411	228	4904	0.1268	ug/mL	64
83) Chrysene	9.431	228	13982	0.3930	ug/mL	97
87) B[b]fluoranth	10.059	252	9883	0.3150	ug/mL	86
88) B[k]fluoranth	10.070	252	2776	0.0953	ug/mL	84

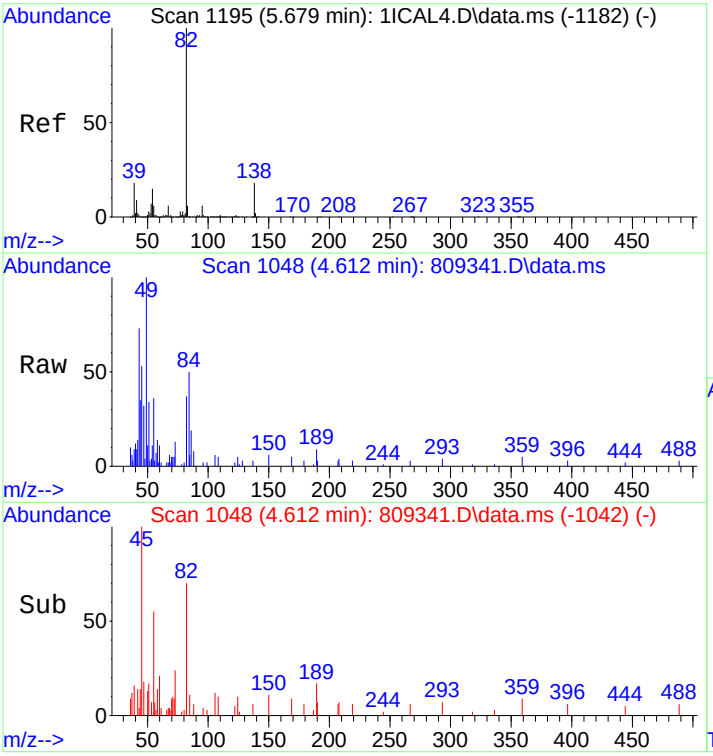
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\809341.D Vial: 21
Acq On : 28 Nov 2016 18:28 Operator: RPN
Sample : 133118,809341, Inst : SVMS1
Misc : 500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:39:32 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

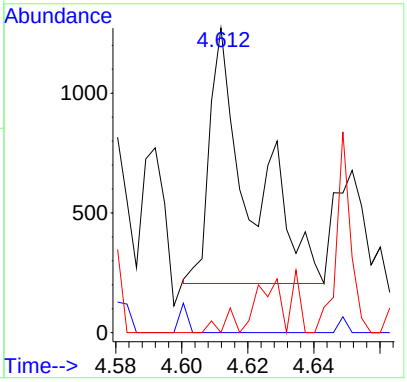


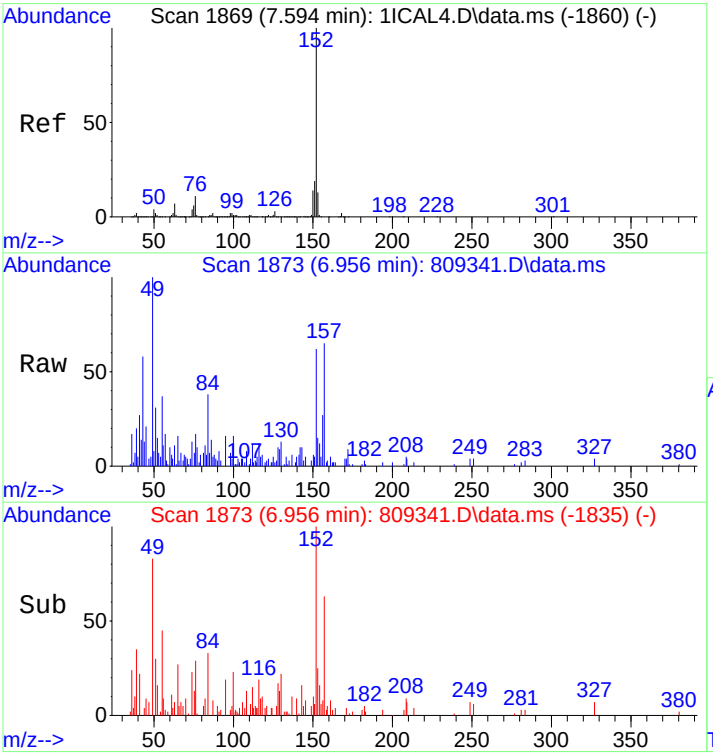


#24
Isophorone
Concen: 0.03 ug/mL
RT: 4.612 min Scan# 1048
Delta R.T. -0.128 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion: 82 Resp: 908

Ion	Ratio	Lower	Upper
82	100		
138	0.0	0.0	45.2
95	0.0	0.0	26.5

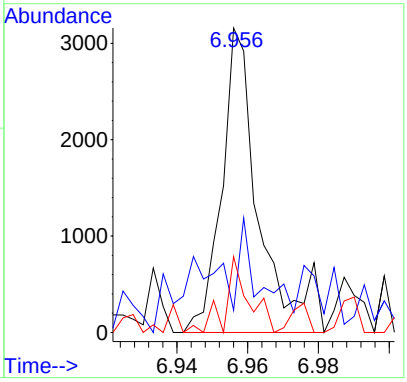


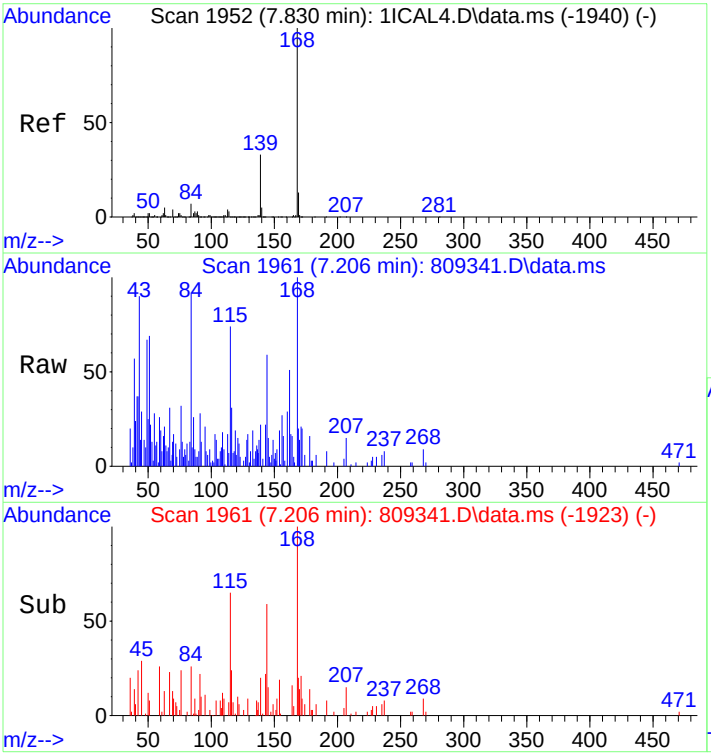


#47
Acnaphthylene
Concen: 0.04 ug/mL
RT: 6.956 min Scan# 1873
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:152 Resp: 2298

Ion	Ratio	Lower	Upper
152	100		
151	1.2	0.0	49.6
153	24.9	0.0	42.8

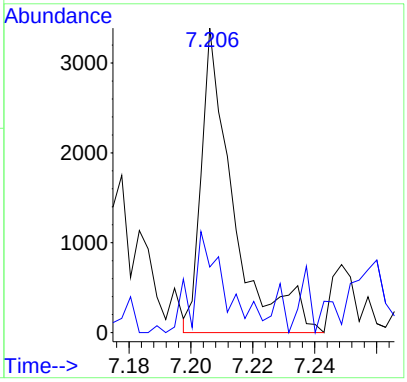


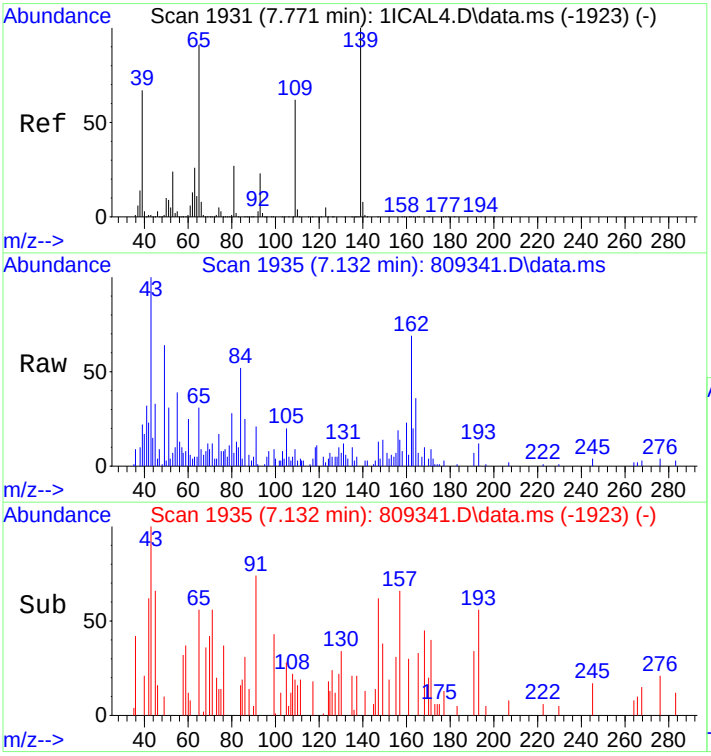


#53
Dibenzofuran
Concen: 0.05 ug/mL
RT: 7.206 min Scan# 1961
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:168 Resp: 2440

Ion	Ratio	Lower	Upper
168	100		
139	11.2	7.1	67.1

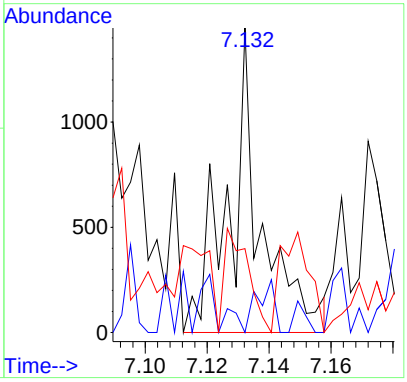


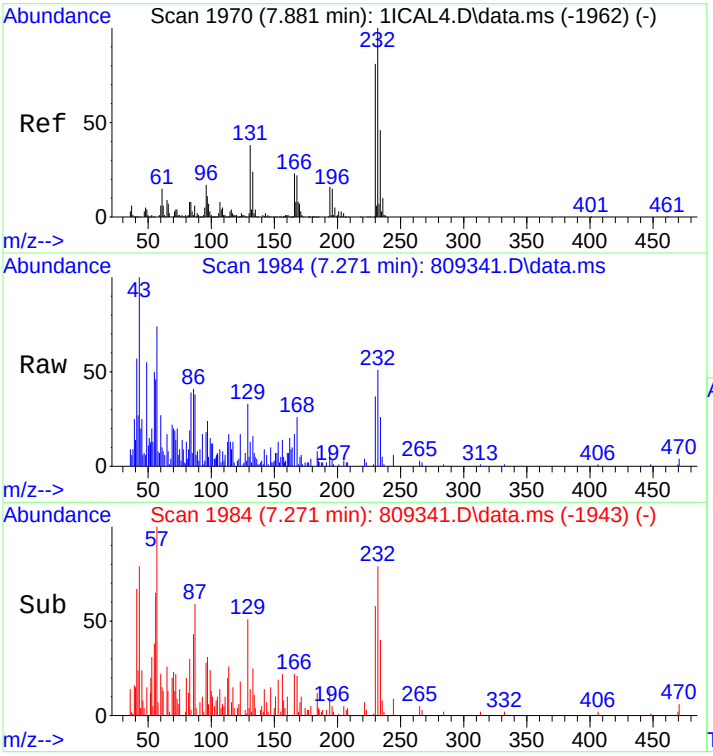


#55
4-Nitrophenol
Concen: 0.12 ug/mL
RT: 7.132 min Scan# 1935
Delta R.T. -0.065 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion: 65 Resp: 1040

Ion	Ratio	Lower	Upper
65	100		
139	0.0	65.3	125.3#
109	27.6	55.1	95.1#

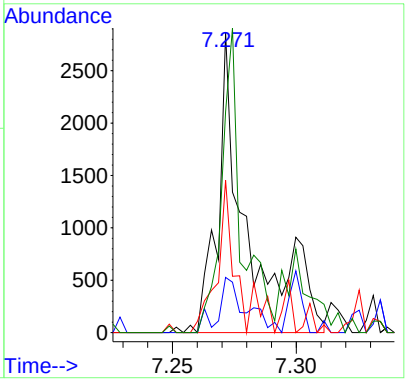


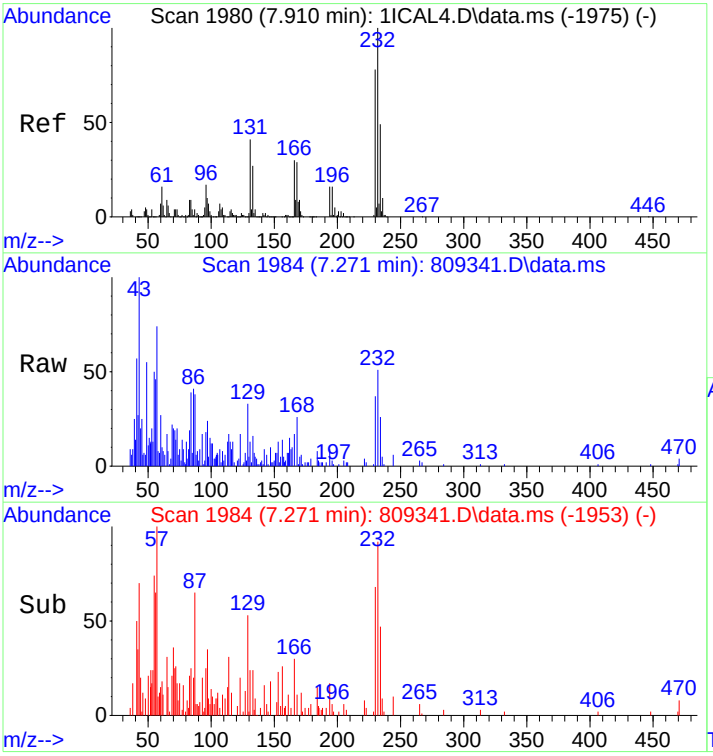


#56
2,3,5,6-Tetrachlorop
Concen: 0.21 ug/mL
RT: 7.271 min Scan# 1984
Delta R.T. -0.003 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:232 Resp: 2419

Ion	Ratio	Lower	Upper
232	100		
194	18.4	0.0	45.1
234	50.7	14.4	74.4
230	73.6	41.5	101.5

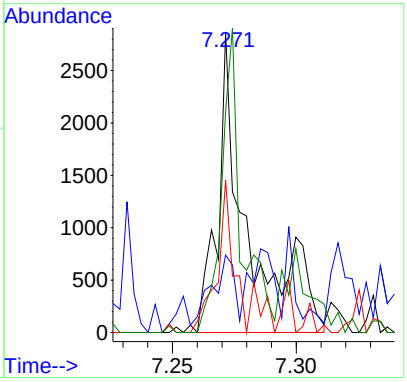


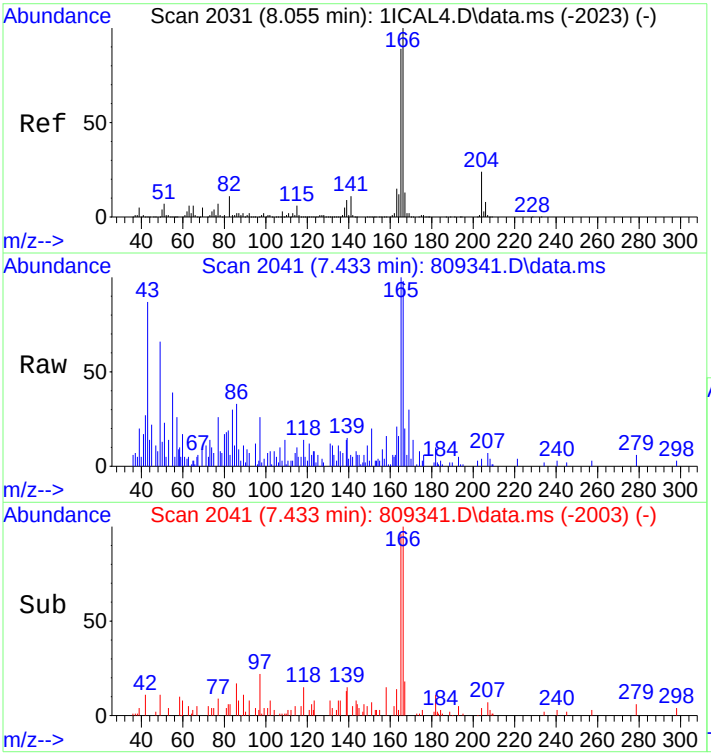


#57
2,3,4,6-Tetrachlorop
Concen: 0.19 ug/mL
RT: 7.271 min Scan# 1984
Delta R.T. -0.031 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:232 Resp: 2419

Ion	Ratio	Lower	Upper
232	100		
131	23.2	14.8	74.8
234	50.7	14.8	74.8
230	73.6	50.1	110.1

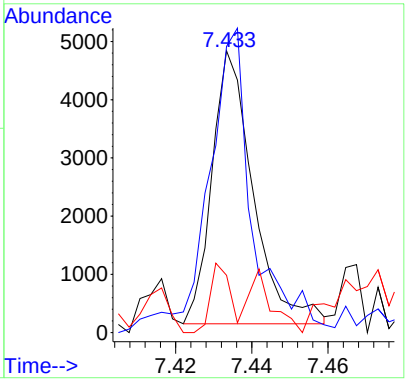


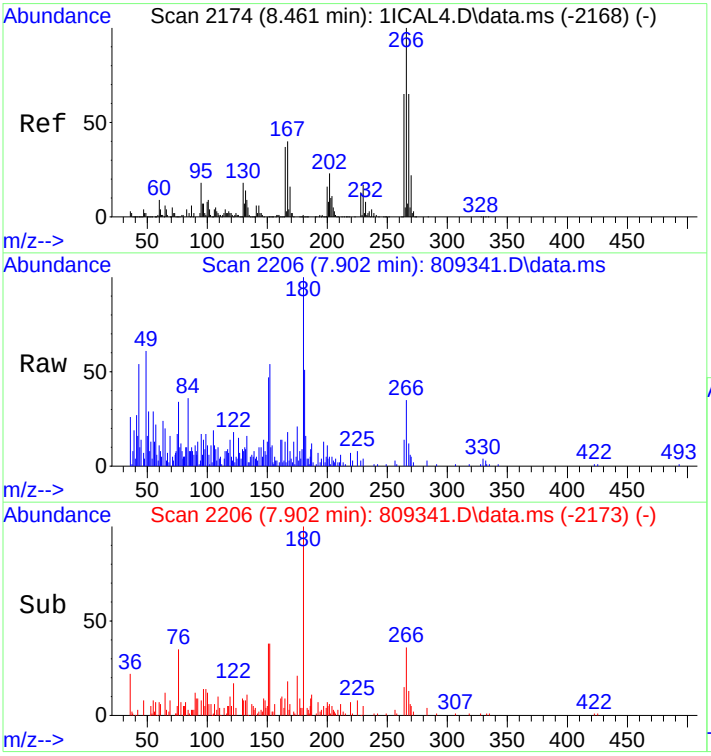


#58
Fluorene
Concen: 0.08 ug/mL
RT: 7.433 min Scan# 2041
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:166 Resp: 3531

Ion	Ratio	Lower	Upper
166	100		
165	102.0	57.2	117.2
167	21.0	0.0	44.0

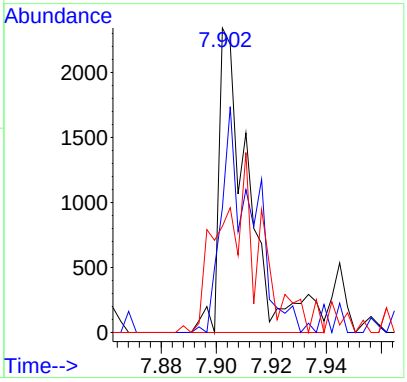


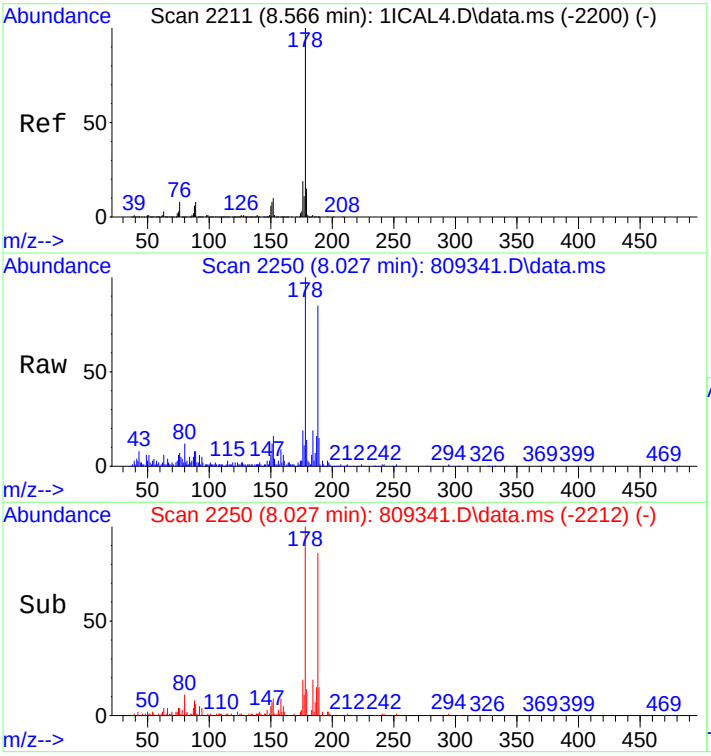


#69
Pentaclphenol
Concen: 1.35 ug/mL
RT: 7.902 min Scan# 2206
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:266 Resp: 1781

Ion	Ratio	Lower	Upper
266	100		
264	40.9	30.1	90.1
268	34.9	32.3	92.3

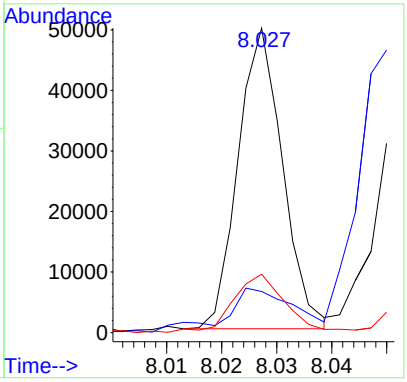


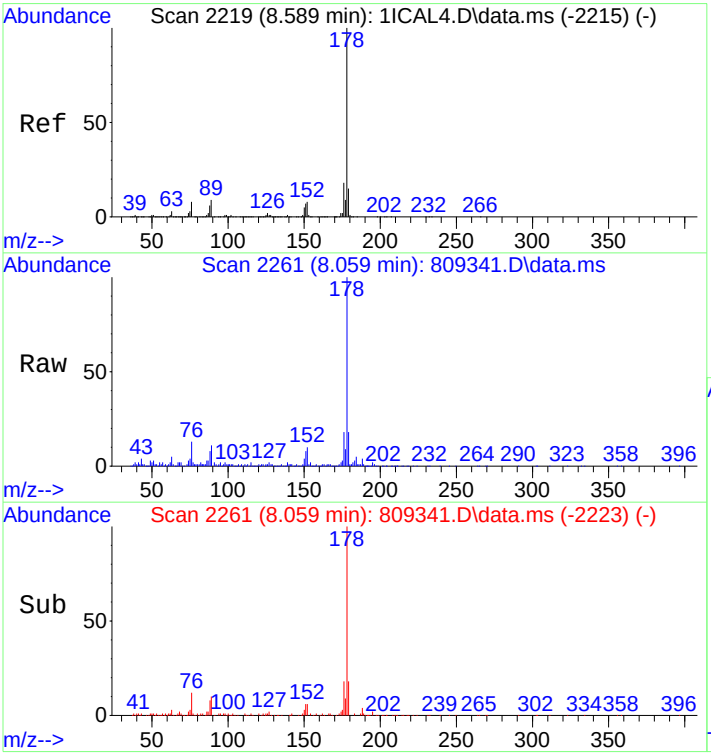


#70
Phenanthrene
Concen: 0.49 ug/mL
RT: 8.027 min Scan# 2250
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:178 Resp: 27894

Ion	Ratio	Lower	Upper
178	100		
179	10.3	0.0	44.1
176	18.3	0.0	49.4

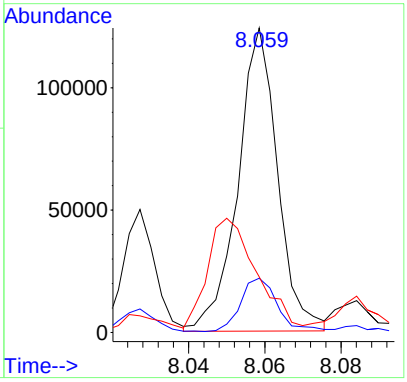


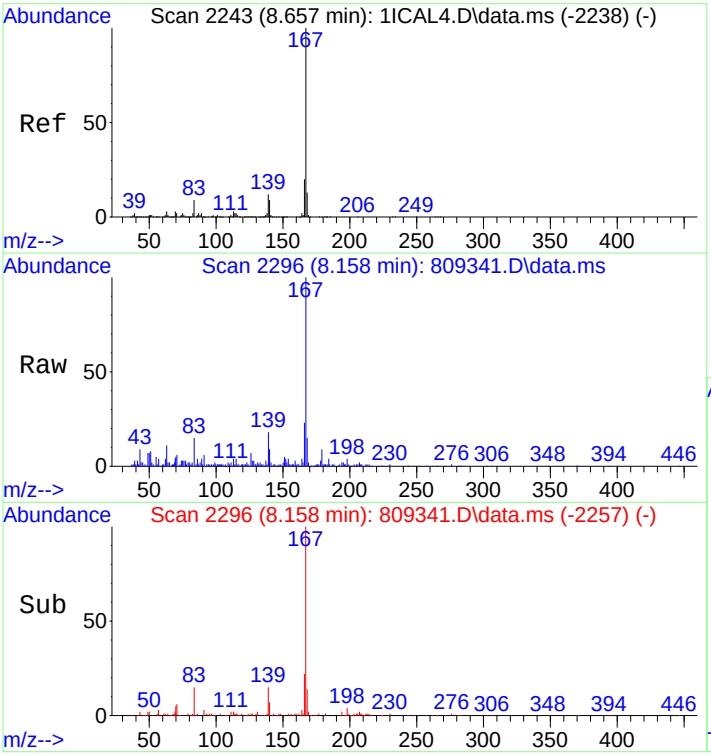


#71
Anthracene
Concen: 1.53 ug/mL
RT: 8.059 min Scan# 2261
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:178 Resp: 89714

Ion	Ratio	Lower	Upper
178	100		
176	17.7	0.0	48.4
179	17.2	0.0	44.3

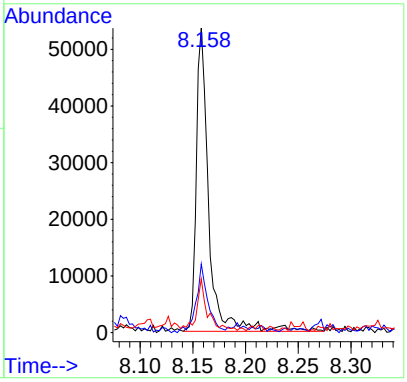


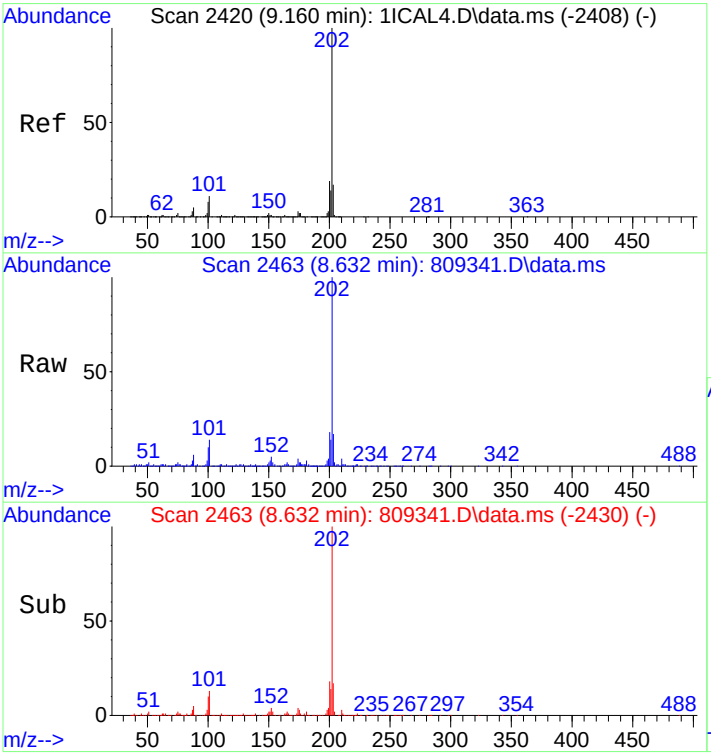


#72
Carbazole
Concen: 0.93 ug/mL
RT: 8.158 min Scan# 2296
Delta R.T. -0.003 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:167 Resp: 44010

Ion	Ratio	Lower	Upper
167	100		
166	21.7	0.0	50.1
139	16.1	0.0	41.8

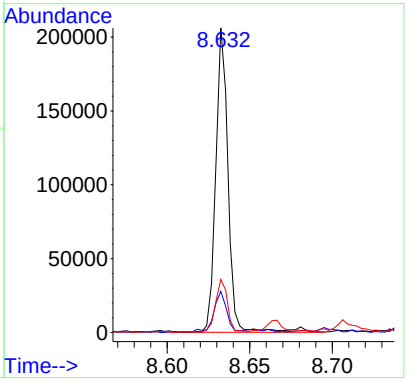


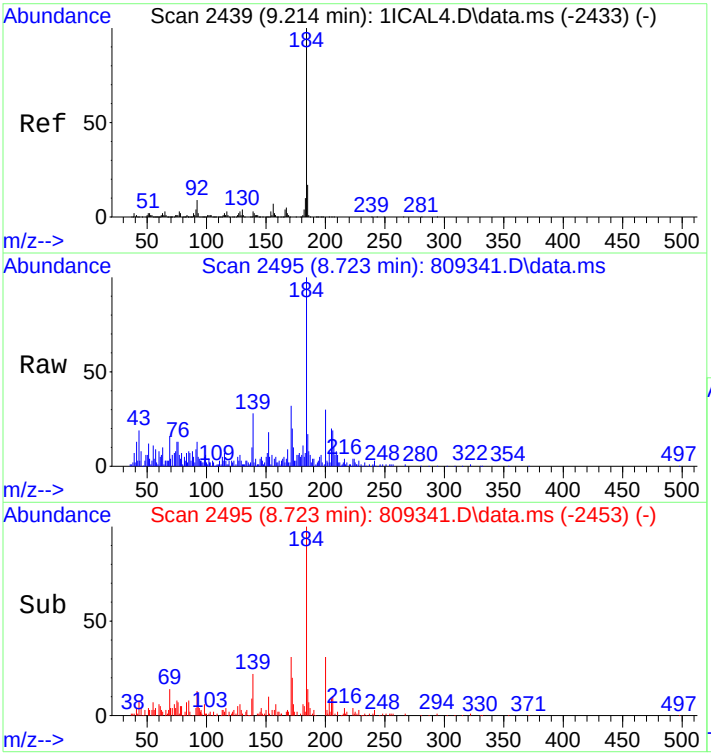


#74
Fluoranthene
Concen: 2.28 ug/mL
RT: 8.632 min Scan# 2463
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:202 Resp: 107790

Ion	Ratio	Lower	Upper
202	100		
101	13.3	0.0	42.6
203	17.3	0.0	37.4

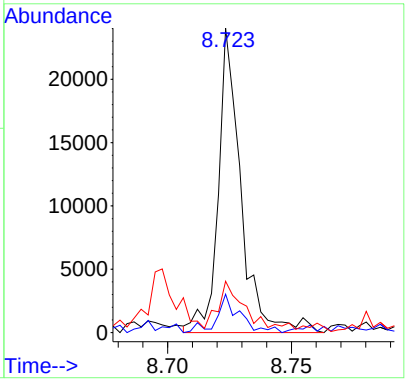


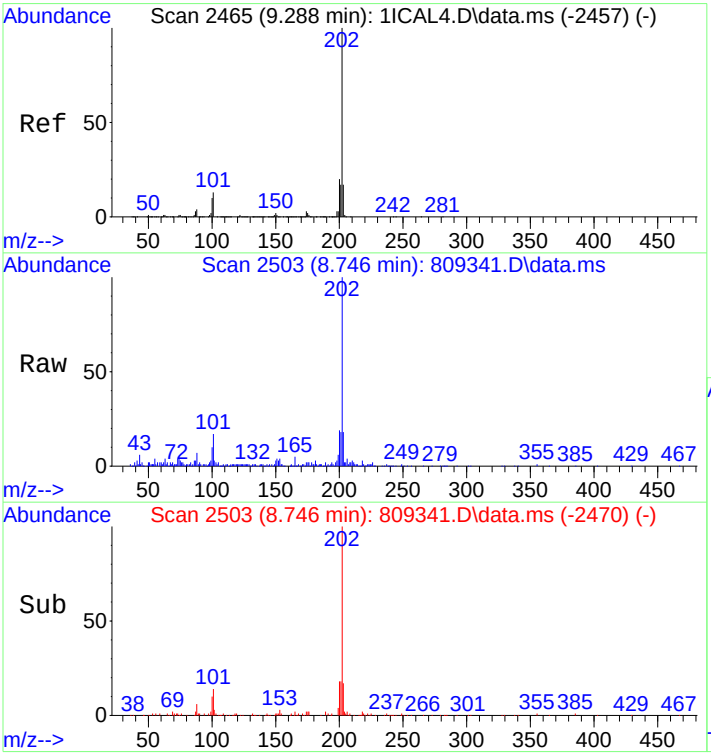


#76
Benzidine
Concen: 4.81 ug/mL
RT: 8.723 min Scan# 2495
Delta R.T. 0.020 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:184 Resp: 15333

Ion	Ratio	Lower	Upper
184	100		
92	12.6	0.0	37.5
185	15.0	0.0	45.5

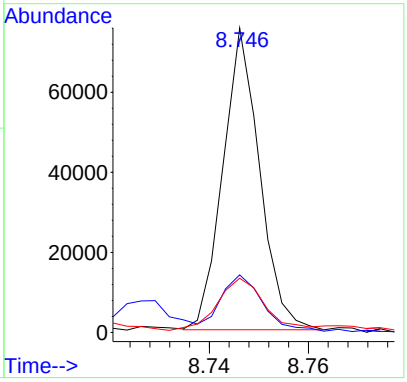


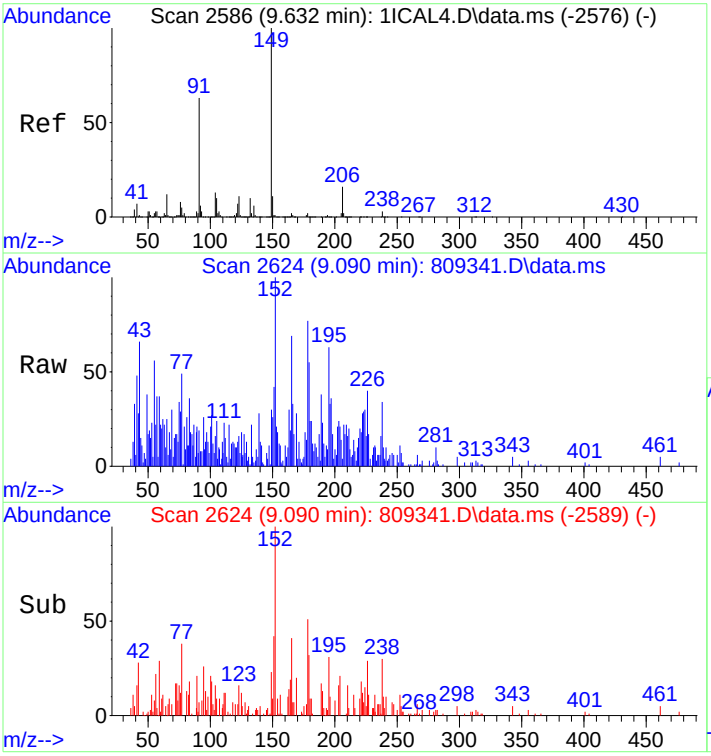


#77
Pyrene
Concen: 0.90 ug/mL
RT: 8.746 min Scan# 2503
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:202 Resp: 38765

Ion	Ratio	Lower	Upper
202	100		
200	18.7	0.0	47.8
203	16.3	0.0	47.4

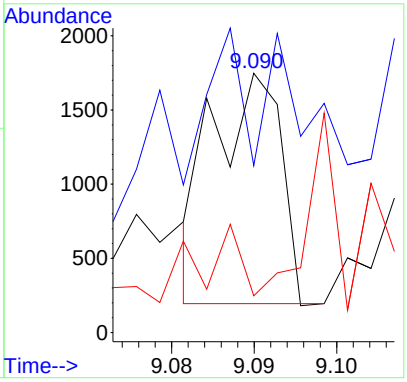


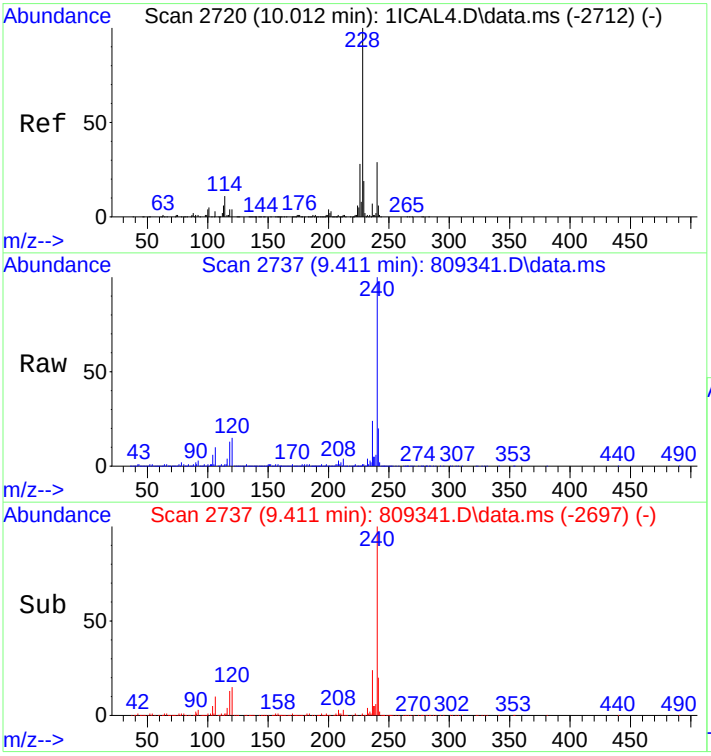


#79
Btylbzylphth
Concen: 0.05 ug/mL
RT: 9.090 min Scan# 2624
Delta R.T. 0.000 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:149 Resp: 884

Ion	Ratio	Lower	Upper
149	100		
91	8.4	37.5	97.5#
206	0.0	0.0	47.1

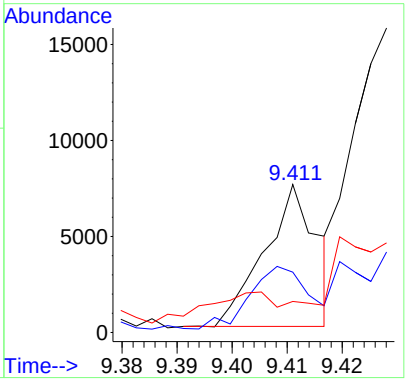


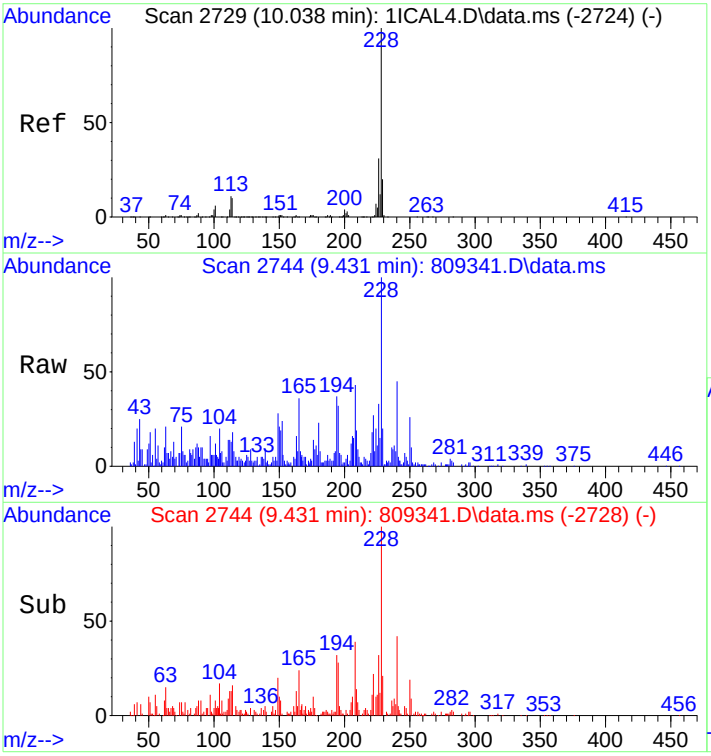


#82
B[a]anthracen
Concen: 0.13 ug/mL
RT: 9.411 min Scan# 2737
Delta R.T. 0.000 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:228 Resp: 4904

Ion	Ratio	Lower	Upper
228	100		
229	39.7	0.0	49.8
226	10.4	0.0	56.3

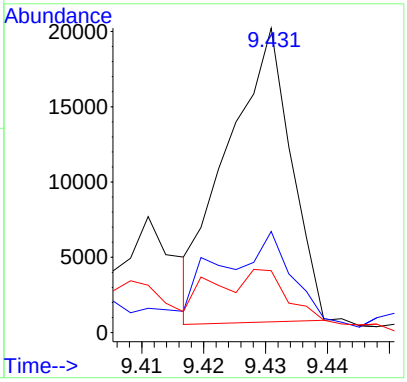


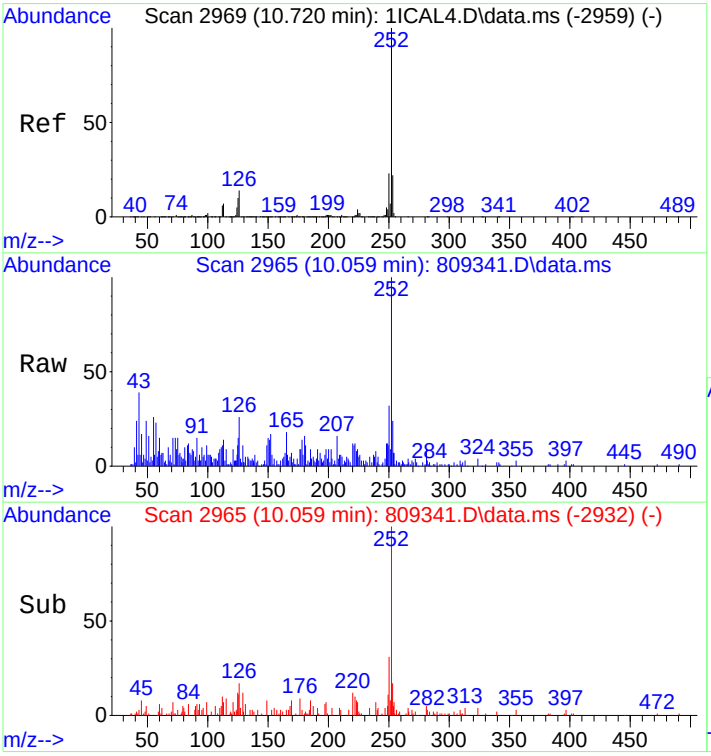


#83
Chrysene
Concen: 0.39 ug/mL
RT: 9.431 min Scan# 2744
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:228 Resp: 13982

Ion	Ratio	Lower	Upper
228	100		
226	29.8	1.3	61.3
229	16.9	0.0	48.5

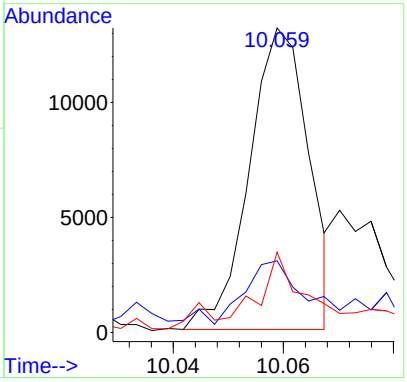


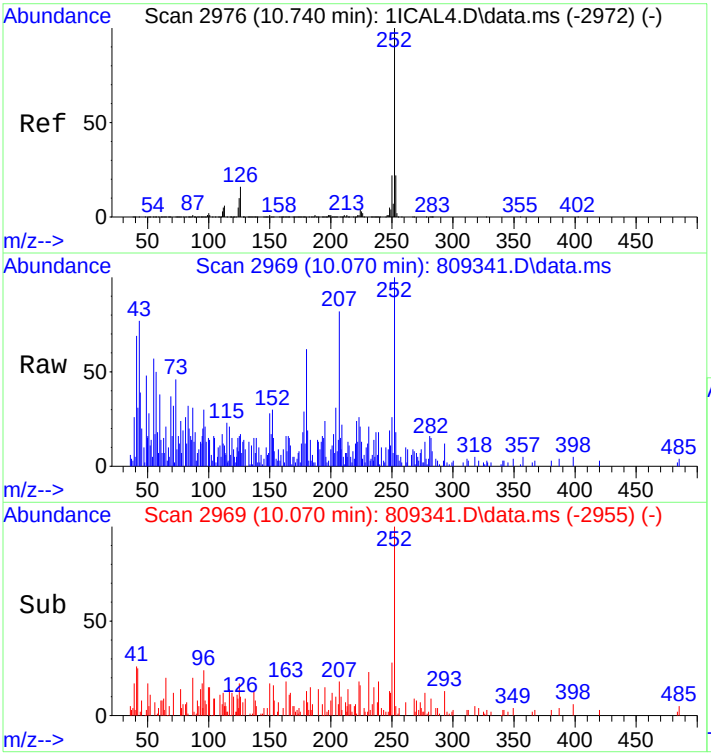


#87
B[b]fluoranth
Concen: 0.32 ug/mL
RT: 10.059 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:252 Resp: 9883

Ion	Ratio	Lower	Upper
252	100		
253	19.8	0.0	51.6
125	22.9	0.0	39.8

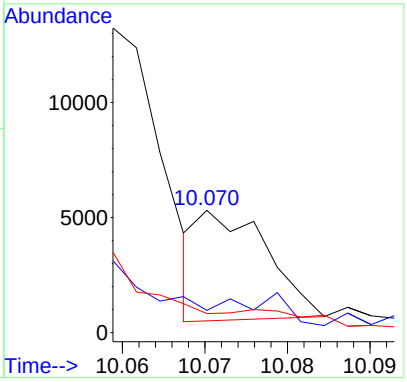




#88
B[k]fluoranth
Concen: 0.10 ug/mL
RT: 10.070 min Scan# 2969
Delta R.T. -0.011 min
Lab File: 809341.D
Acq: 28 Nov 16 6:28 pm

Tgt Ion:252 Resp: 2776

Ion	Ratio	Lower	Upper
252	100		
253	14.3	0.0	50.6
125	1.5	0.0	39.0



SEMI - VOLATILE ORGANIC ANALYSIS
INITIAL CALIBRATION
DOCUMENTS

Injection Log Summary Report

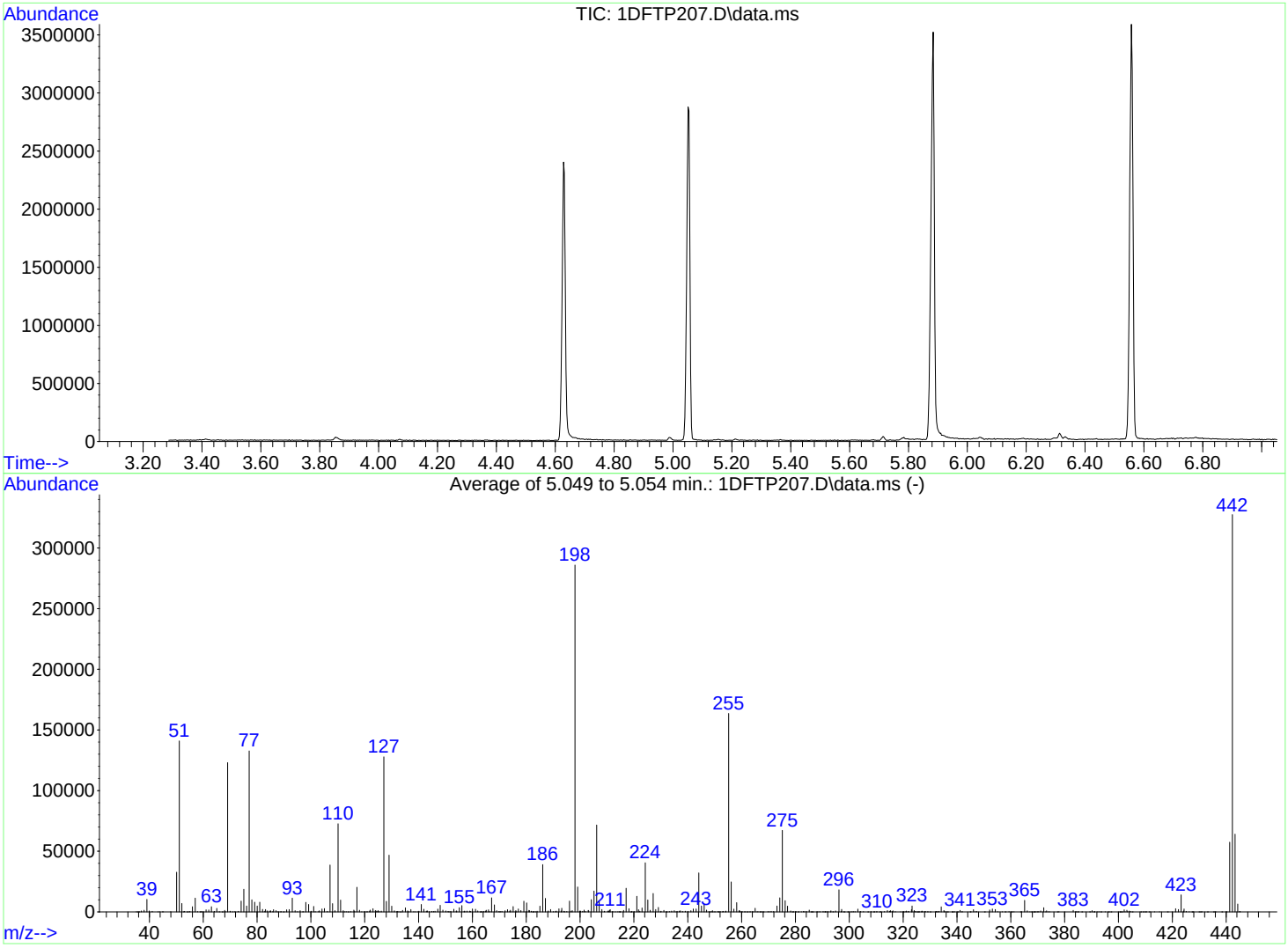
Method : X:\METHODS\1A110916.M (RTE Integrator)
Title : Method for 8270 analysis
Start (Tune) File ID : X:\DATA\1S110916\1DFTP207.D
Injection Date : 9 Nov 2016 Log Time Period (hrs) : ALL
Injection Time : 10:49 Total files within period : 53
Sample Directory : X:\DATA\1S110916\

Injection Log Summary Table

File ID	Multiplier I	S	T	Sample Name / Misc Info	Date	Time
				500uL+5ul IS S3553C		
1IB02	1.00	1.00	1.00	InstrumentBlank 500uL+5ul IS S3553C	9 Nov 2016	14:22
1ICAL7	1.00	1.00	1.00	ICAL 50ug/ml SVMS7214 500uL+5ul IS S3553C	9 Nov 2016	14:41
1ICAL6	1.00	1.00	1.00	ICAL 40ug/ml SVMS7213 500uL+5ul IS S3553C	9 Nov 2016	15:01
1ICAL5	1.00	1.00	1.00	ICAL 30ug/ml SVMS7212 500uL+5ul IS S3553C	9 Nov 2016	15:45
1ICAL4	1.00	1.00	1.00	ICAL 20ug/ml SVMS7211 500uL+5ul IS S3553C	9 Nov 2016	16:05
1ICAL3	1.00	1.00	1.00	ICAL 10ug/ml SVMS7210 500uL+5ul IS S3553C	9 Nov 2016	16:24
1ICAL2	1.00	1.00	1.00	ICAL 5ug/ml SVMS7209 500uL+5ul IS S3553C	9 Nov 2016	16:44
1ICAL1	1.00	1.00	1.00	ICAL 1ug/ml SVMS7208 500uL+5ul IS S3553C	9 Nov 2016	17:03
1ICV1	1.00	1.00	1.00	ICV 20ug/ml SVMS7215 500uL+5ul IS S3553C	9 Nov 2016	17:22
1ICV2	1.00	1.00	1.00	ICV 40ug/ml SVMS7216 500uL+5ul IS S3553C	9 Nov 2016	17:42

Data File : C:\INSTARCH\Data\1S110916\1DFTP207.D Vial: 1
Acq On : 9 Nov 2016 10:49 Operator: JJY
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE

Method : C:\INSTARCH\Methods\1DFTPP.M
Title : DFTPP TUNE Method
Last Update : Fri Nov 04 12:05:16 2016



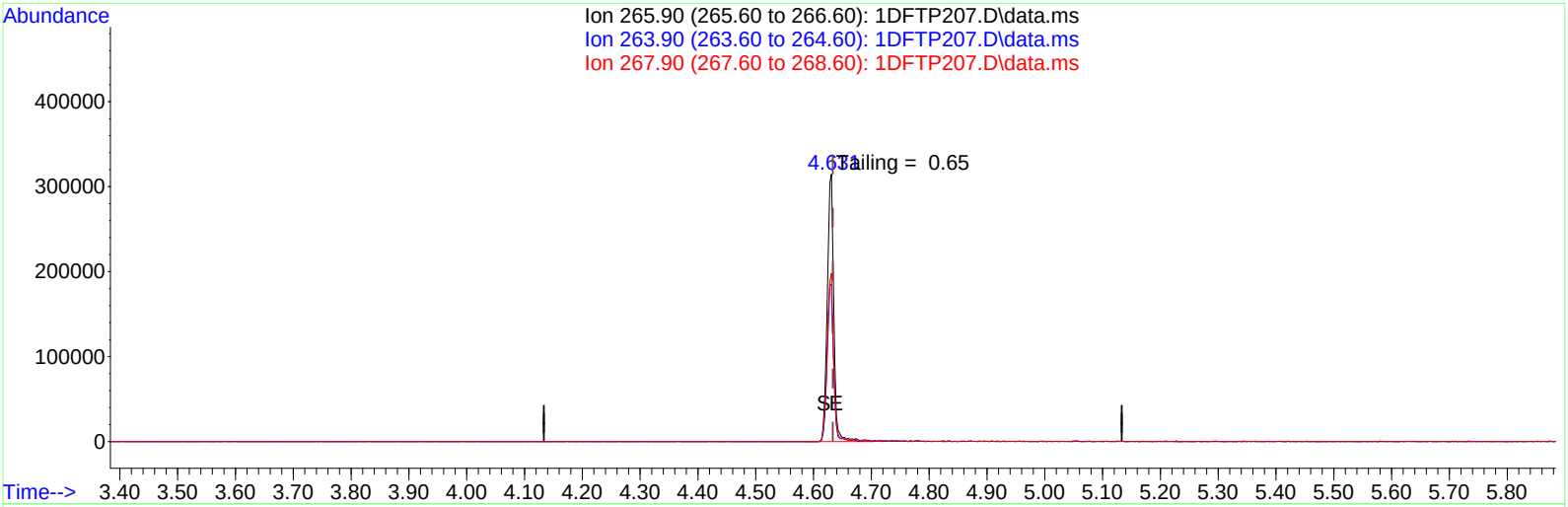
AutoFind: Scans 621, 622, 623; Background Corrected with Scan 610

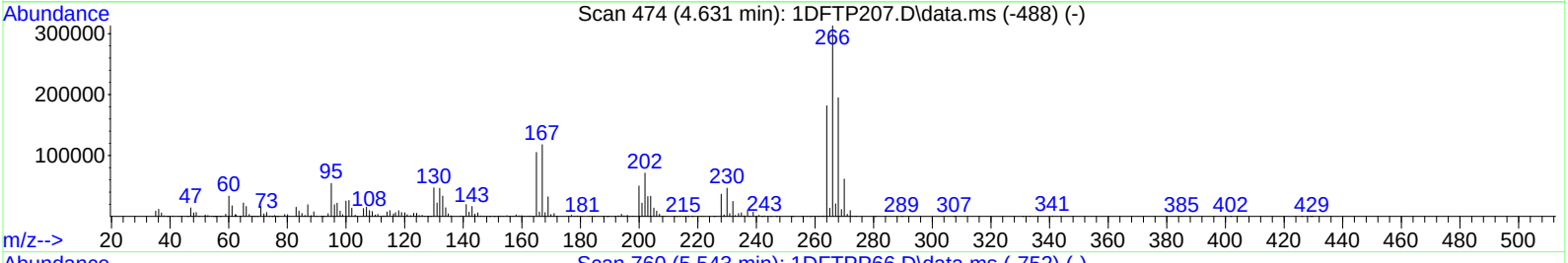
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	43.0	140970	PASS
68	69	0.00	2	1.1	1338	PASS
70	69	0.00	2	0.5	584	PASS
127	442	10	80	39.0	127829	PASS
197	198	0.00	2	0.3	996	PASS
198	442	50	100	87.3	285973	PASS
199	198	5	9	7.2	20509	PASS
275	442	10	60	20.5	67229	PASS
365	198	1	100	3.3	9562	PASS
441	442	0.01	24	17.6	57528	PASS
442	442	50	100	100.0	327509	PASS
443	442	15	24	19.6	64053	PASS

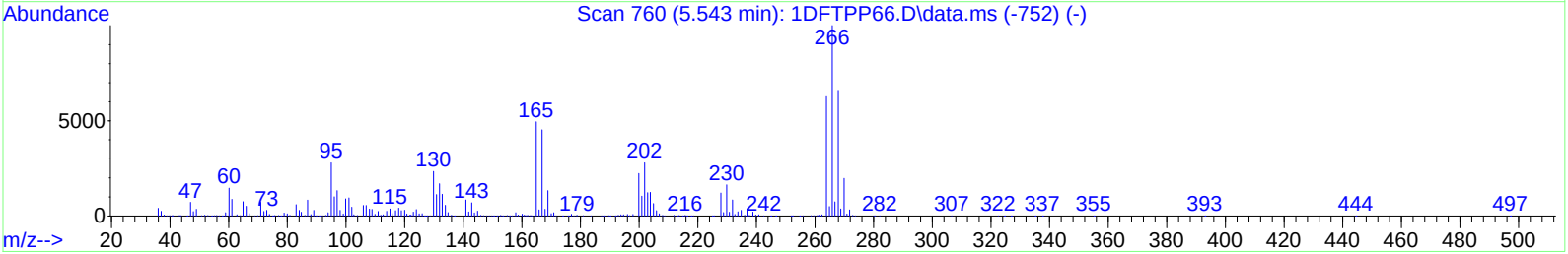
Quantitation Report (Qedit)

Data File : C:\INSTARCH\Data\1S110916\1DFTP207.D Vial: 1
Acq On : 9 Nov 2016 10:49 Operator: JJY
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 11:00:26 2016

Quant Method : C:\INSTARCH\Methods\1DFTPP.M
Quant Title : DFTPP TUNE Method
QLast Update : Fri Nov 04 12:05:16 2016
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M







TIC: 1DFTP207.D\data.ms

(1) Pentachlorophenol

4.631min (-0.003) 16.32 ng

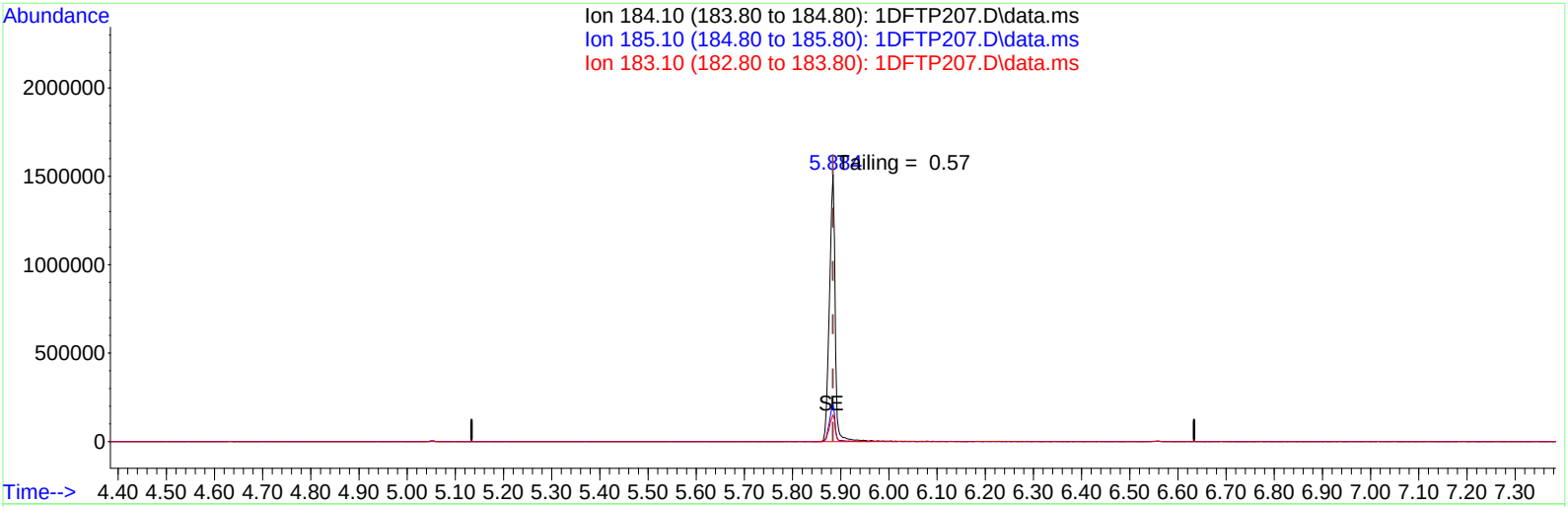
response 242676

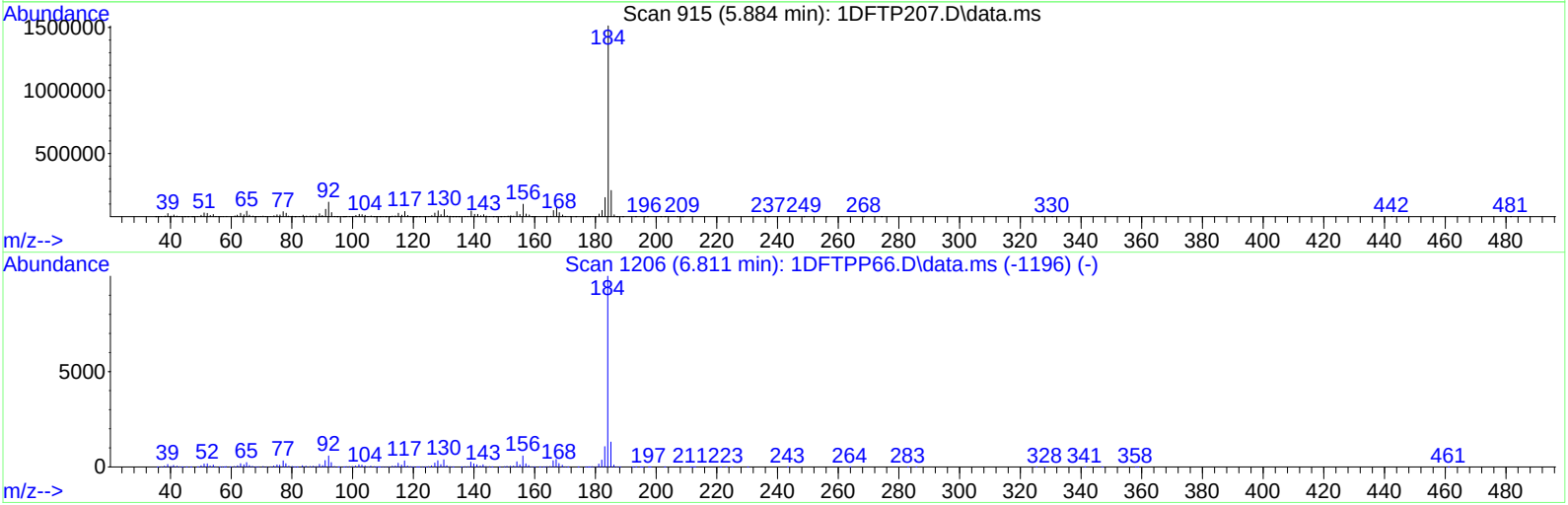
Ion	Exp%	Act%
265.90	100	100
263.90	66.20	58.42
267.90	60.90	62.92
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\INSTARCH\Data\1S110916\1DFTP207.D Vial: 1
Acq On : 9 Nov 2016 10:49 Operator: JJY
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 11:00:26 2016

Quant Method : C:\INSTARCH\Methods\1DFTPP.M
Quant Title : DFTPP TUNE Method
QLast Update : Fri Nov 04 12:05:16 2016
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M





TIC: 1DFTP207.D\data.ms

(3) Benzidine

5.884min (+0.000) 14.06 ng

response 1232833

Ion	Exp%	Act%
184.10	100	100
185.10	13.80	14.18
183.10	12.20	10.45
0.00	0.00	0.00

Data File	: 1DFTP207.D	Vial Number	: 1
Data File Path	: C:\INSTARCH\Data\1S110916\	Operator	: JJY
Date Acquired	: 11/9/2016 10:49	Instrument Name:	SVMS1
Sample Name	: DFTPP TUNE SVMS7269	Sample Multiplier:	1
Misc Info	: SVMS1,25 ug DFTPP		

Quant Method	: C:\INSTARCH\Methods\1DFTPP.M
Calibration Title	: DFTPP TUNE Method
Last Update	: Fri Nov 04 12:05:16 2016

Compound	R.T.	QIon	Response
1) Pentachlorophenol	4.63	266	242676
2) DFTPP	5.05	198	233091
3) Benzidine	5.88	184	1232833
4) DDE	6.04	246	1699
5) DDD	6.32	235	11294
6) DDT	6.56	235	589426

DDT %Degradation

$$\frac{DDD + DDE}{DDD + DDE + DDT} \times 100\% = 2.16\ \%$$

Method Path : C:\INSTARCH\METHODS\
Method File : 1S110916.M
Title : Method for 8270 analysis
Last Update : Wed Nov 09 17:18:01 2016
Response Via : Initial Calibration

Calibration Files
1 =1ICAL1.D 5 =1ICAL2.D 10 =1ICAL3.D 20 =1ICAL4.D 30 =1ICAL5.D 40 =1ICAL6.D 50 =1ICAL7.D

	Compound	1	5	10	20	30	40	50	Avg	%RSD
	14Diclbenzd4				ISTD					
1) I	Ntrsdimeth	0.605	0.715	0.686	0.678	0.648	0.707	0.687	0.675	5.62
2) CT	Pyridine	0.879	0.980	1.182	1.203	1.211	1.279	1.254	1.141	13.23
3) CT	SURR2Flphenol	0.393	0.460	0.439	0.460	0.462	0.483	0.466	0.452	6.42
4) S	Aniline	1.545	1.330	1.655	1.698	1.716	1.810	1.752	1.644	9.81
5) CT		1.133	1.055	1.008	1.069	1.073	1.128	1.099	1.081	4.05
6) CPT	bis2Clethletr									
	SURRPhenol-d5	0.509	0.521	0.510	0.527	0.504	0.538	0.523	0.519	2.28
7) S		1.347	1.525	1.461	1.499	1.482	1.598	1.512	1.489	5.12
8) CPT	Phenol	1.178	1.258	1.195	1.233	1.221	1.278	1.232	1.228	2.81
9) CPT	2-Clphenol									
10) CT	13Diclbenz	1.406	1.431	1.405	1.434	1.382	1.464	1.415	1.419	1.84
11) CT	14Diclbenz	1.498	1.561	1.432	1.429	1.404	1.468	1.405	1.457	3.93
12) CT	12Diclbenz	1.515	1.406	1.363	1.382	1.336	1.383	1.313	1.386	4.69
13) CT	Benzyl alcoho	0.659	0.802	0.753	0.806	0.812	0.864	0.809	0.786	8.22
14) CPT	bis2clispreth	2.765	2.810	2.590	2.601	2.525	2.660	2.487	2.634	4.52
15) CPT	2Methylphenol	0.856	1.025	0.975	0.965	0.938	0.994	0.926	0.954	5.75
16) CT	Ntrspyrrol	0.544	0.640	0.609	0.593	0.592	0.631	0.595	0.600	5.22
17) CPT	Acetophenone	1.705	1.982	1.779	1.842	1.810	1.893	1.797	1.830	4.83
18) CPT	Hexaclethane	0.642	0.667	0.611	0.619	0.581	0.632	0.599	0.621	4.59
19) CPT	N-Ntrsdinprop	0.842	0.961	0.857	0.921	0.885	0.943	0.901	0.901	4.84
20) CPT	3&4Methylphenol	1.114	1.256	1.219	1.255	1.226	1.307	1.230	1.230	4.78
21) I	Naphthalened8				ISTD					
22) S	SURRNitrbenzened5	0.055	0.058	0.054	0.058	0.057	0.058	0.055	0.056	2.63
23) CPT	Nitrobenzene	0.302	0.279	0.274	0.284	0.290	0.297	0.277	0.286	3.59
24) CPT	Isophorone	0.511	0.537	0.510	0.523	0.526	0.519	0.495	0.517	2.60
25) CPT	2-Nitrophenol	0.121	0.147	0.143	0.150	0.148	0.147	0.140	0.142	6.92
26) CPT	24Dimthpheno	0.195	0.223	0.210	0.218	0.216	0.221	0.207	0.213	4.65
27) CPT	bis2clethoxym	0.346	0.363	0.318	0.331	0.335	0.329	0.318	0.334	4.83
28) CPT	24Diclphenol	0.280	0.295	0.290	0.289	0.282	0.283	0.263	0.283	3.62
29) CT	124Triclbenz	0.359	0.370	0.337	0.337	0.337	0.337	0.317	0.342	5.04
30) CT	Benzoic acid		0.119	0.122	0.156	0.159	0.165	0.157	0.146	13.88
31) CPT	Naphthalene	0.995	0.991	0.922	0.905	0.888	0.897	0.858	0.922	5.65
32) CPT	4-Cl-aniline	0.353	0.302	0.341	0.358	0.348	0.351	0.331	0.340	5.62
33) CT	26Diclphenol	0.269	0.277	0.268	0.271	0.255	0.249	0.233	0.260	5.83
34) CT	Hexaclprop	0.250	0.279	0.252	0.269	0.260	0.252	0.237	0.257	5.31
35) CPT	Hexaclbutdien	0.278	0.264	0.246	0.255	0.240	0.243	0.223	0.250	7.11
36) CPT	4Cl3methylphe	0.227	0.286	0.277	0.290	0.284	0.287	0.277	0.276	7.93
37) CPT	2Methylnaphth	0.690	0.693	0.646	0.653	0.621	0.623	0.602	0.647	5.40
38) CT	1Methylnaphth	0.588	0.583	0.534	0.536	0.517	0.514	0.495	0.538	6.52
39) I	Acenaphthened10				ISTD					
40) CPT	Hxclcycpentdi	0.289	0.397	0.406	0.460	0.435	0.431	0.417	0.405	13.65
41) CPT	1245Tetrclbenz	0.899	0.870	0.797	0.791	0.735	0.741	0.702	0.791	9.19
42) CPT	246Triclpheno	0.511	0.503	0.483	0.514	0.488	0.501	0.486	0.498	2.52

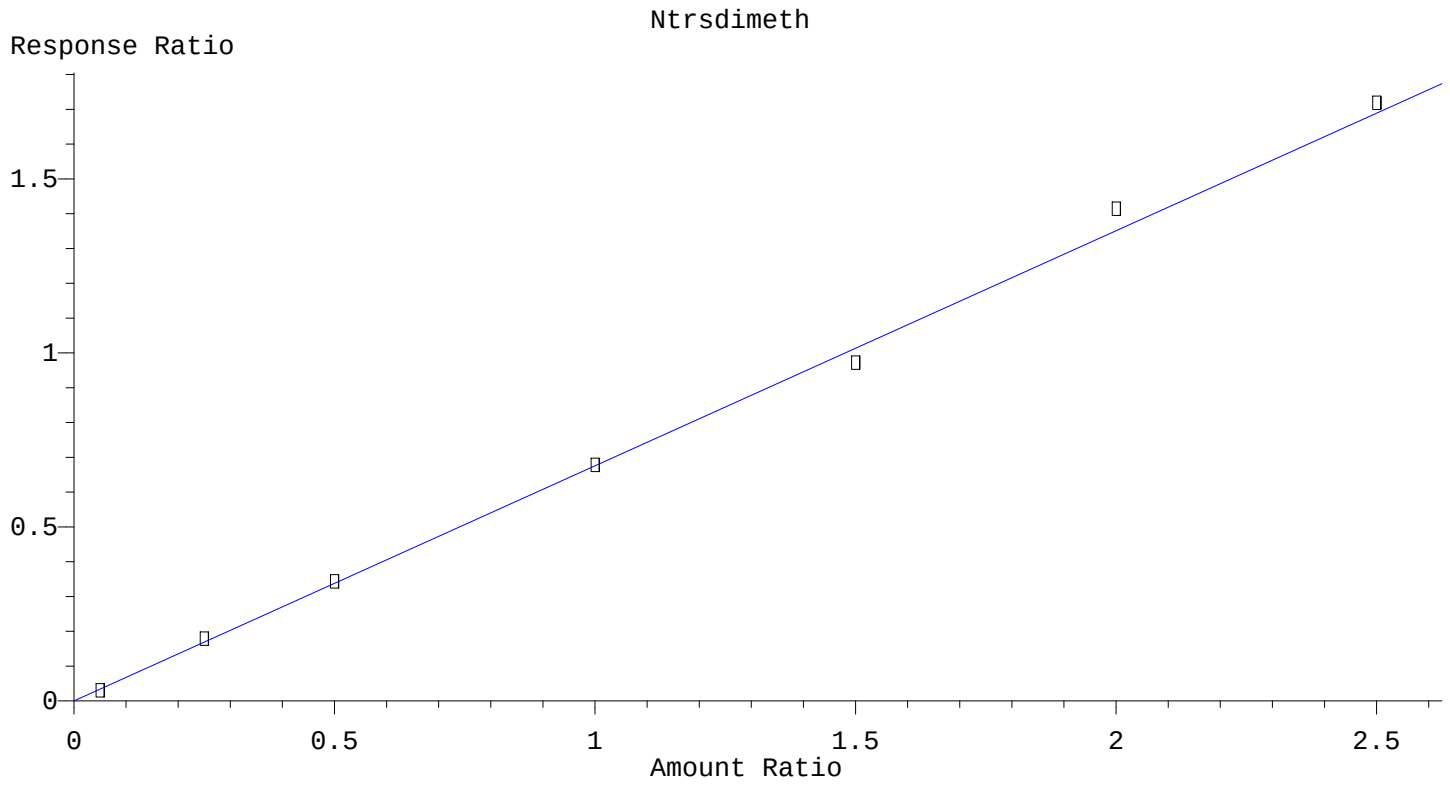
Response Factor Report SVMS1

43)	CPT	245Triclpheno	0.538	0.561	0.541	0.558	0.522	0.521	0.508	0.535	3.67
44)	S	SURR2Flbiphenyl	0.345	0.355	0.323	0.336	0.310	0.321	0.311	0.329	5.19
45)	CPT	2Clnaphthalen	1.447	1.472	1.333	1.372	1.306	1.323	1.284	1.362	5.27
46)	CPT	2Nitroaniline	0.340	0.406	0.388	0.416	0.426	0.432	0.419	0.404	7.86
47)	CPT	Acnaphthylene	2.422	2.410	2.181	2.277	2.144	2.200	2.115	2.250	5.53
48)	CPT	Dimethylphtha	1.687	1.670	1.519	1.563	1.452	1.488	1.434	1.545	6.54
49)	CPT	26Dinitrotolu	0.349	0.377	0.331	0.339	0.324	0.338	0.318	0.339	5.71
50)	CPT	Acenaphthene	1.447	1.413	1.320	1.326	1.264	1.262	1.245	1.325	5.90
51)	CPT	3Nitroaniline	0.329	0.300	0.341	0.350	0.348	0.341	0.331	0.334	5.11
52)	CPT	24Dinitphenol		0.105	0.137	0.206	0.199	0.218	0.205	0.178	25.73#
53)	CPT	Dibenzofuran	2.207	2.186	1.976	1.974	1.873	1.876	1.850	1.992	7.44
54)	CPT	24Dinitrotolu	0.435	0.469	0.429	0.449	0.420	0.426	0.406	0.433	4.71
55)	CPT	4-Nitrophenol		0.305	0.305	0.343	0.351	0.337	0.339	0.330	6.02
56)	CT	2,3,5,6-Tetrac...	0.402	0.439	0.446	0.470	0.441	0.453	0.441	0.442	4.60
57)	CPT	2,3,4,6-Tetrac...	0.506	0.526	0.480	0.502	0.476	0.478	0.465	0.490	4.34
58)	CPT	Fluorene	1.759	1.749	1.579	1.600	1.495	1.497	1.400	1.583	8.45
59)	CPT	4Clphlphlethr	0.948	0.879	0.814	0.806	0.730	0.724	0.684	0.798	11.74
60)	CPT	Diethylphthal	1.782	1.900	1.663	1.772	1.683	1.697	1.672	1.738	4.92
61)	CPT	4Nitroaniline	0.324	0.302	0.323	0.346	0.345	0.347	0.344	0.333	5.18
62)	S	SURR246Trlbrphenl	0.121	0.129	0.127	0.132	0.124	0.127	0.120	0.126	3.32
63)	I	Phenanthrd10	----------ISTD----------								
64)	CPT	46Dinit2mylph		0.097	0.103	0.121	0.123	0.125	0.120	0.115	10.32
65)	CPT	Ntrsdiphlam&Di...	0.596	0.569	0.509	0.499	0.475	0.472	0.439	0.508	11.01
66)	CT	Azobenz&12Diph...	0.188	0.176	0.156	0.154	0.153	0.149	0.142	0.160	10.14
67)	CPT	4Brphlphlethr	0.259	0.253	0.241	0.235	0.224	0.223	0.215	0.236	6.96
68)	CPT	Hexaclbenzene	0.316	0.289	0.267	0.267	0.257	0.255	0.250	0.272	8.63
69)	CPT	Pentaclphenol		0.131	0.138	0.151	0.157	0.159	0.154	0.148	7.68
70)	CPT	Phenanthrene	1.175	1.060	1.028	1.006	0.981	0.986	0.960	1.028	7.07
71)	CPT	Anthracene	1.138	1.158	1.045	1.052	1.008	1.005	0.974	1.054	6.57
72)	CPT	Carbazole	0.884	0.906	0.843	0.841	0.850	0.828	0.797	0.850	4.23
73)	CPT	Dinbtylphthal	0.886	0.964	0.904	0.880	0.903	0.870	0.834	0.892	4.44
74)	CPT	Fluoranthene	0.926	0.918	0.838	0.834	0.833	0.822	0.783	0.851	6.12
75)	I	Chrysene-d12	----------ISTD----------								
76)	CT	Benzidine		0.109	0.335	0.387	0.444	0.450	0.437	0.360	36.25#
77)	CPT	Pyrene	1.340	1.345	1.263	1.347	1.344	1.398	1.357	1.342	2.98
78)	S	SURRTerphenyl-d14	0.163	0.164	0.160	0.168	0.164	0.175	0.167	0.166	2.93
79)	CPT	Btylbzylphth	0.514	0.596	0.551	0.605	0.609	0.639	0.615	0.590	7.21
80)	TM	bis2Ethlhxlad	0.396	0.450	0.410	0.453	0.444	0.477	0.460	0.441	6.44
81)	CPT	33Diclbnzidin	0.412	0.290	0.231	0.220	0.238	0.256	0.271	0.274	23.88#
82)	CPT	B[a]anthracen	1.230	1.216	1.129	1.214	1.201	1.217	1.220	1.204	2.84
83)	CPT	Chrysene	1.110	1.112	1.044	1.124	1.099	1.143	1.118	1.107	2.78
84)	CPT	bis2Ethlhxlph	0.758	0.821	0.787	0.826	0.799	0.822	0.767	0.797	3.45
85)	CPT	Dinoctylphthl	1.212	1.379	1.404	1.550	1.561	1.588	1.585	1.469	9.68
86)	I	Perylene-d12	----------ISTD----------								
87)	CPT	B[b]fluoranth	1.149	1.205	1.204	1.176	1.188	1.242	1.135	1.186	3.06
88)	CPT	B[k]fluoranth	1.203	1.265	1.007	1.146	1.018	0.987	1.084	1.101	9.70
89)	CPT	Benz[a]pyrene	1.205	1.231	1.117	1.170	1.085	1.123	1.076	1.144	5.20
90)	CPT	Indeno-pyrene	1.300	1.347	1.269	1.291	1.222	1.246	1.197	1.267	4.01
91)	CPT	Dib[ah]anthr	1.029	1.108	1.044	1.052	1.002	1.030	0.956	1.032	4.51
92)	CPT	B[ghi]perylen	1.059	1.119	1.082	1.120	1.081	1.091	1.051	1.086	2.46

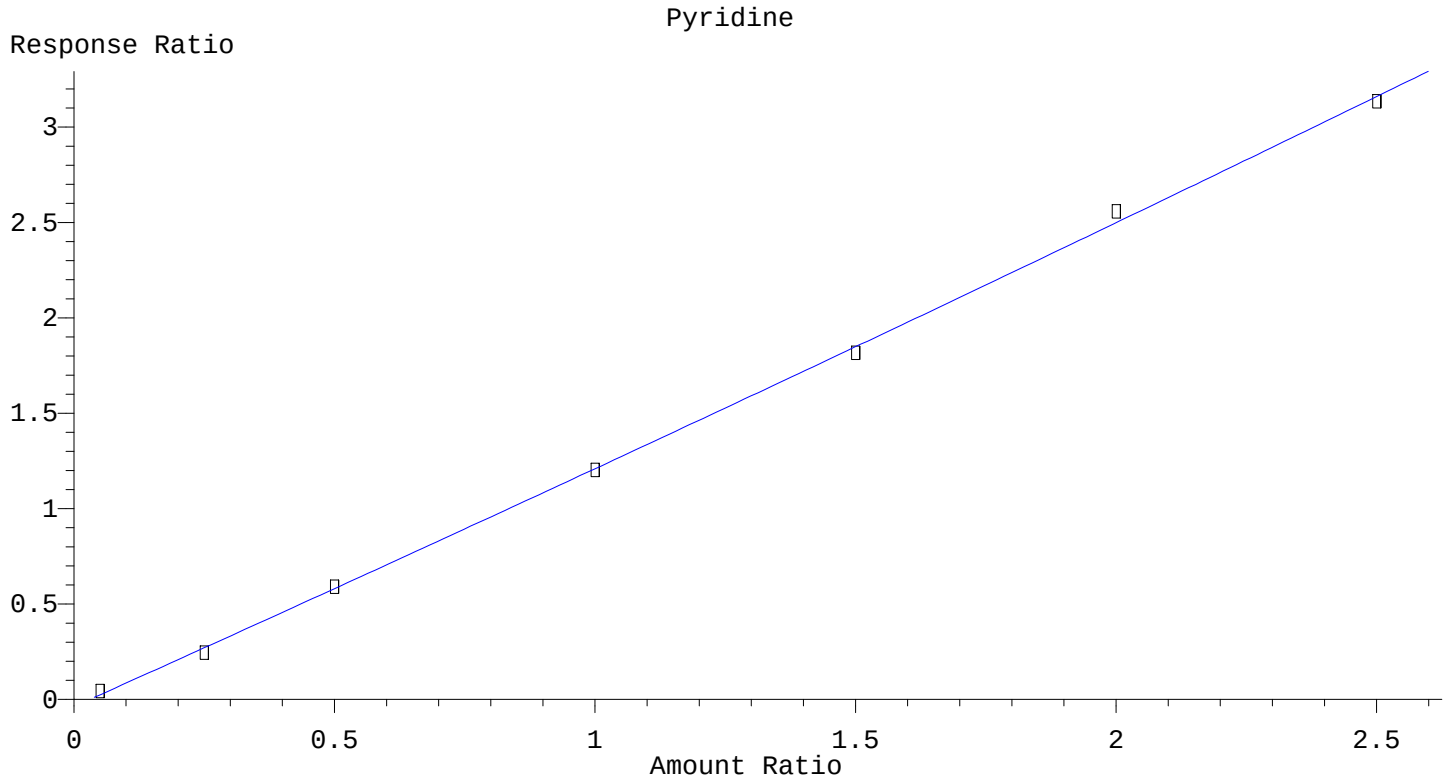
Response Factor Report SVMS1

Method Path : C:\INSTARCH\METHODS\
Method File : 1S110916.M
(#) = Out of Range

Response Factor Report SVMS1

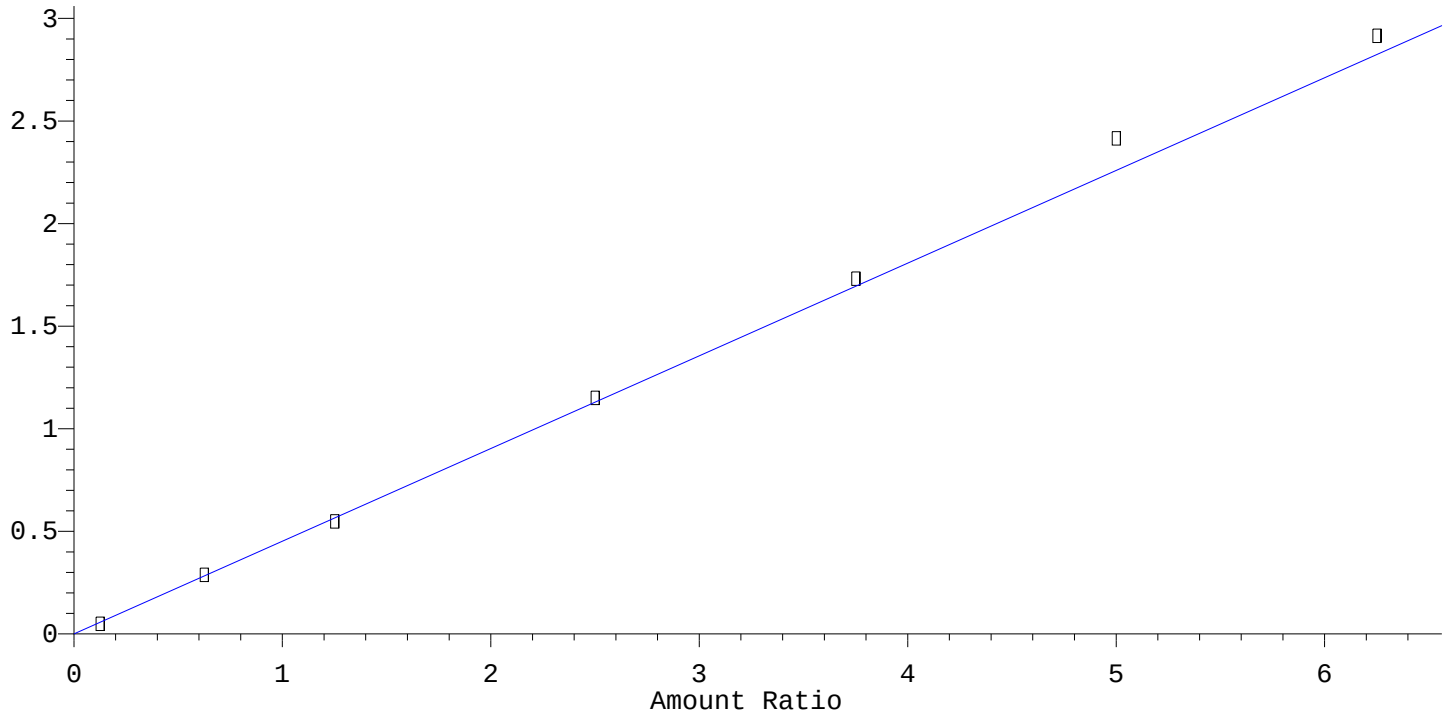


Resp Ratio = 6.75e-001 * Amt
RF Rel Std Dev = 5.6% Curve Fit: Avg RF



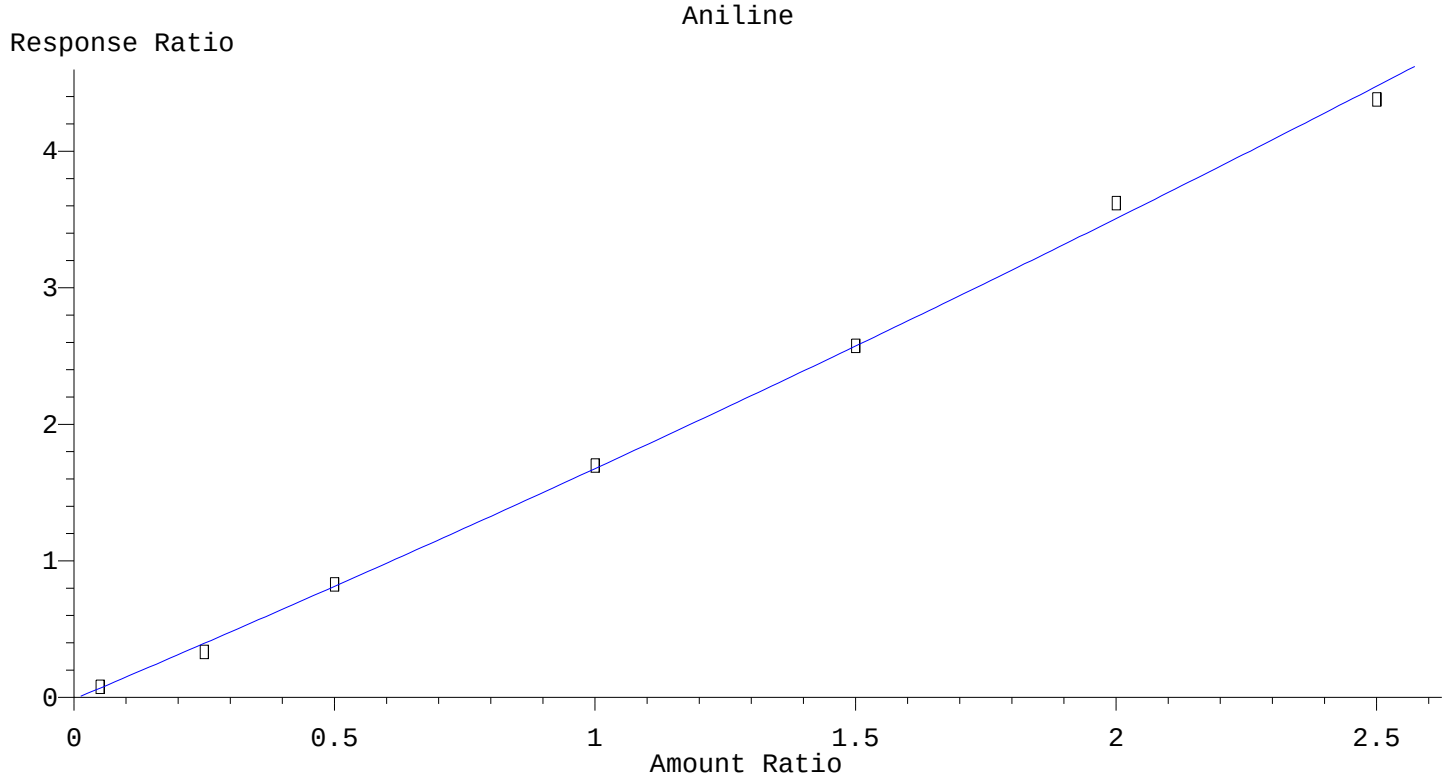
R = 2.19e-002 A*A + 1.22e+000 A - 3.71e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic

SURR2Flphenol

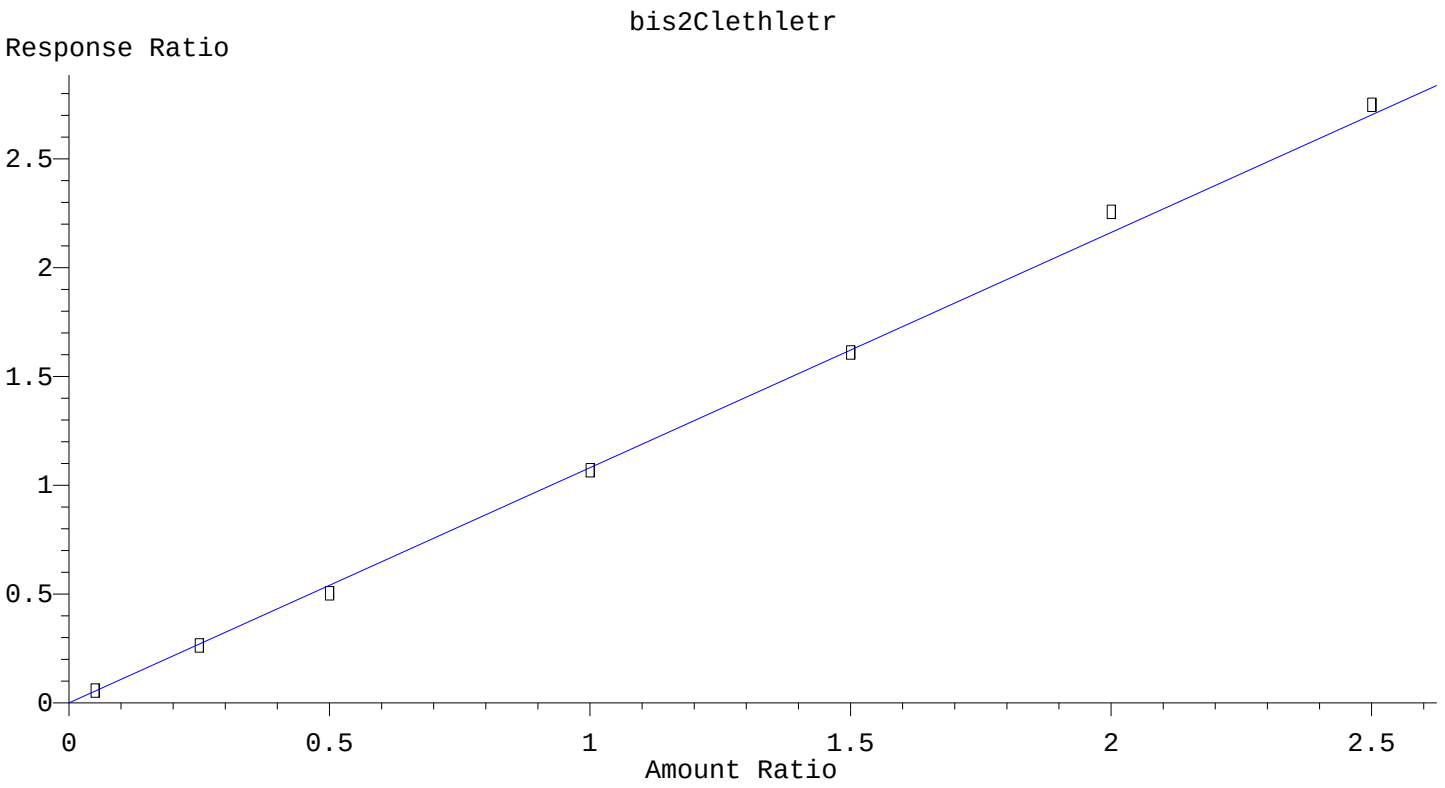


Resp Ratio = 4.52e-001 * Amt
RF Rel Std Dev = 6.4% Curve Fit: Avg RF

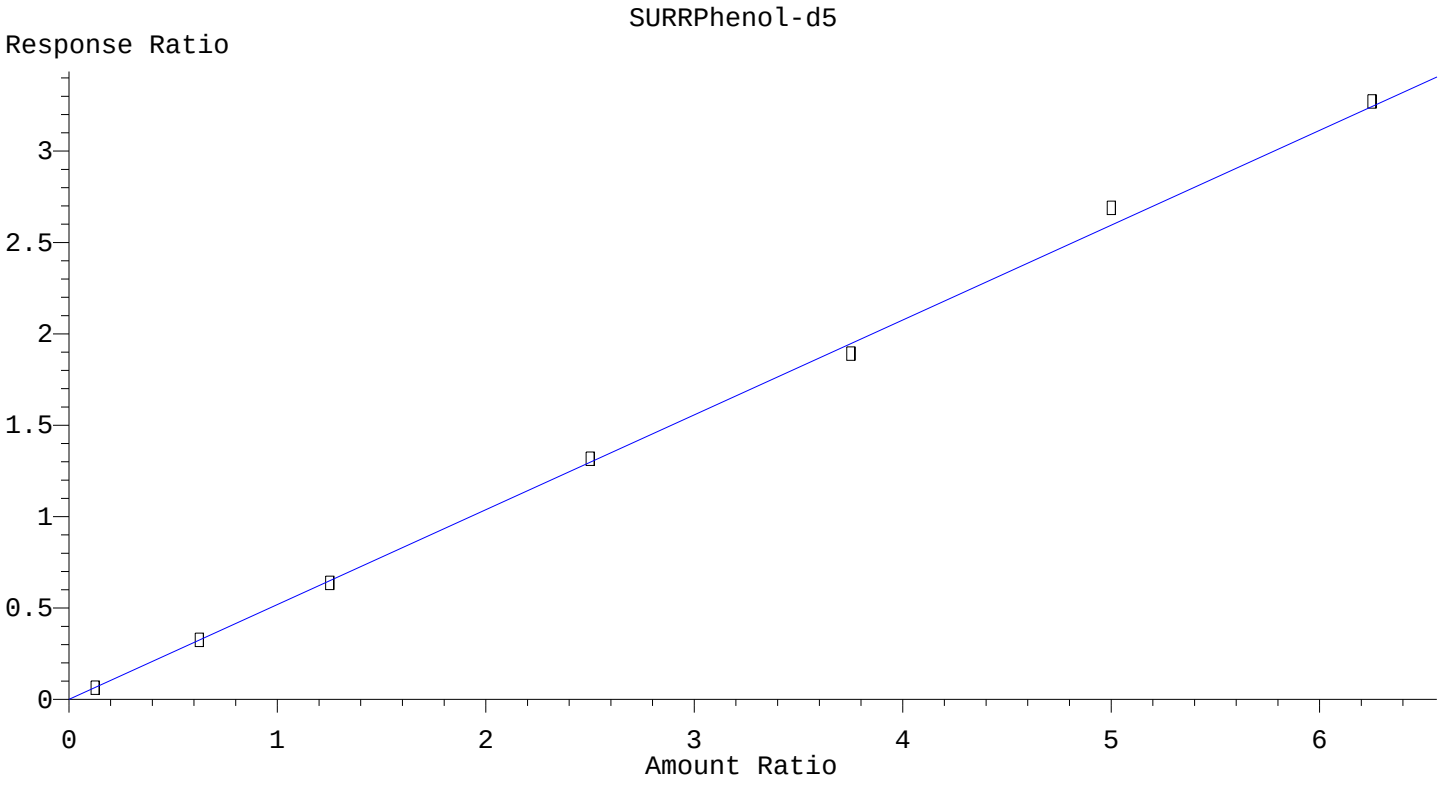
Aniline



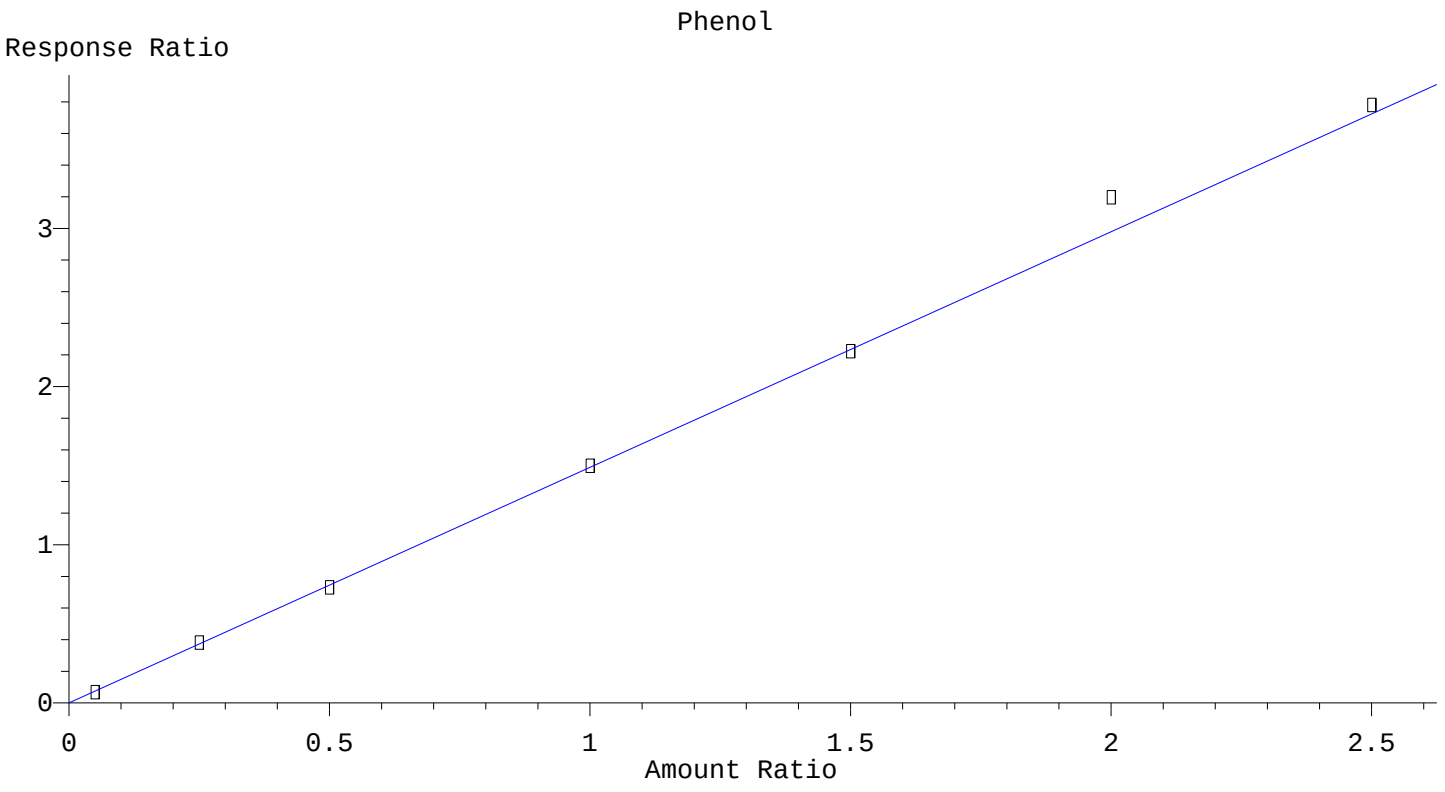
R = 7.16e-002 A*A + 1.62e+000 A - 1.30e-002
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a)



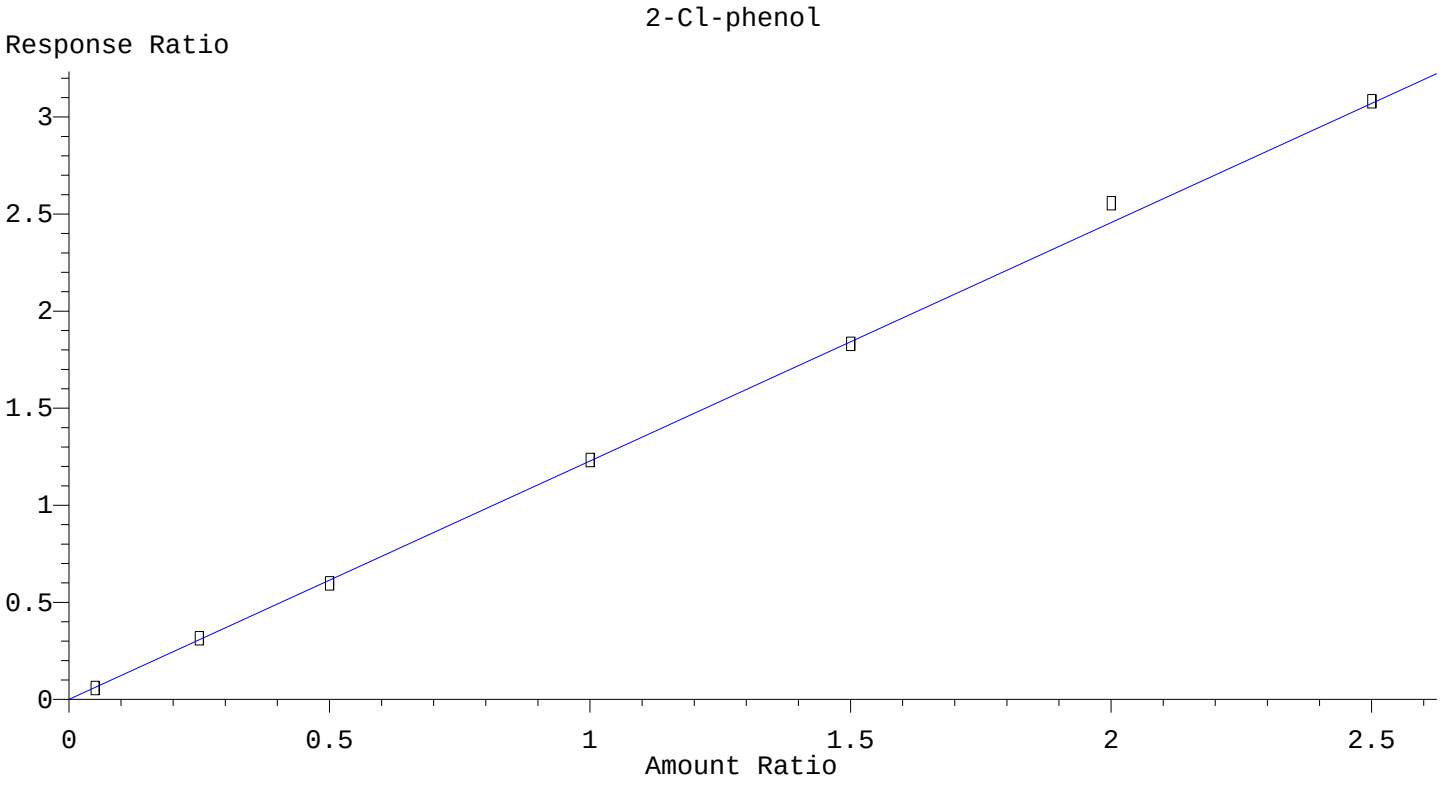
Resp Ratio = 1.08e+000 * Amt
RF Rel Std Dev = 4.1% Curve Fit: Avg RF



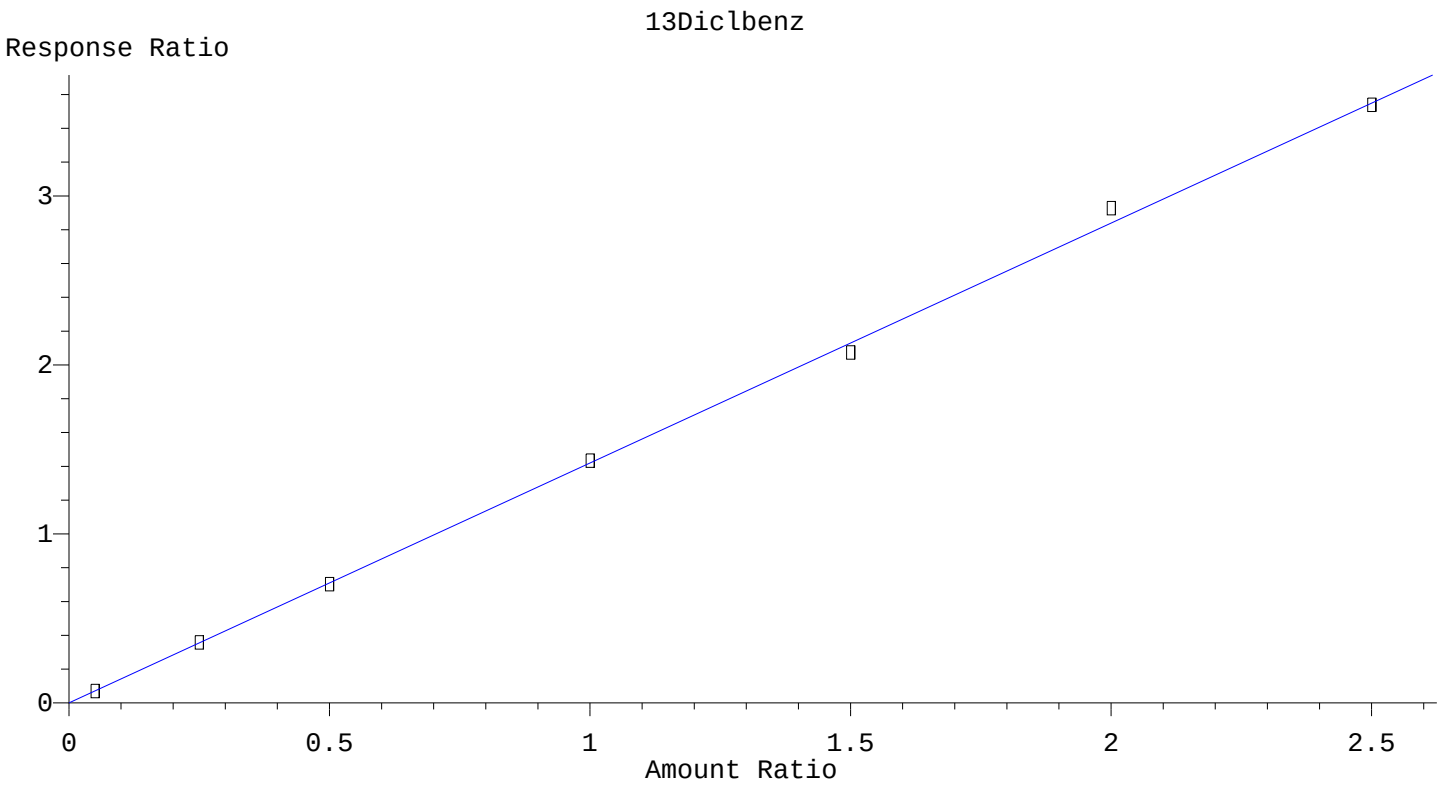
Resp Ratio = 5.19e-001 * Amt
RF Rel Std Dev = 2.3% Curve Fit: Avg RF



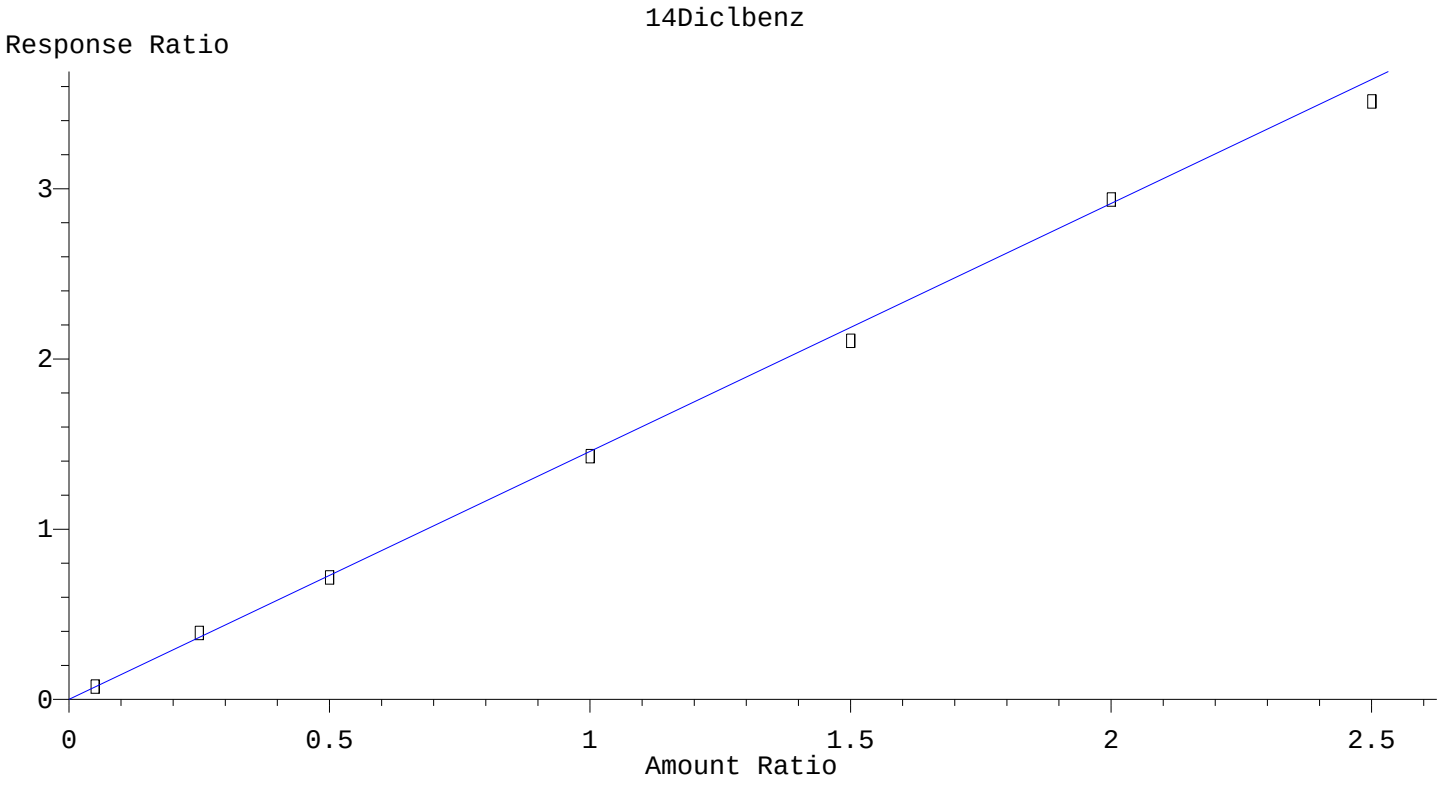
Resp Ratio = 1.49e+000 * Amt
RF Rel Std Dev = 5.1% Curve Fit: Avg RF



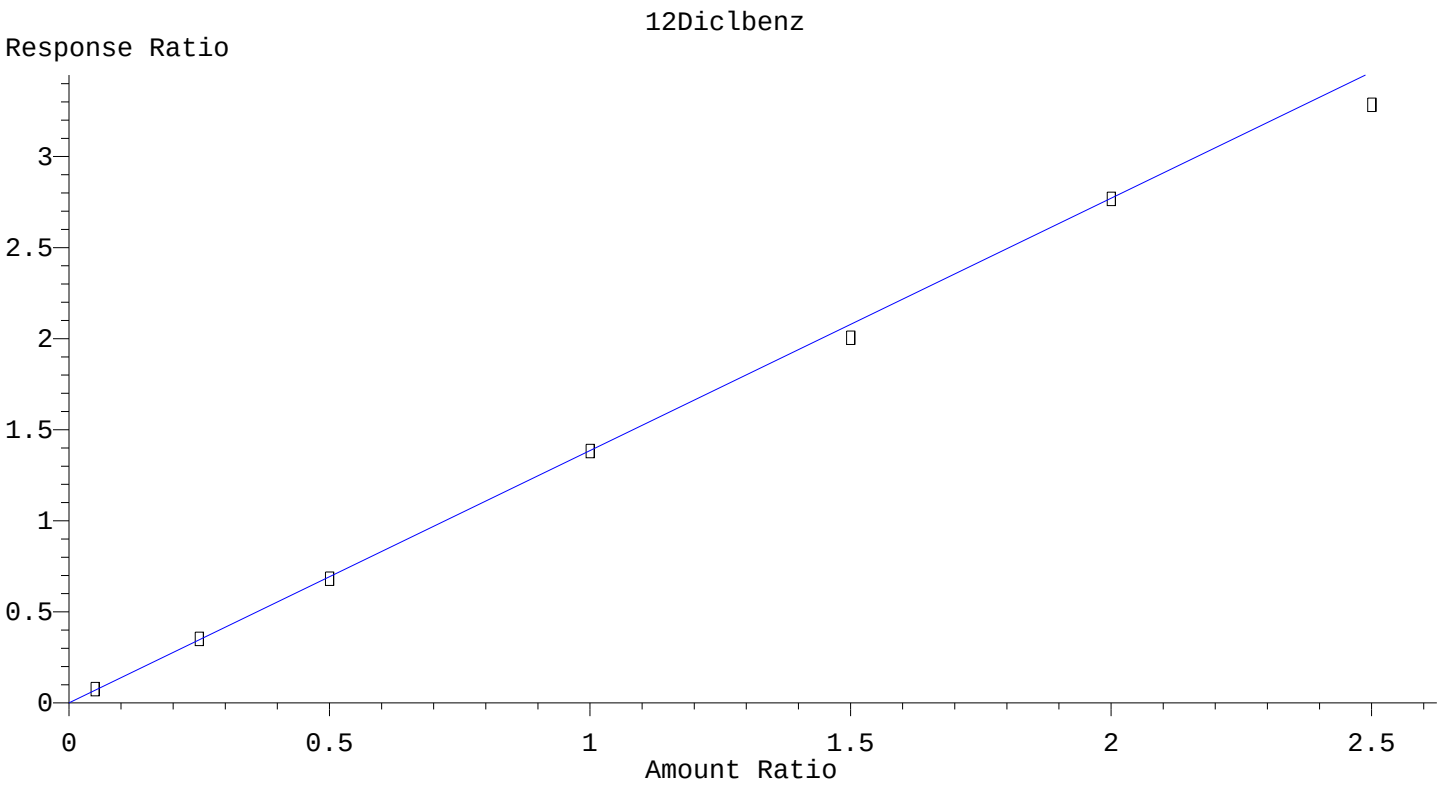
Resp Ratio = 1.23e+000 * Amt
RF Rel Std Dev = 2.8% Curve Fit: Avg RF



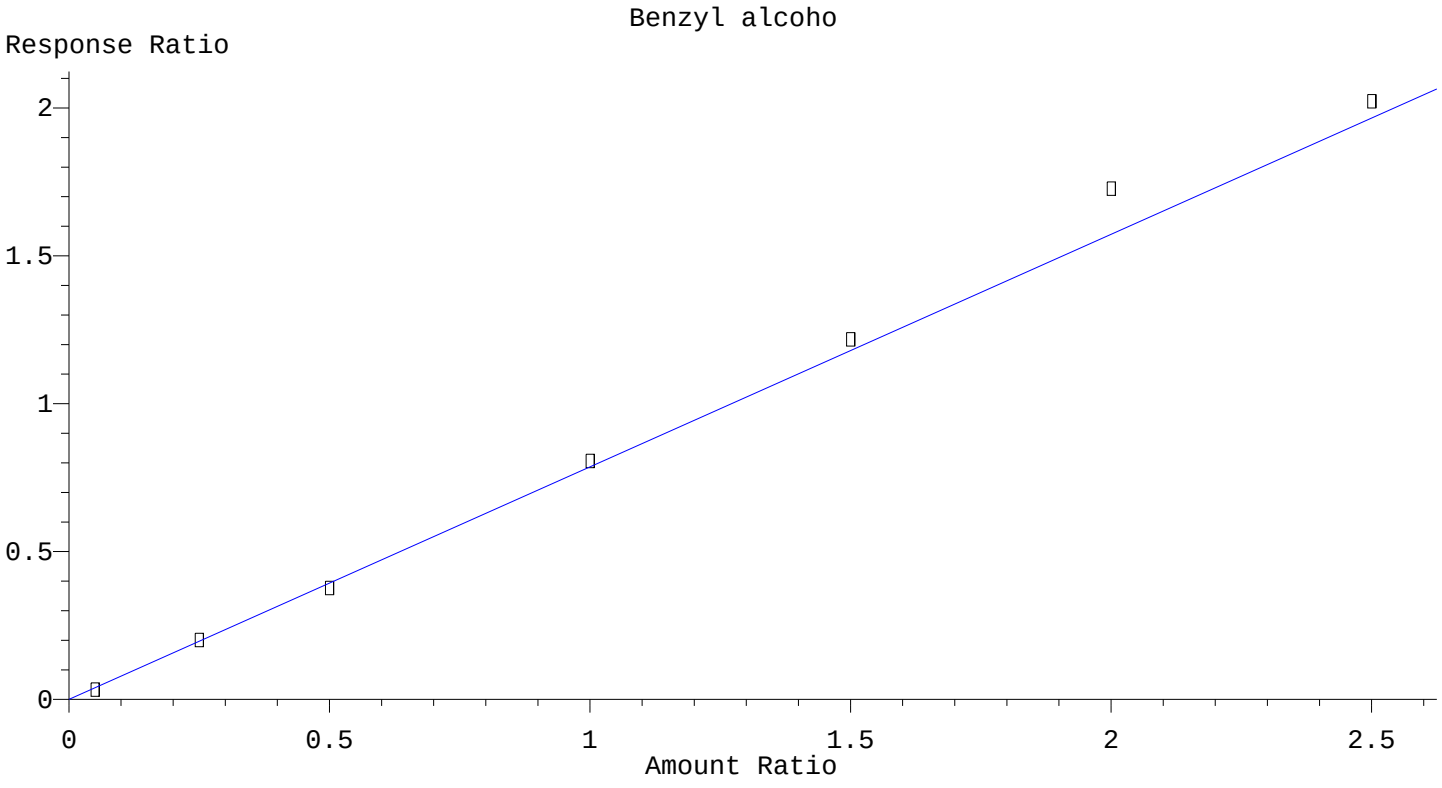
Resp Ratio = 1.42e+000 * Amt
RF Rel Std Dev = 1.8% Curve Fit: Avg RF



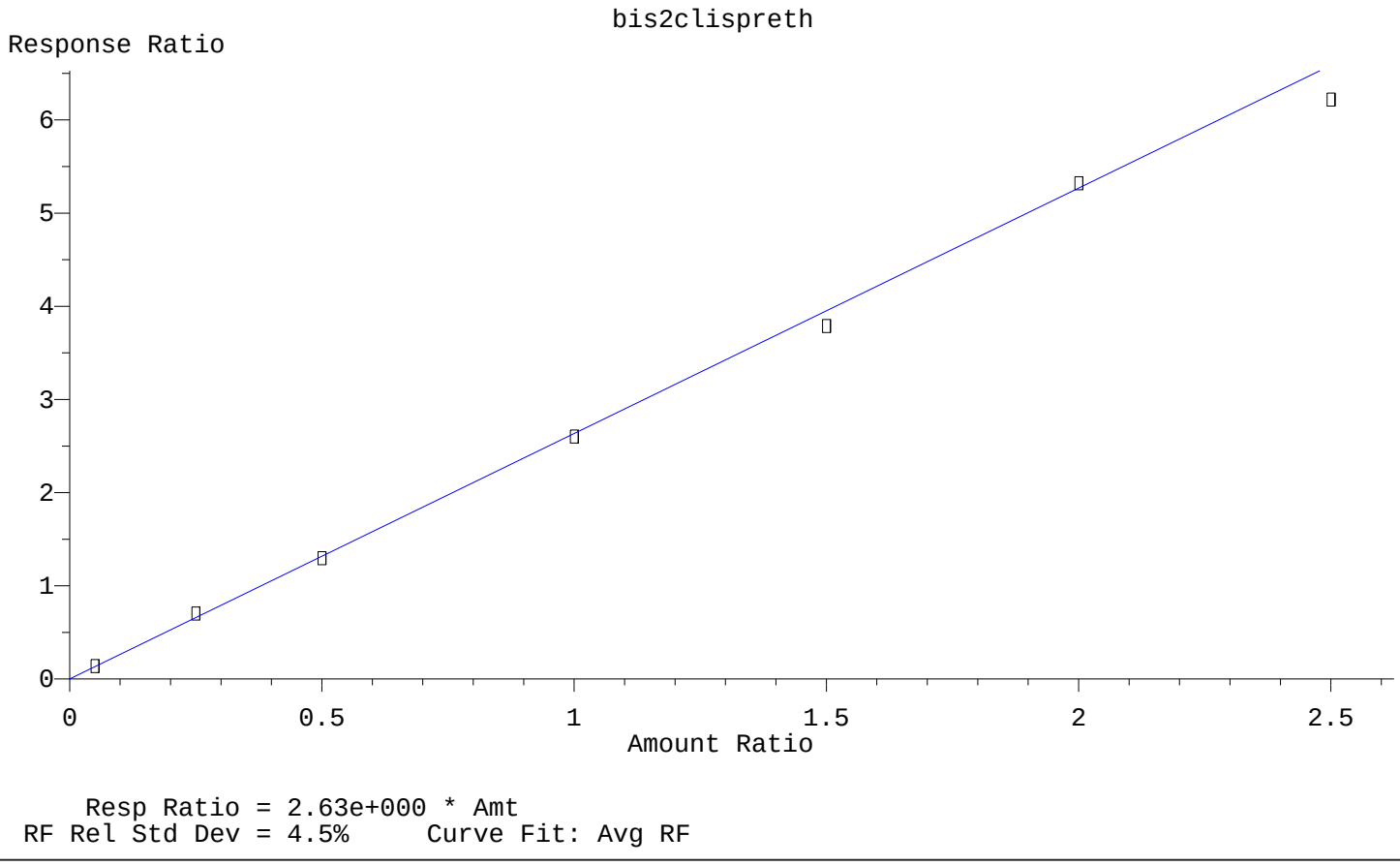
Resp Ratio = 1.46e+000 * Amt
RF Rel Std Dev = 3.9% Curve Fit: Avg RF



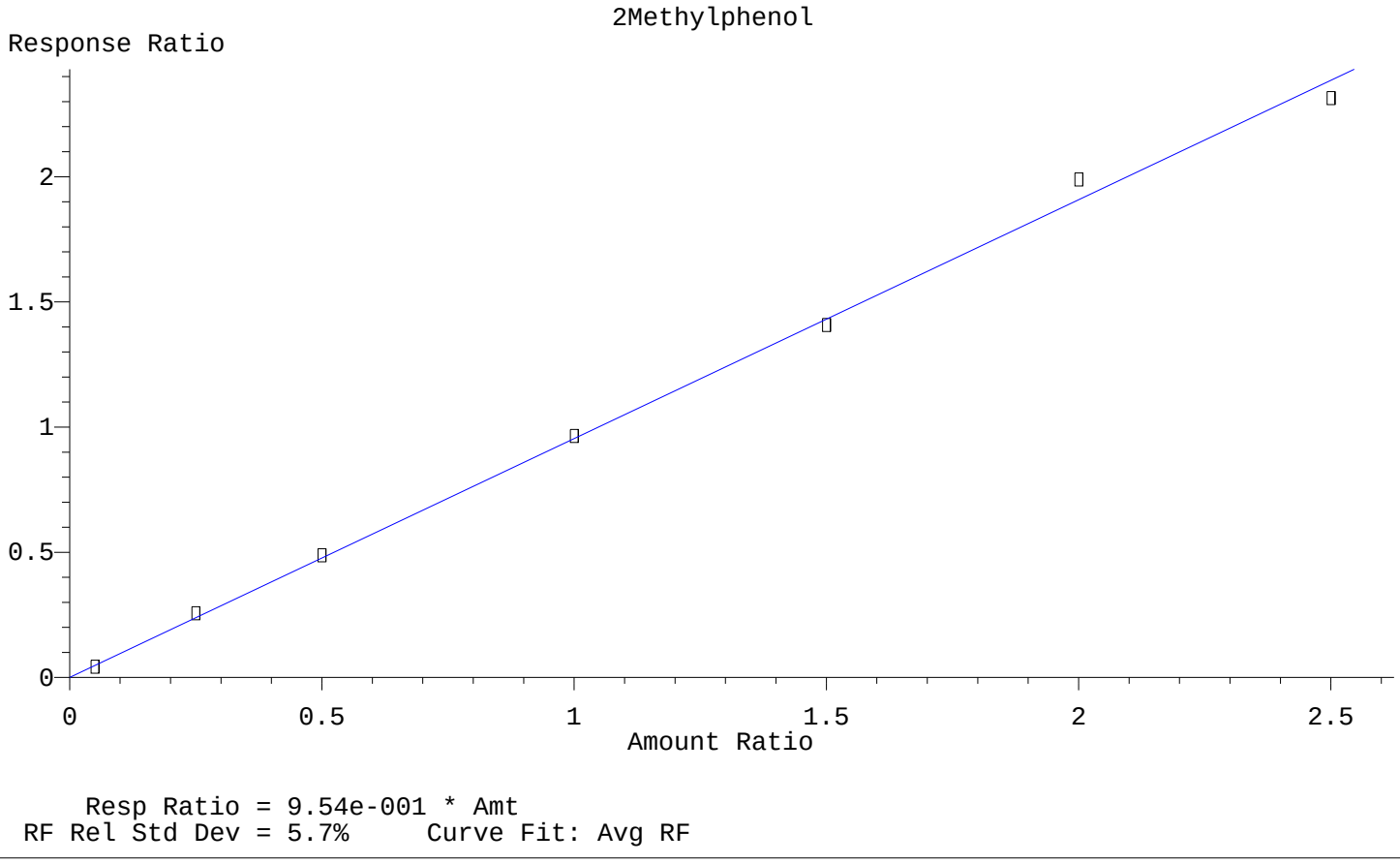
Resp Ratio = 1.39e+000 * Amt
RF Rel Std Dev = 4.7% Curve Fit: Avg RF



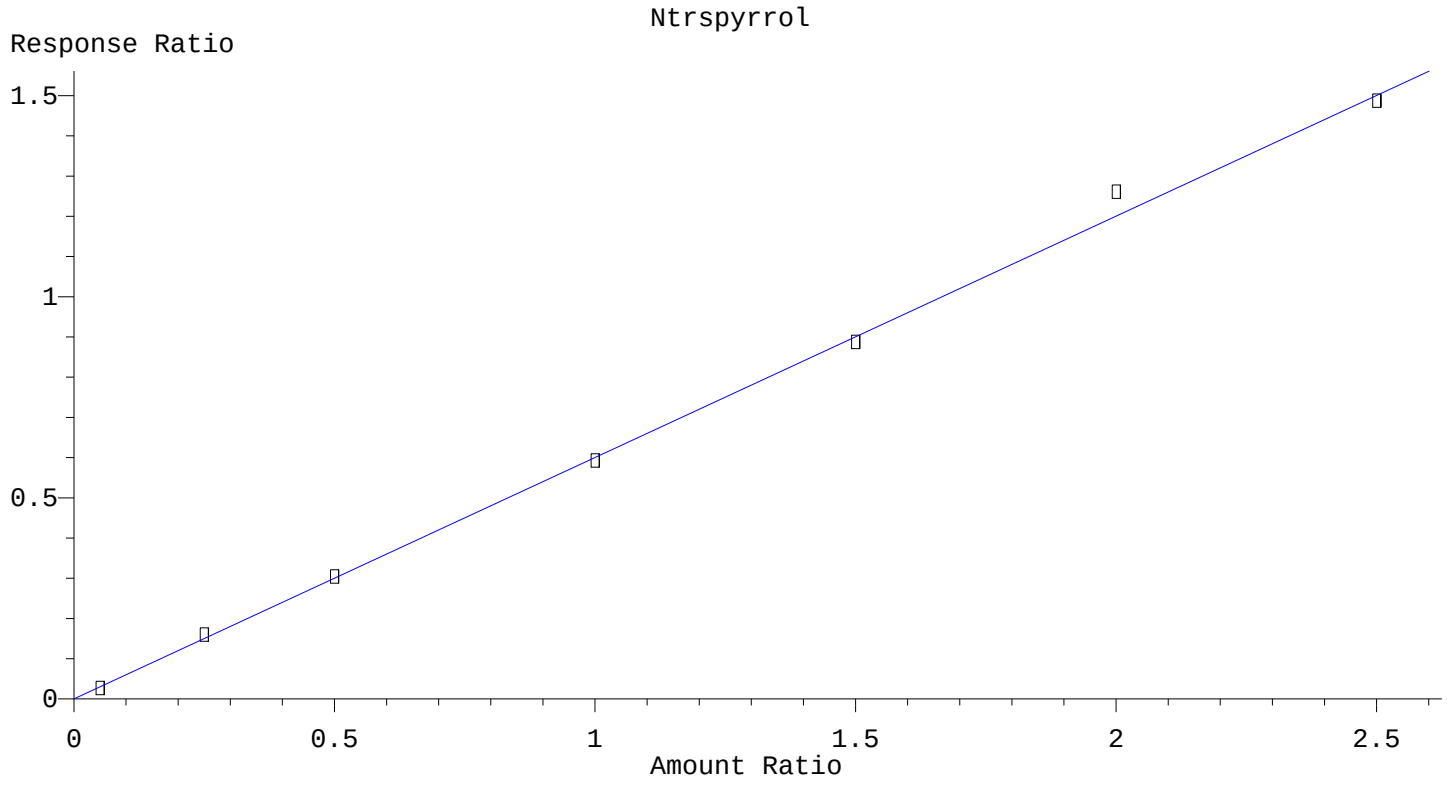
Resp Ratio = 7.86e-001 * Amt
RF Rel Std Dev = 8.2% Curve Fit: Avg RF



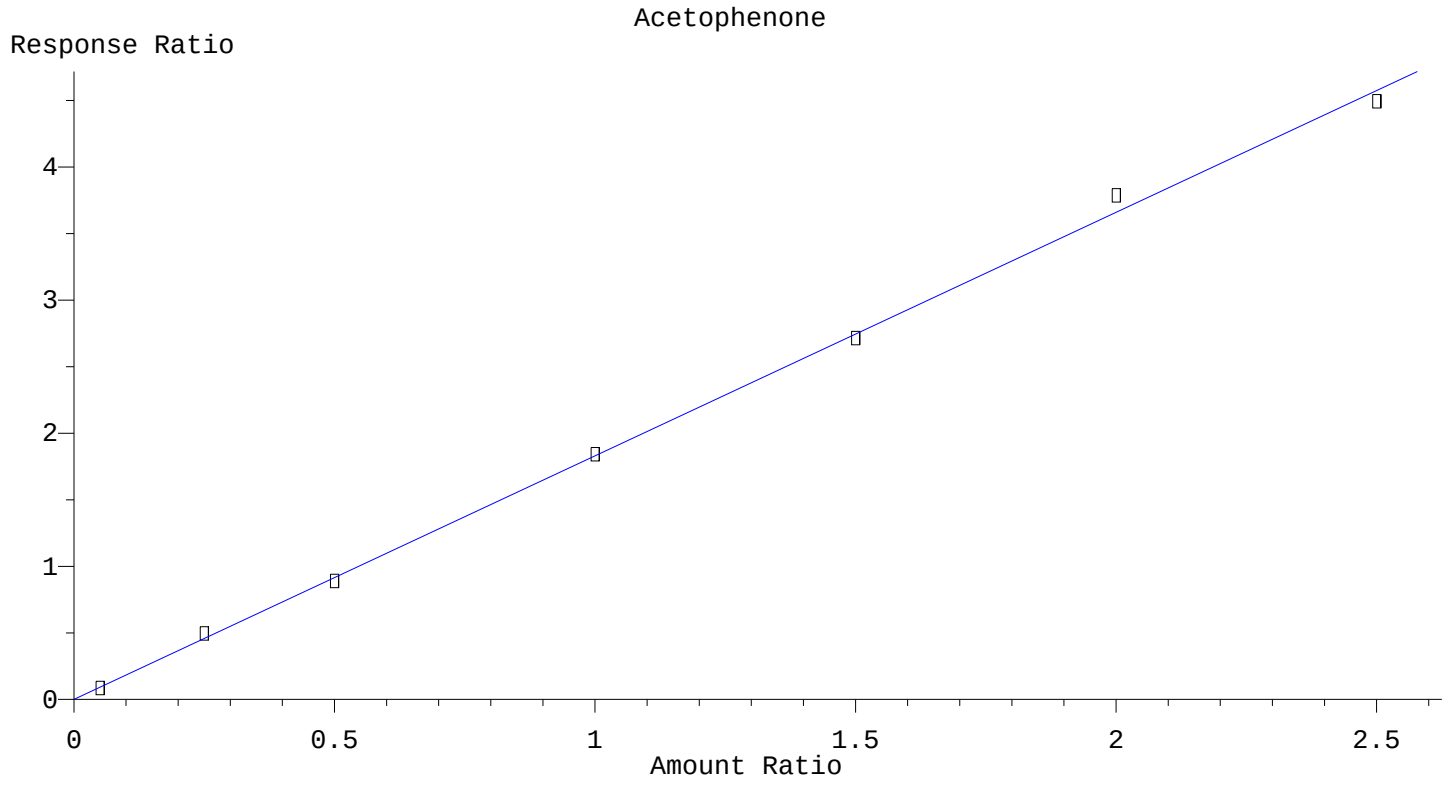
Resp Ratio = 2.63e+000 * Amt
RF Rel Std Dev = 4.5% Curve Fit: Avg RF



Resp Ratio = 9.54e-001 * Amt
RF Rel Std Dev = 5.7% Curve Fit: Avg RF

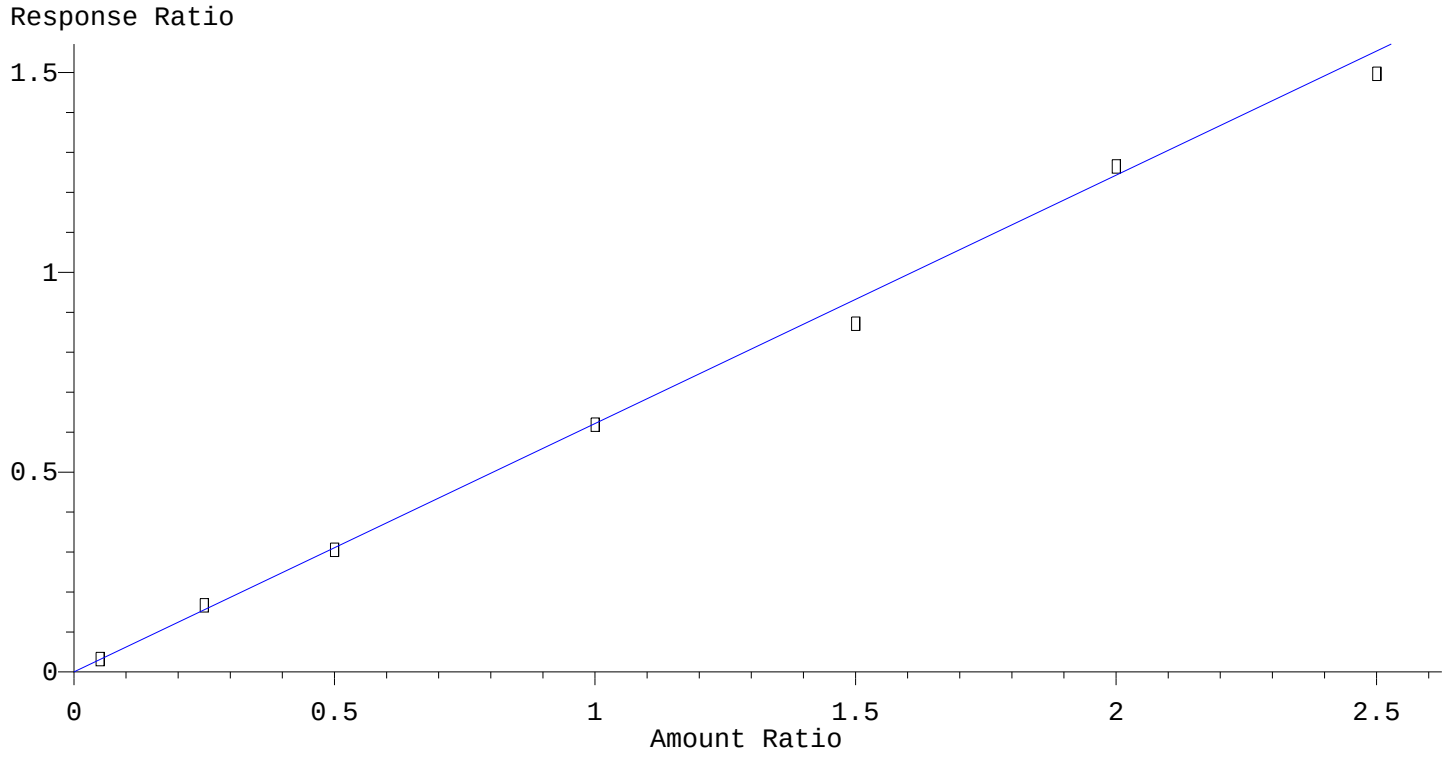


Resp Ratio = 6.00e-001 * Amt
RF Rel Std Dev = 5.2% Curve Fit: Avg RF



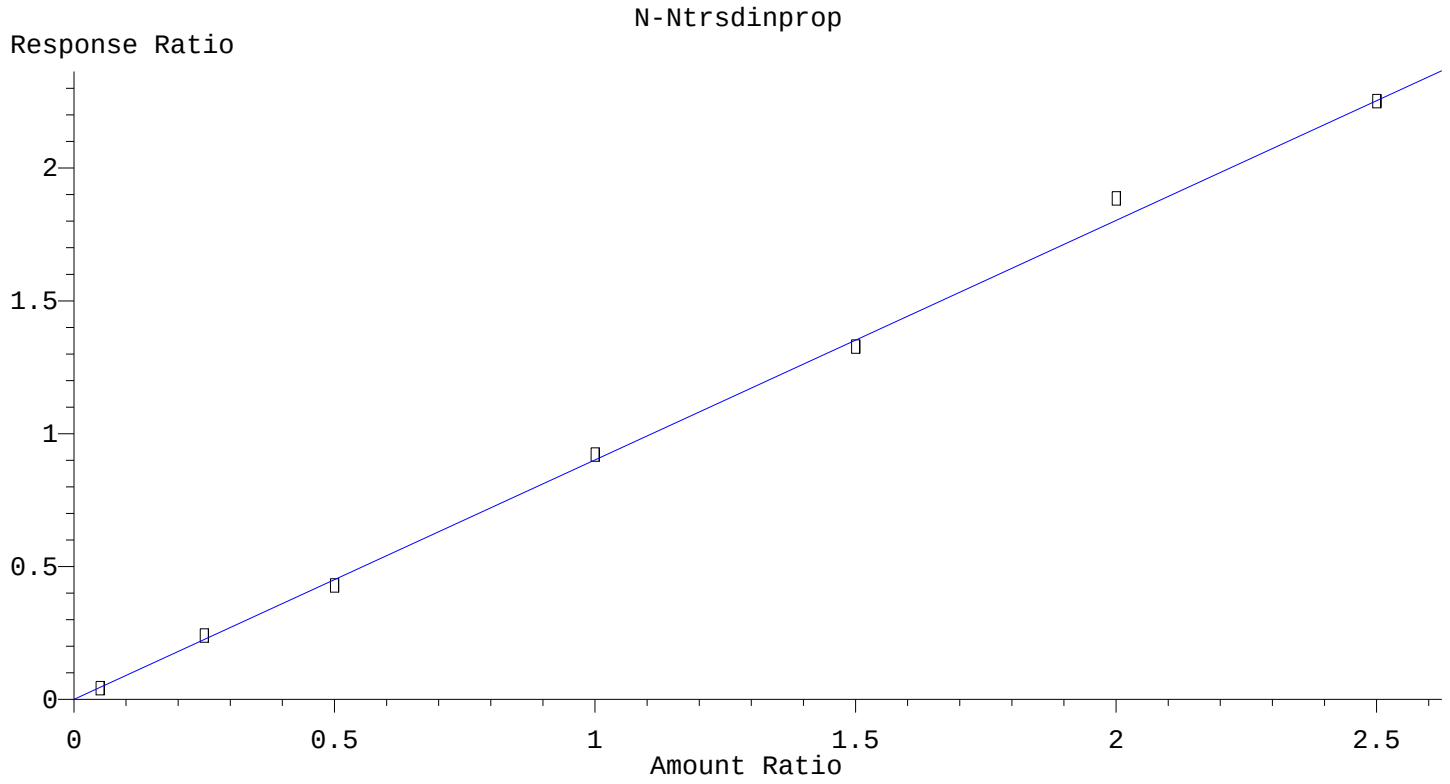
Resp Ratio = 1.83e+000 * Amt
RF Rel Std Dev = 4.8% Curve Fit: Avg RF

Hexaclethane



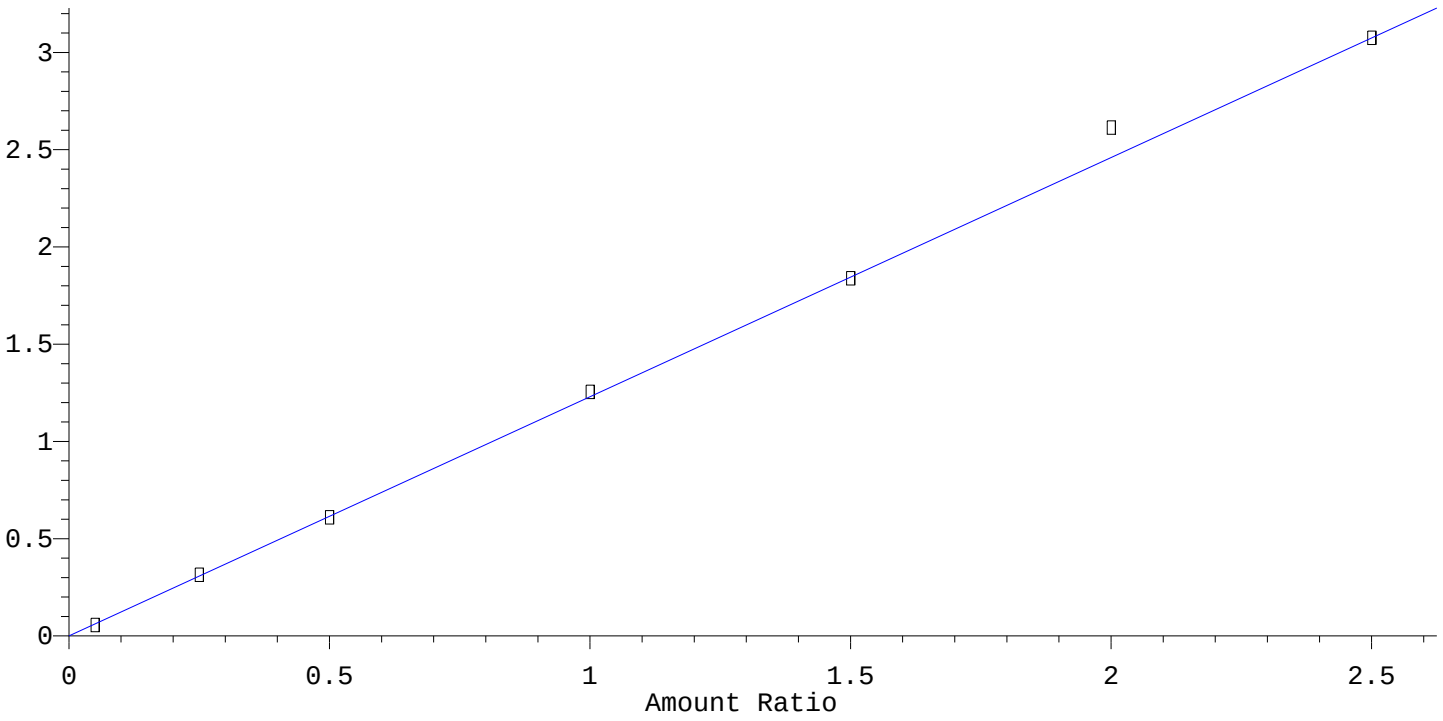
Resp Ratio = 6.21e-001 * Amt
RF Rel Std Dev = 4.6% Curve Fit: Avg RF

N-Ntrsdinprop



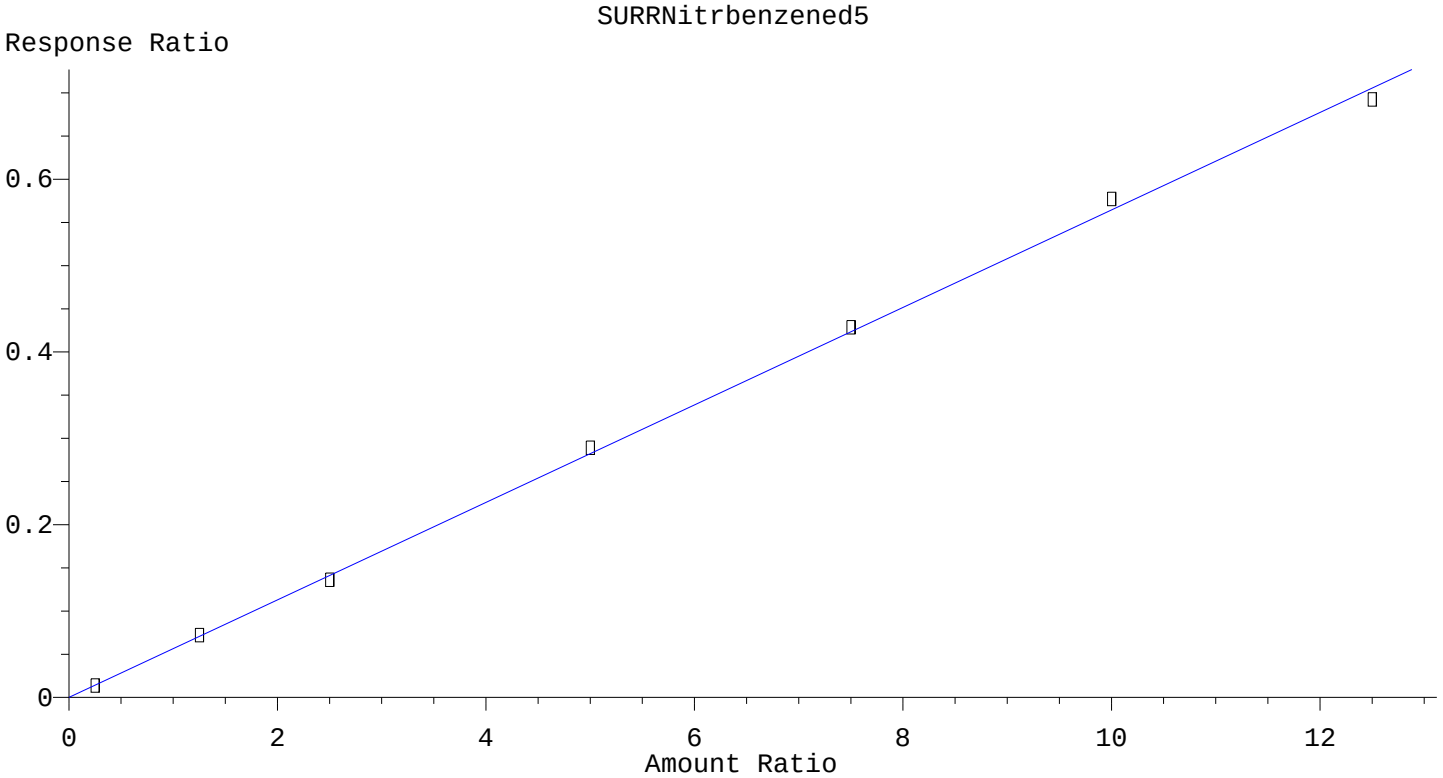
Resp Ratio = 9.01e-001 * Amt
RF Rel Std Dev = 4.8% Curve Fit: Avg RF

3&4Methylphenol

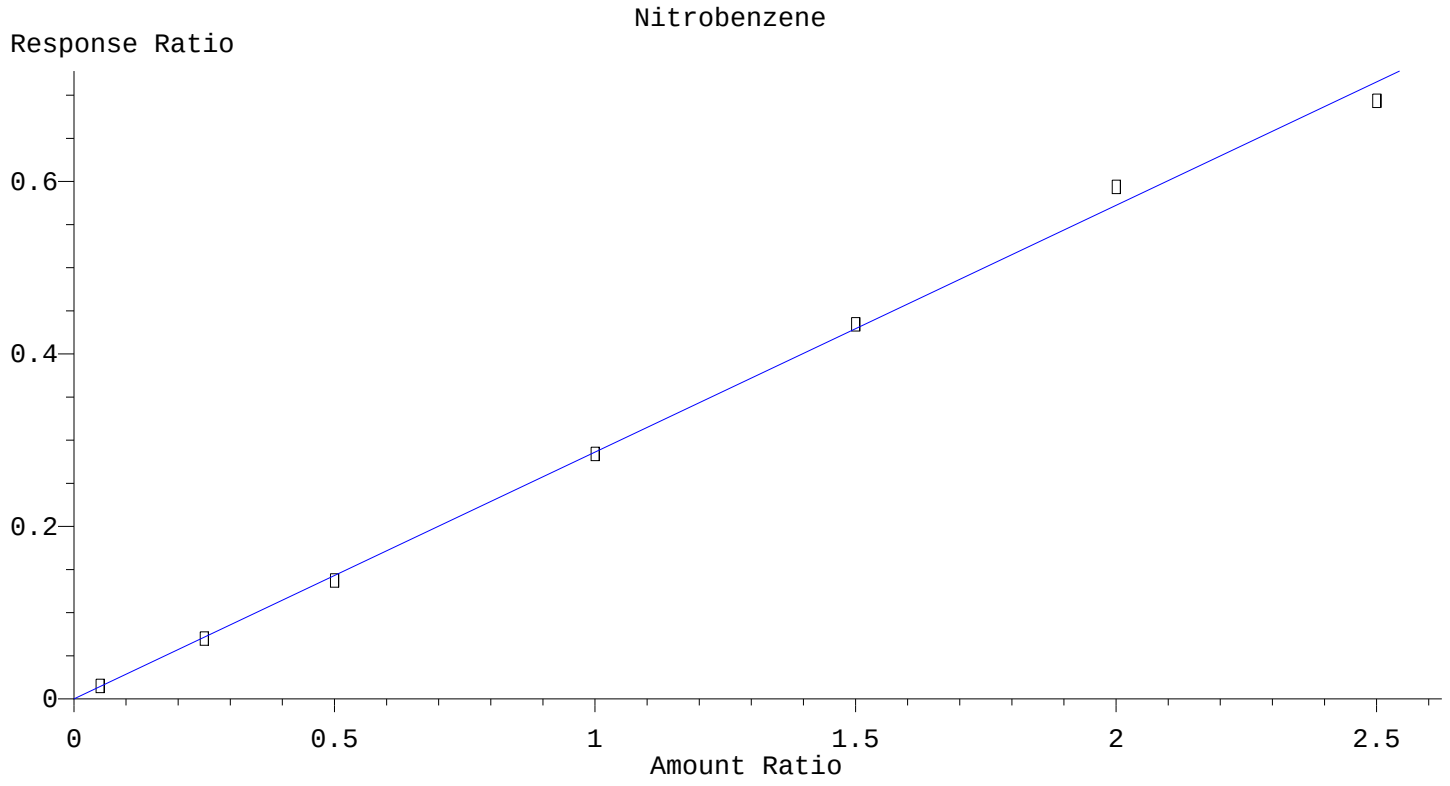


Resp Ratio = 1.23e+000 * Amt
RF Rel Std Dev = 4.8% Curve Fit: Avg RF

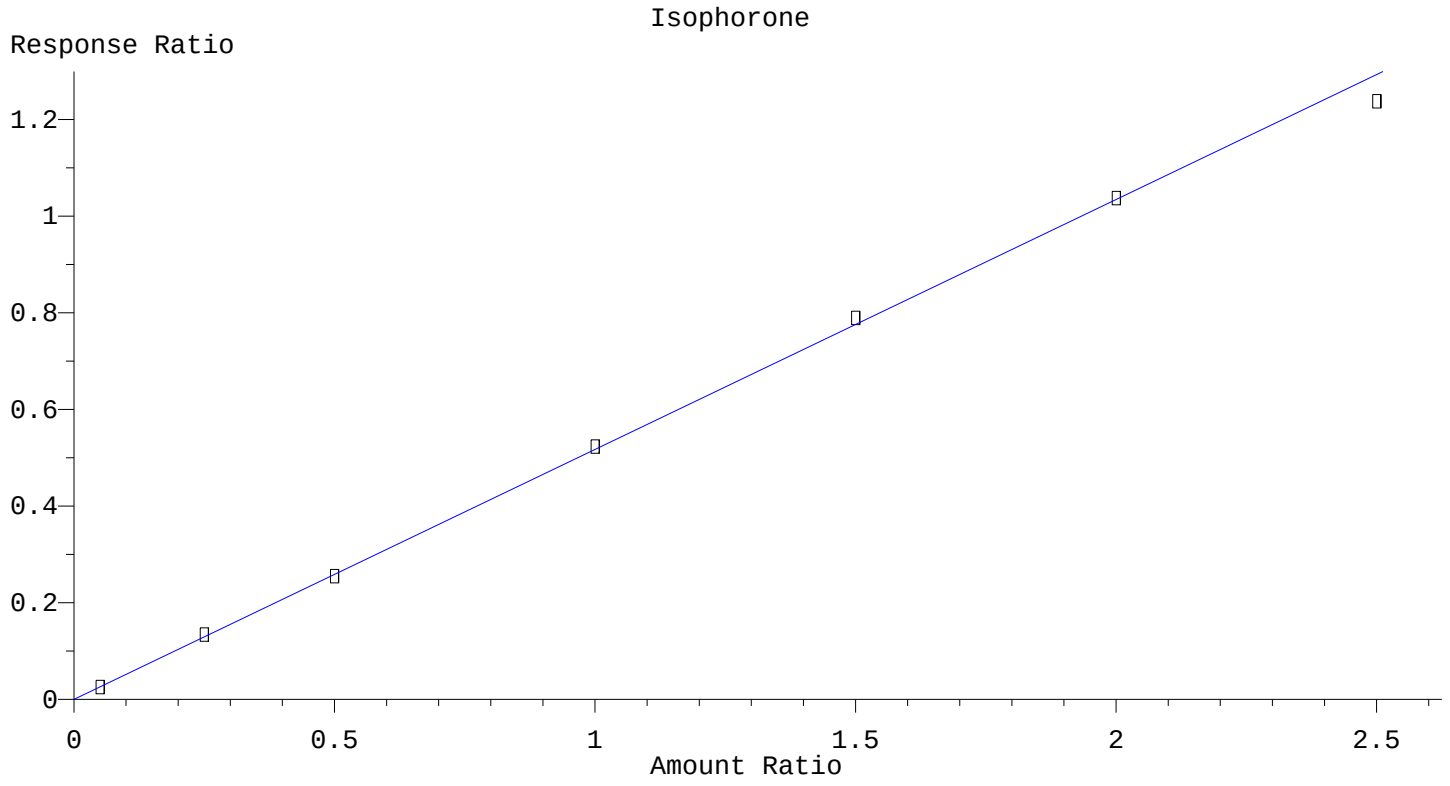
SURRNitrbenzened5



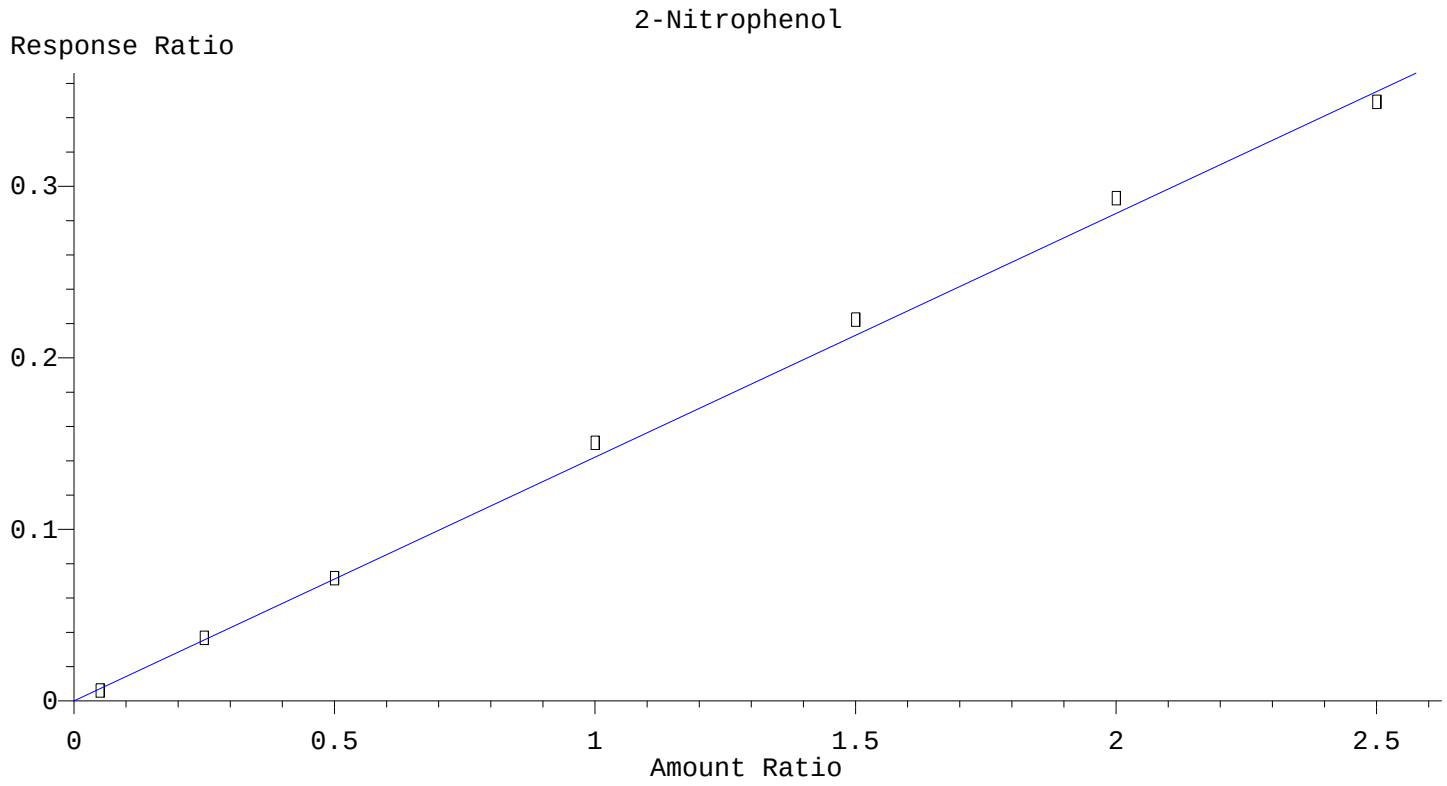
Resp Ratio = 5.64e-002 * Amt
RF Rel Std Dev = 2.6% Curve Fit: Avg RF



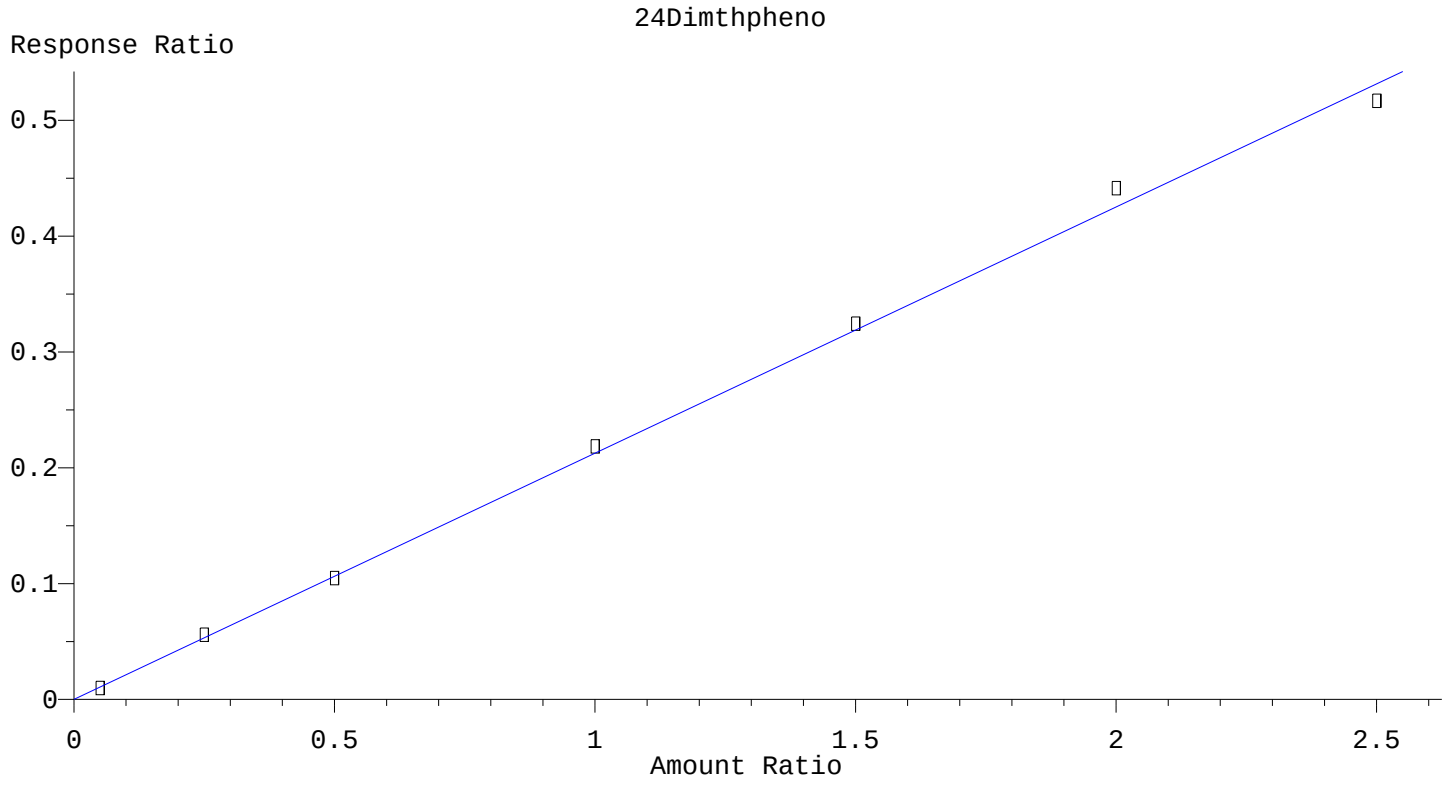
Resp Ratio = 2.86e-001 * Amt
RF Rel Std Dev = 3.6% Curve Fit: Avg RF



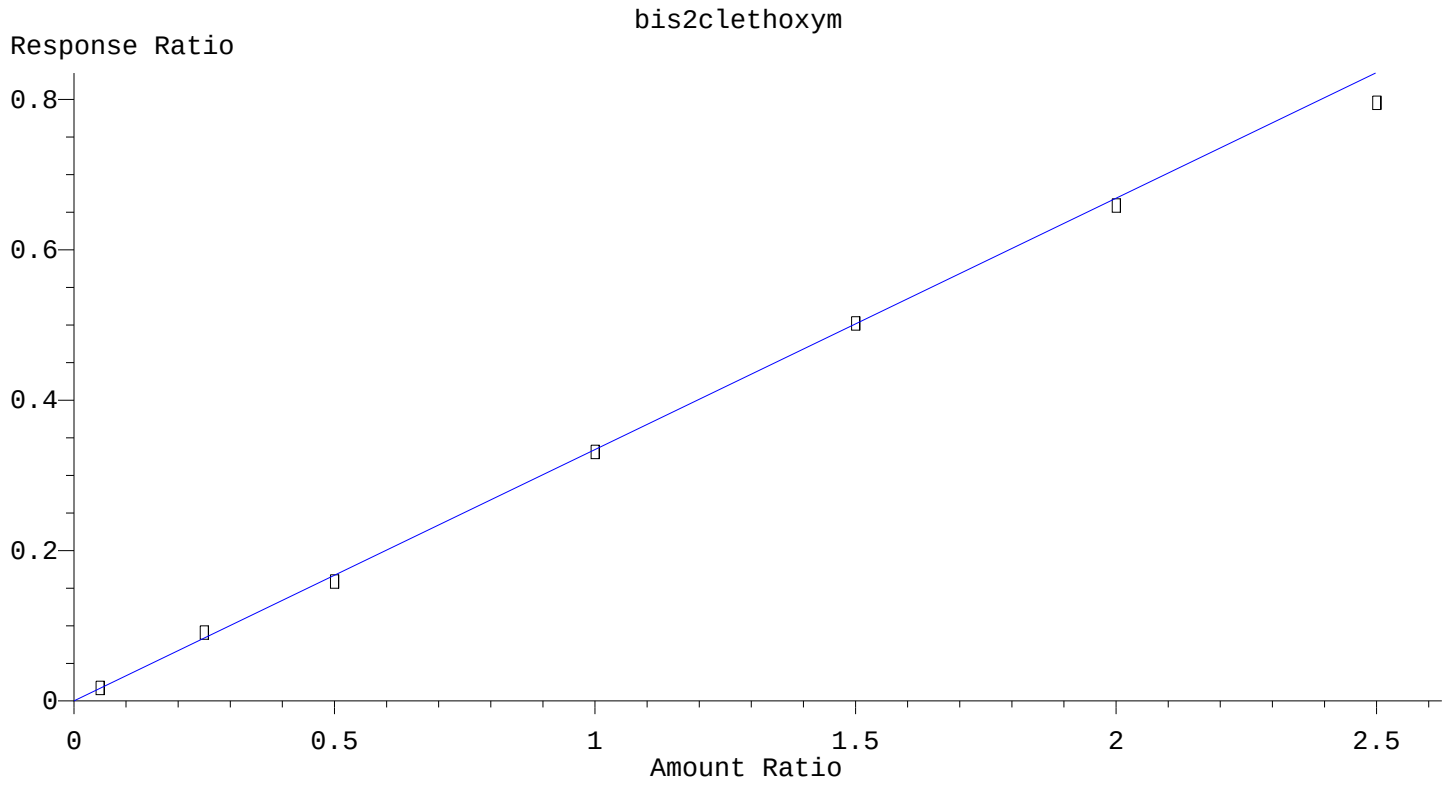
Resp Ratio = 5.17e-001 * Amt
RF Rel Std Dev = 2.6% Curve Fit: Avg RF



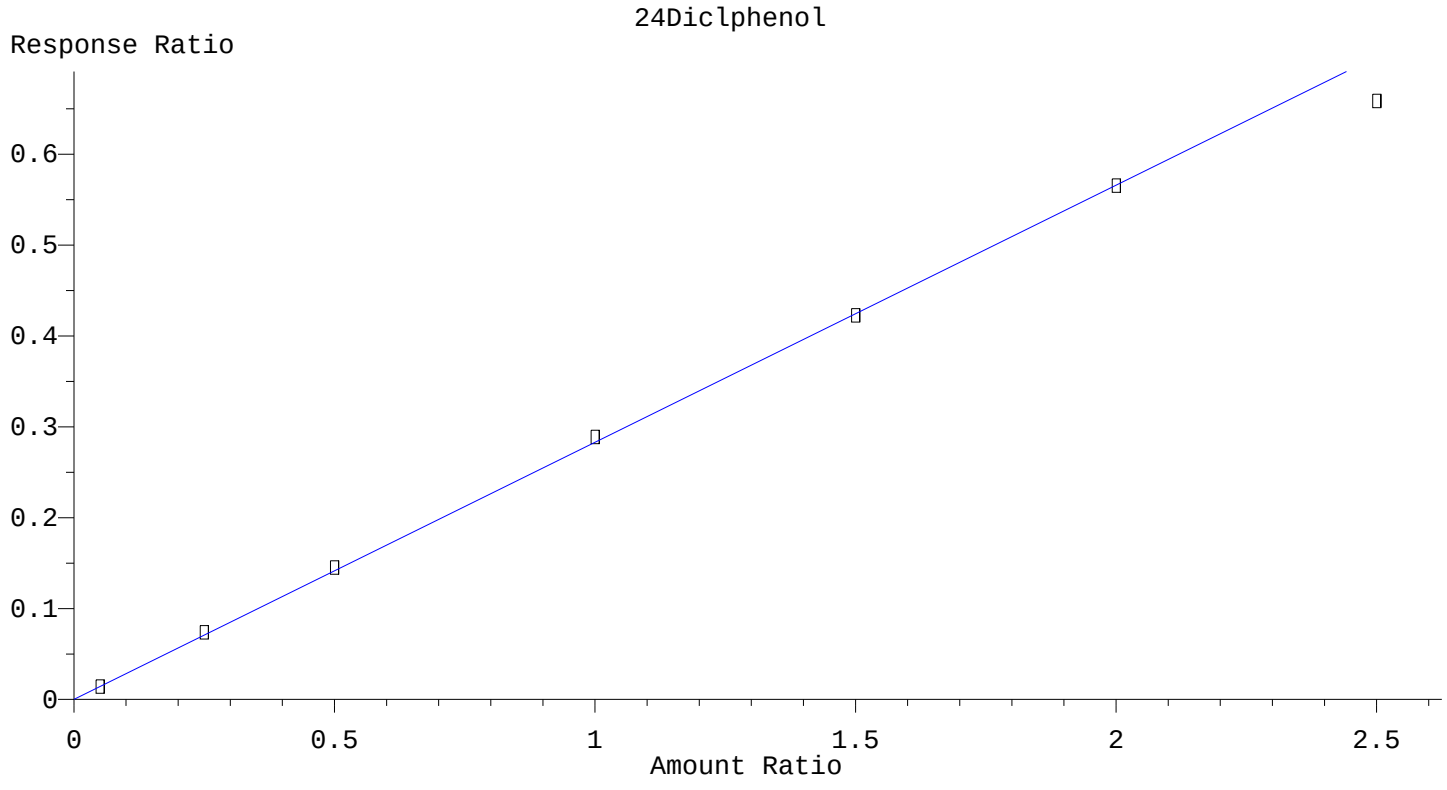
Resp Ratio = 1.42e-001 * Amt
RF Rel Std Dev = 6.9% Curve Fit: Avg RF



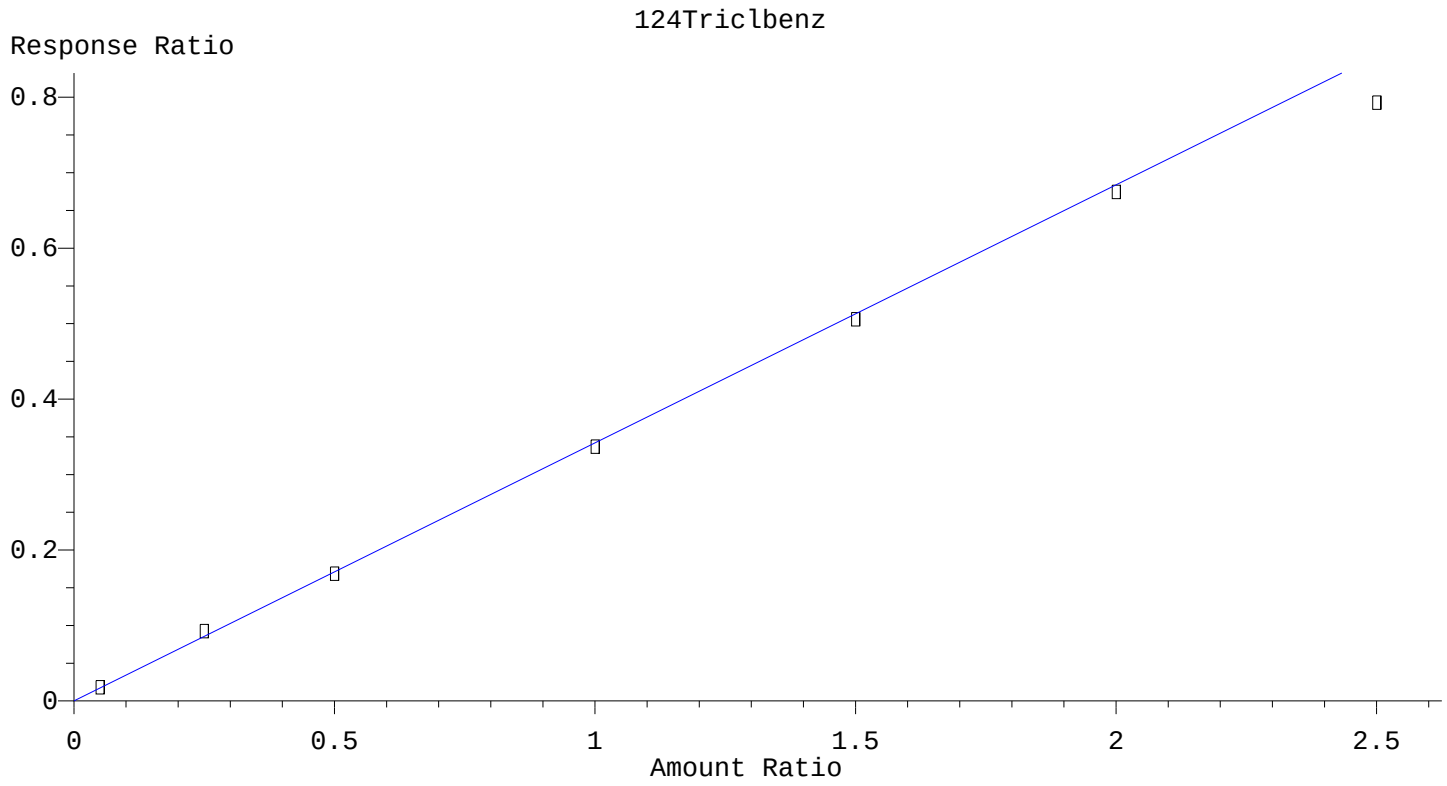
Resp Ratio = 2.13e-001 * Amt
RF Rel Std Dev = 4.6% Curve Fit: Avg RF



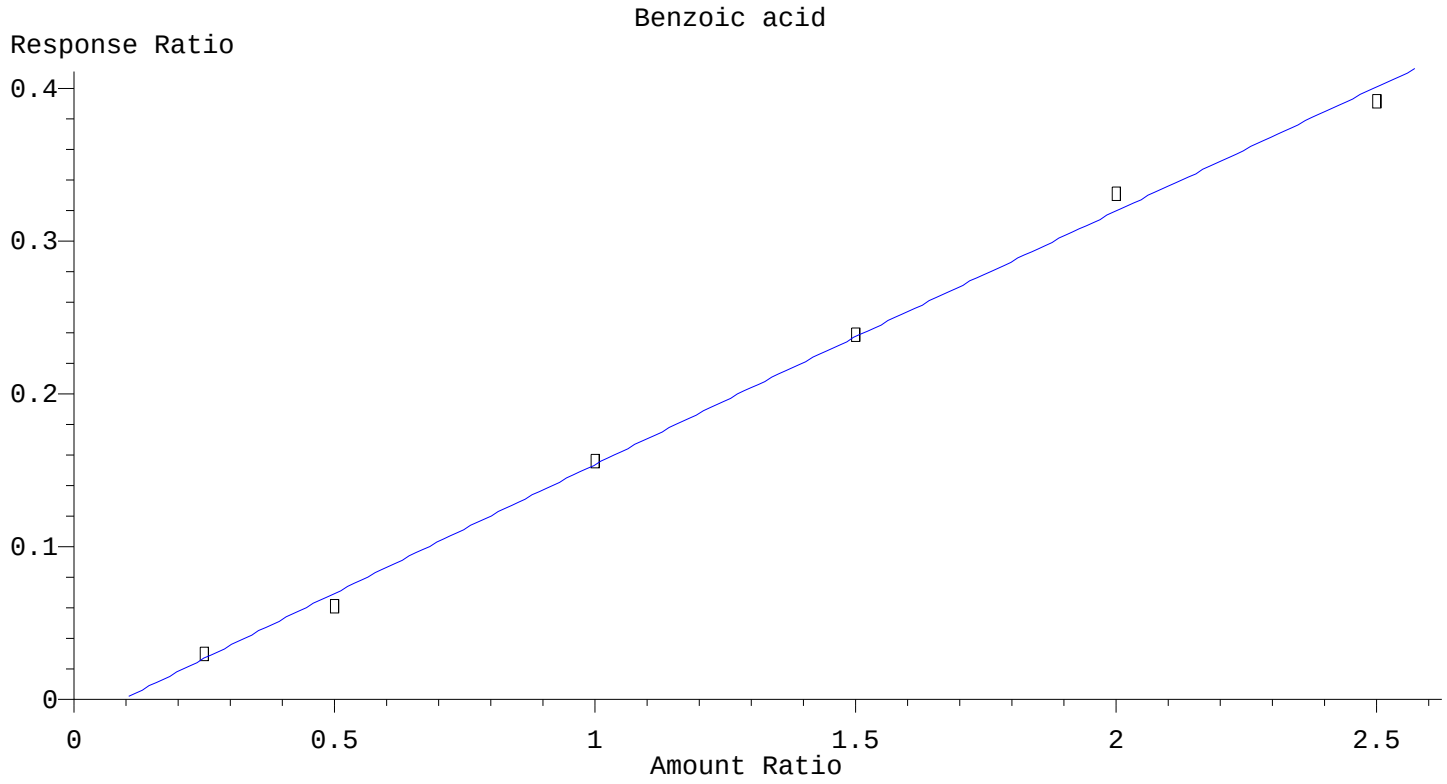
Resp Ratio = 3.34e-001 * Amt
RF Rel Std Dev = 4.8% Curve Fit: Avg RF



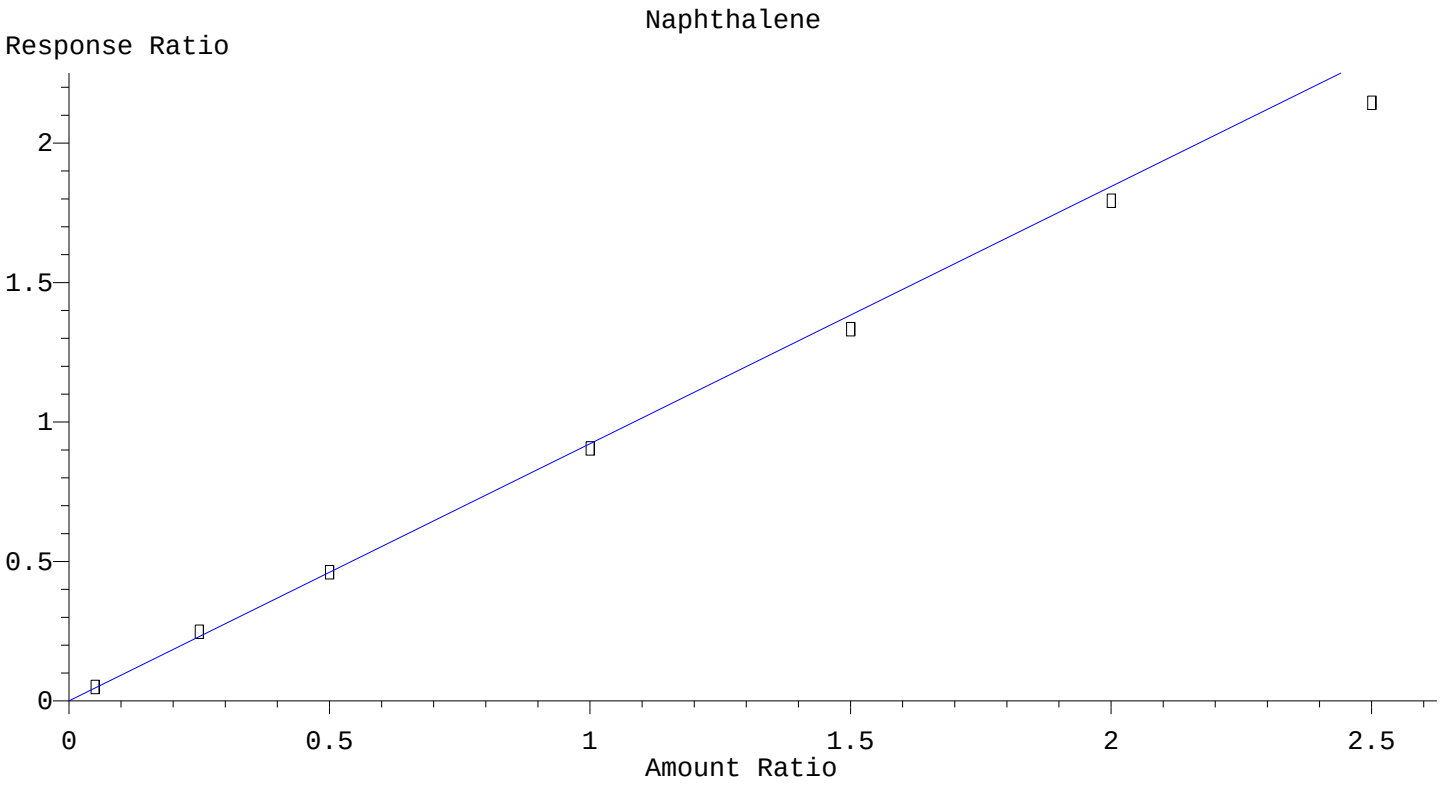
Resp Ratio = 2.83e-001 * Amt
RF Rel Std Dev = 3.6% Curve Fit: Avg RF



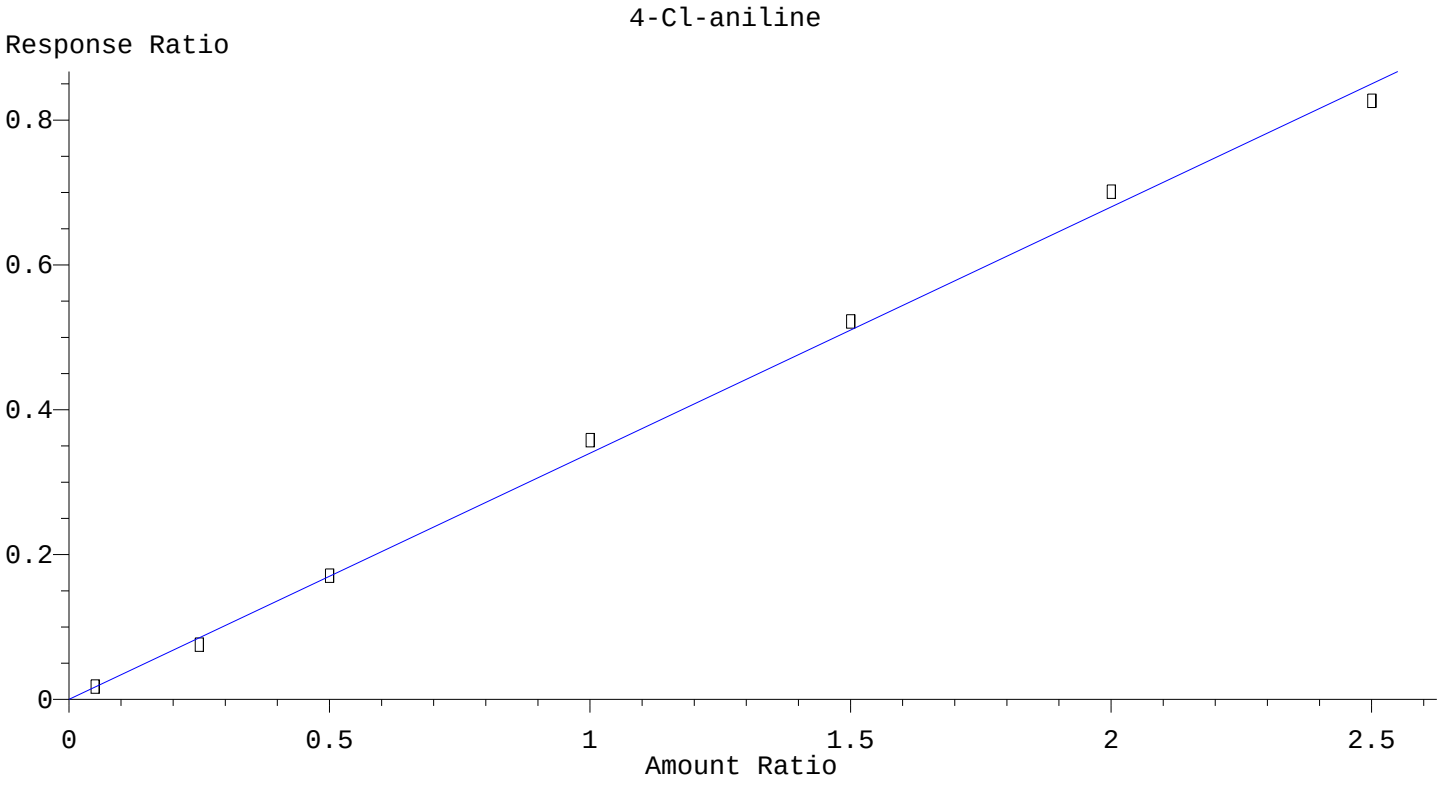
Resp Ratio = 3.42e-001 * Amt
RF Rel Std Dev = 5.0% Curve Fit: Avg RF



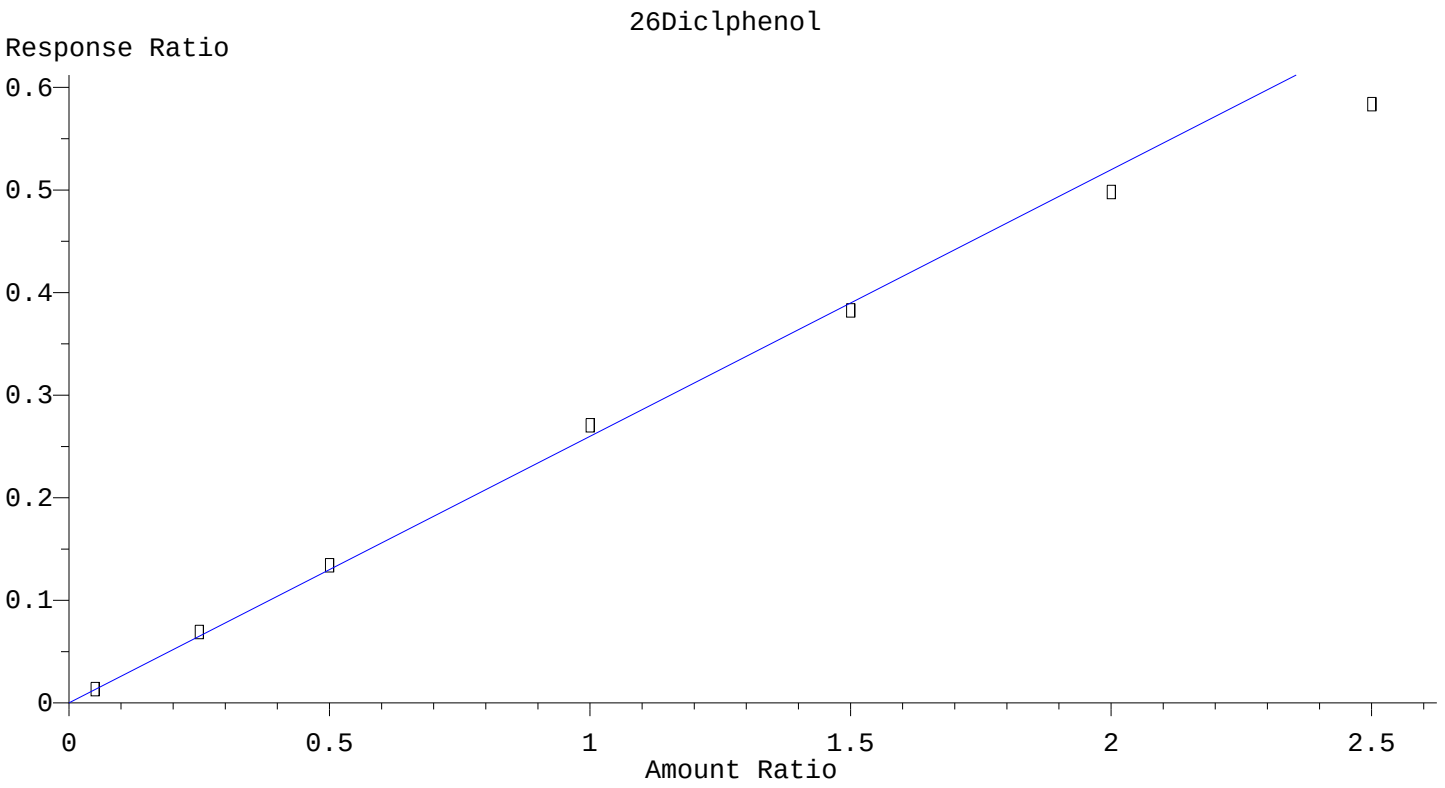
R = -2.15e-003 A*A + 1.72e-001 A - 1.61e-002
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a)



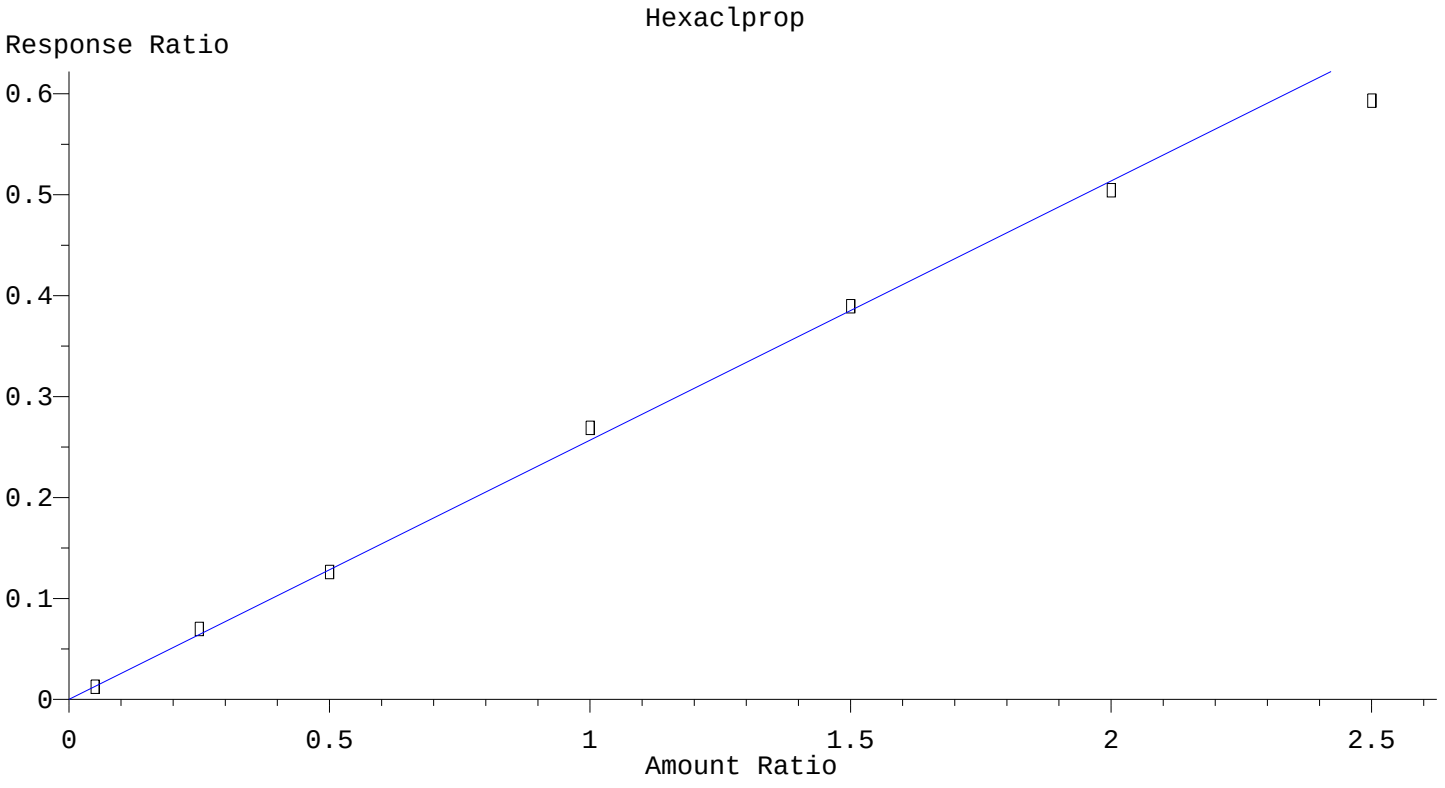
Resp Ratio = 9.22e-001 * Amt
RF Rel Std Dev = 5.7% Curve Fit: Avg RF



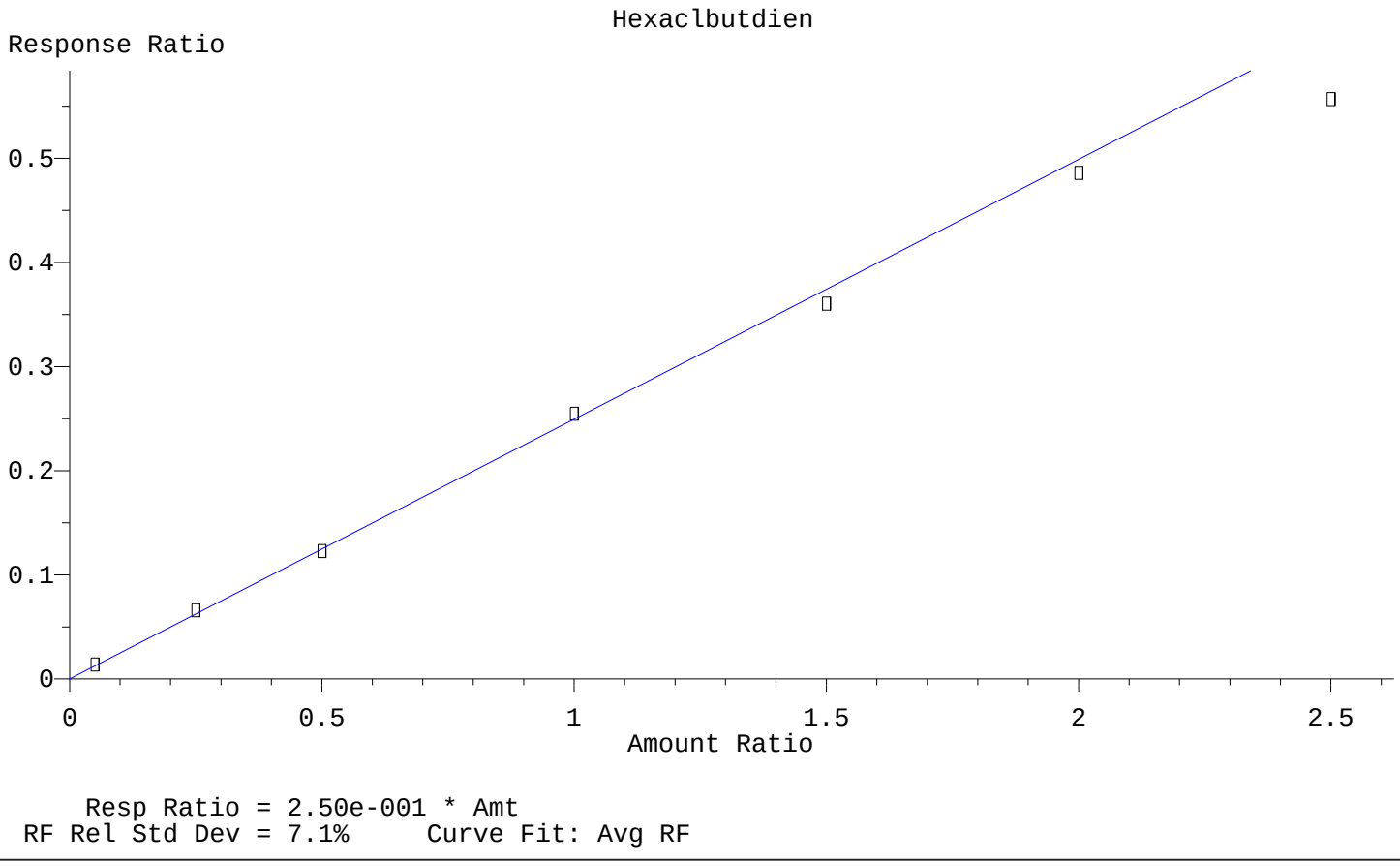
Resp Ratio = 3.40e-001 * Amt
RF Rel Std Dev = 5.6% Curve Fit: Avg RF



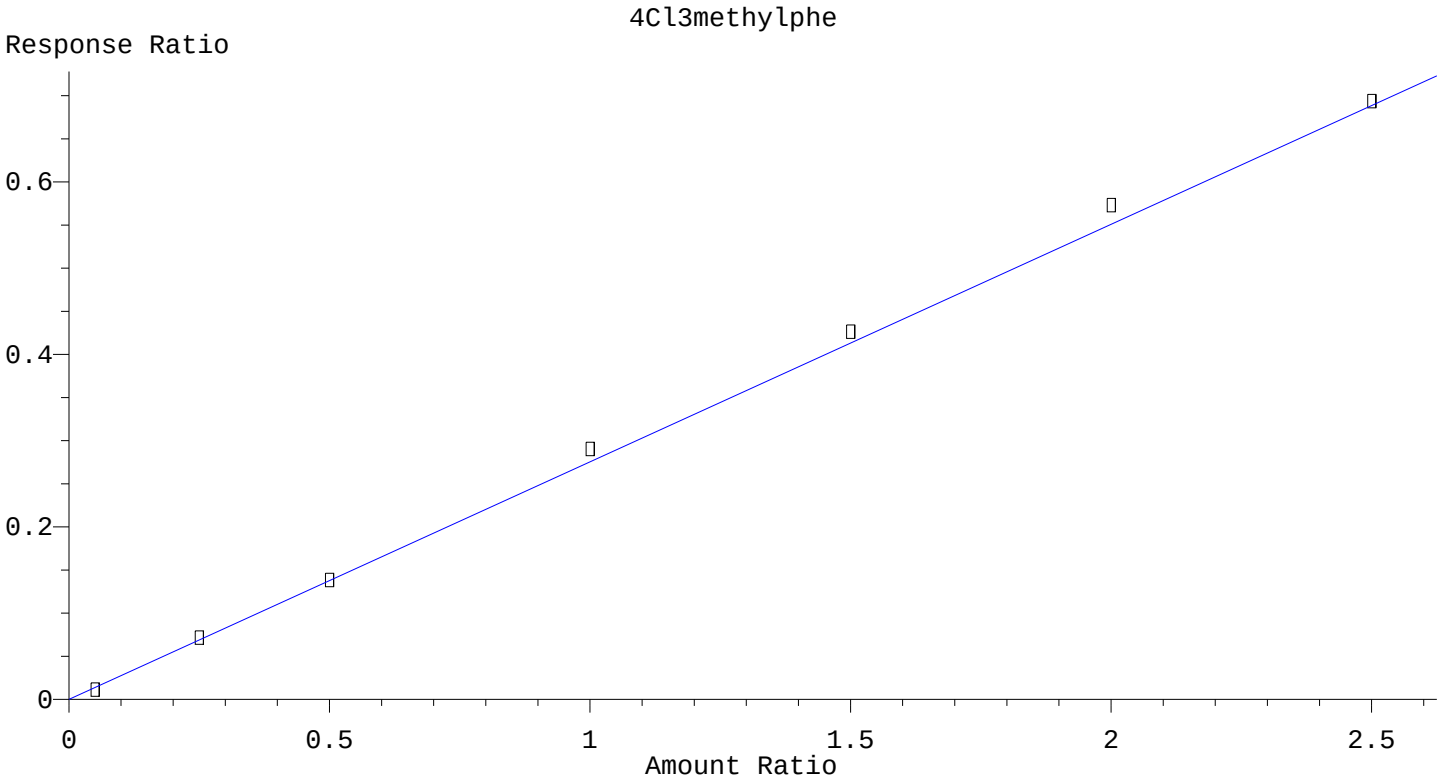
Resp Ratio = 2.60e-001 * Amt
RF Rel Std Dev = 5.8% Curve Fit: Avg RF



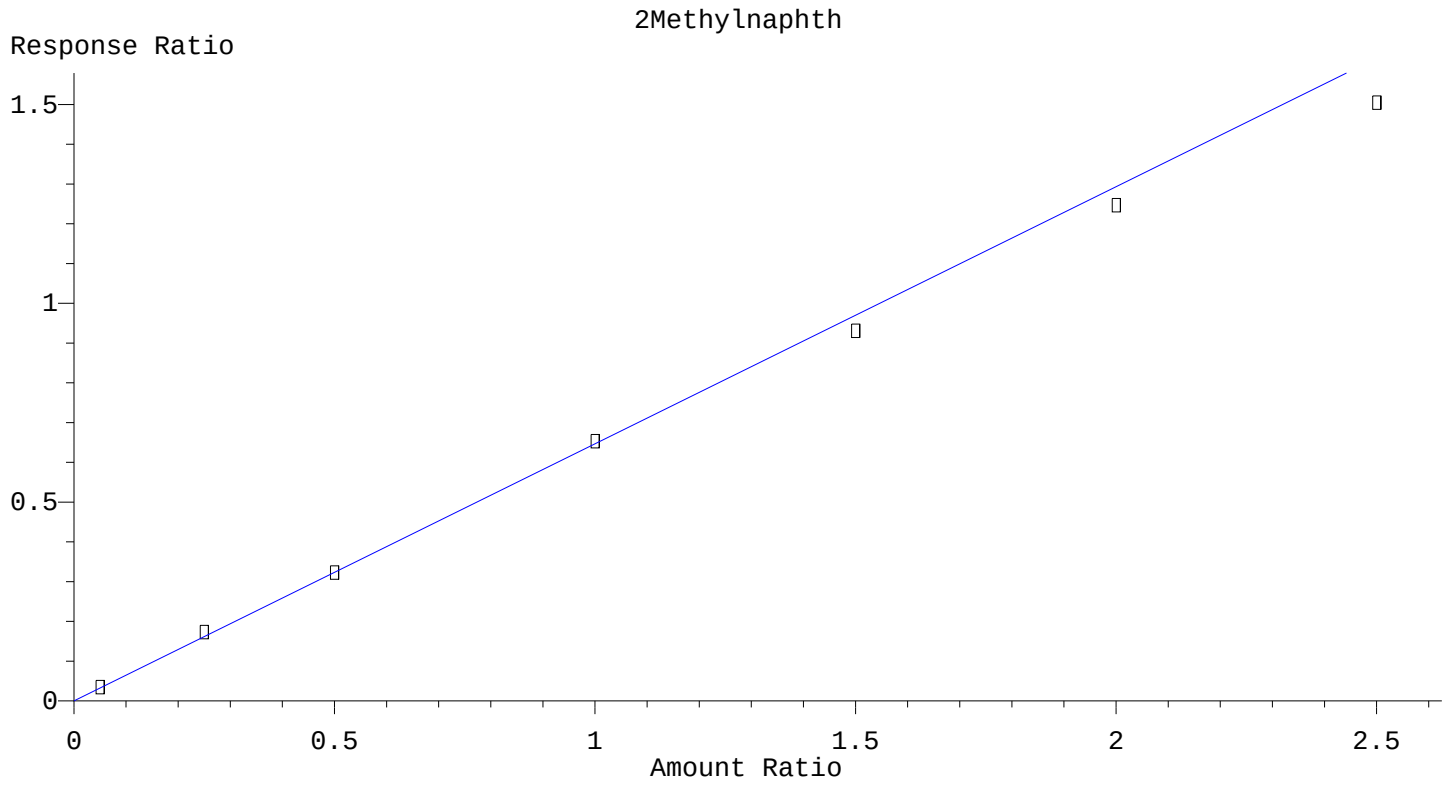
Resp Ratio = 2.57e-001 * Amt
RF Rel Std Dev = 5.3% Curve Fit: Avg RF



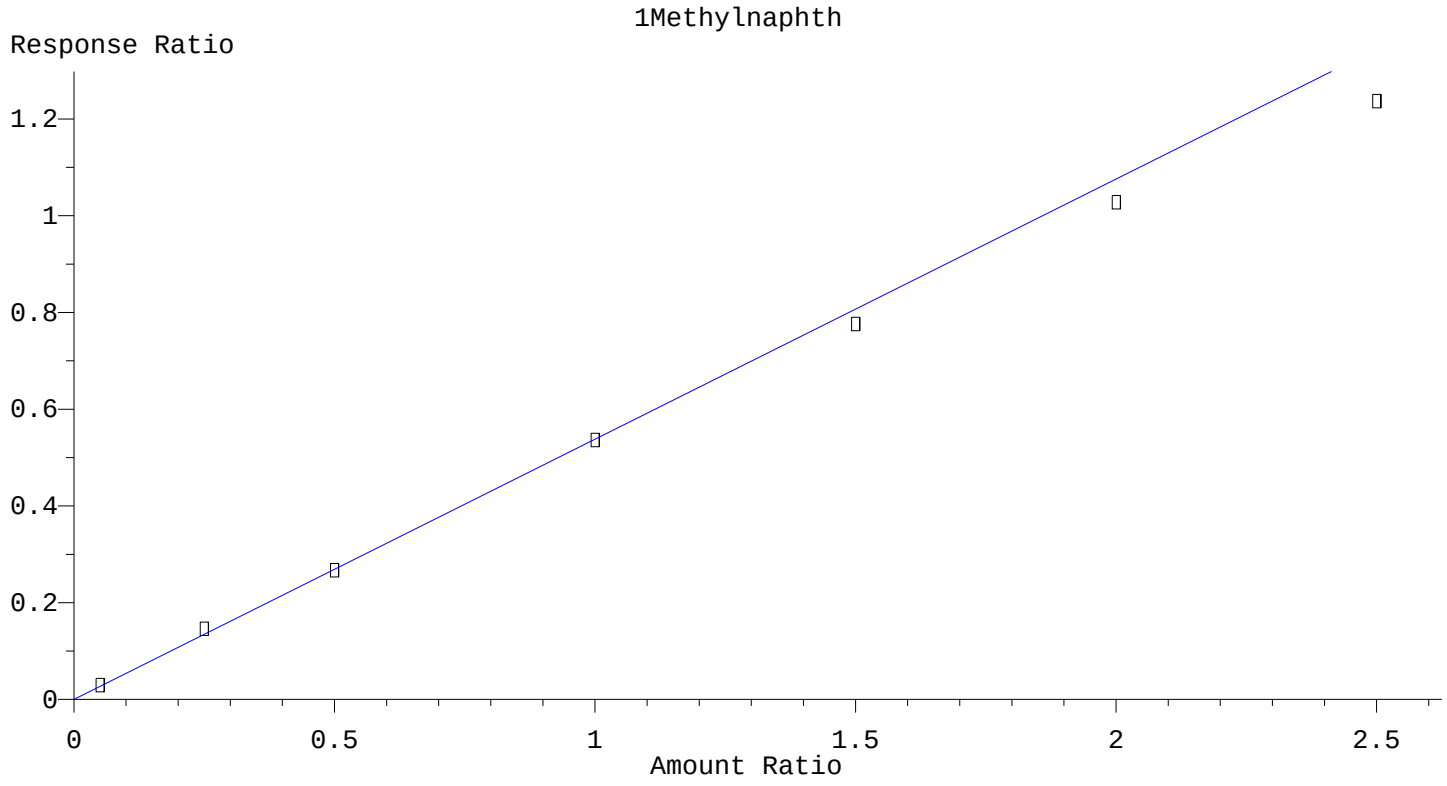
Resp Ratio = 2.50e-001 * Amt
RF Rel Std Dev = 7.1% Curve Fit: Avg RF



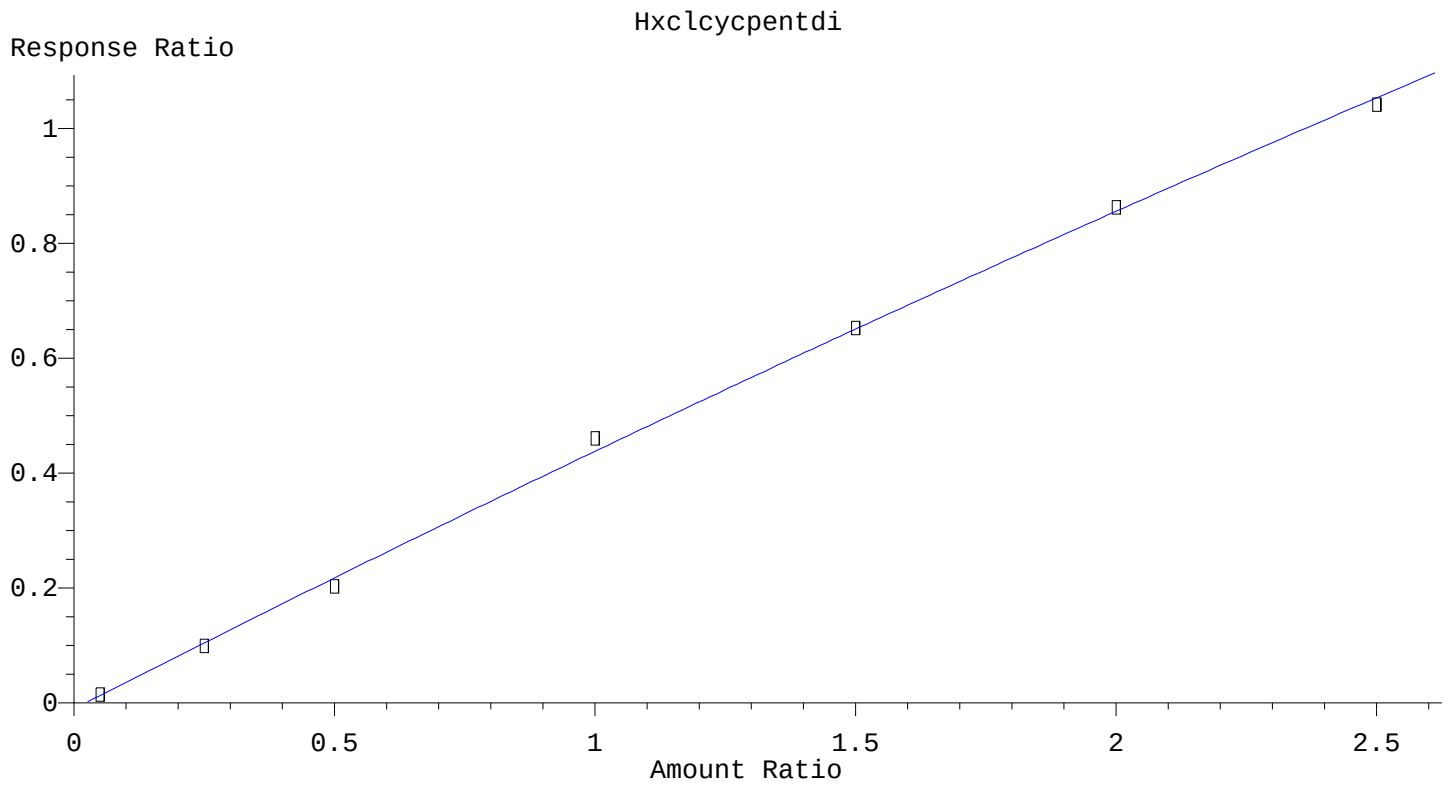
Resp Ratio = 2.76e-001 * Amt
RF Rel Std Dev = 7.9% Curve Fit: Avg RF



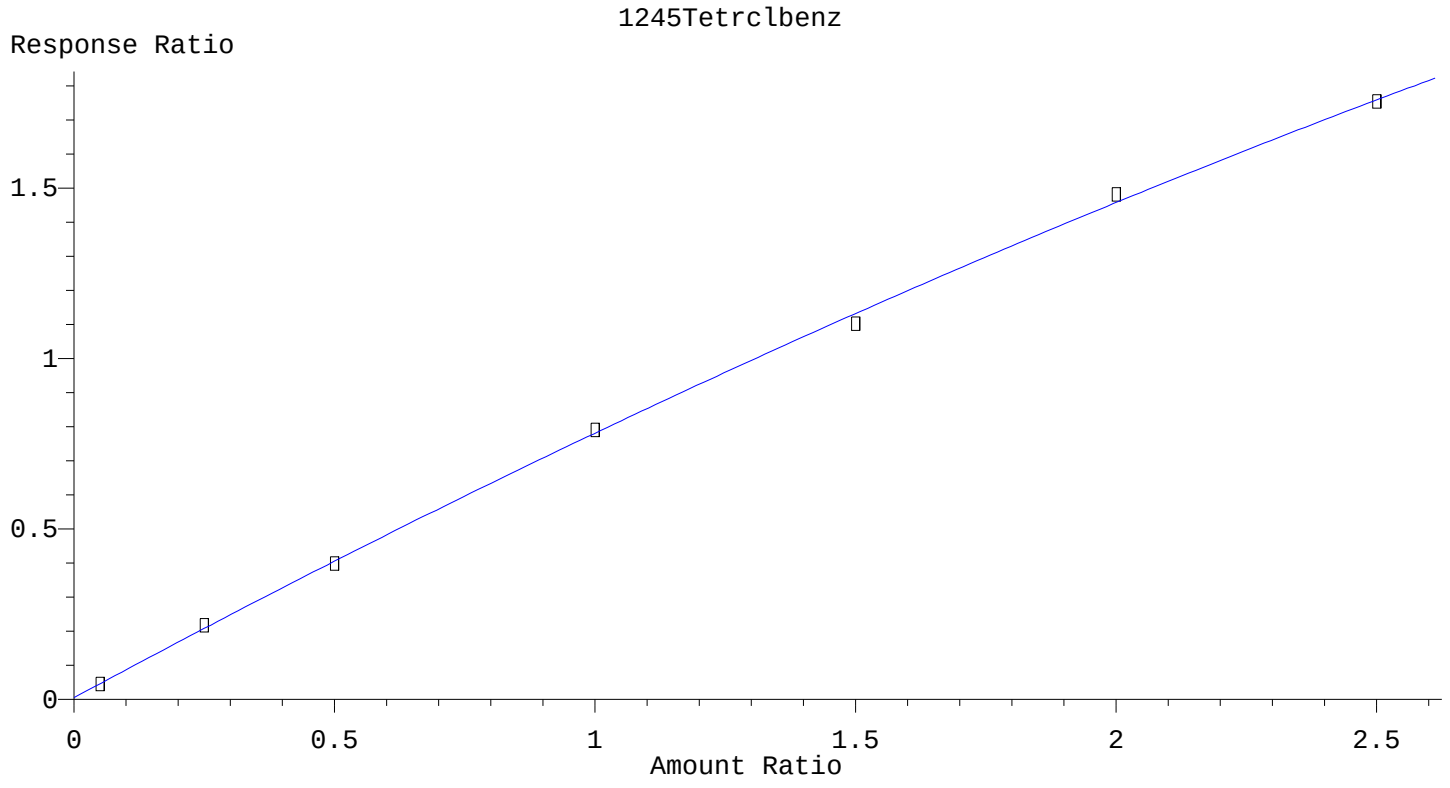
Resp Ratio = 6.47e-001 * Amt
RF Rel Std Dev = 5.4% Curve Fit: Avg RF



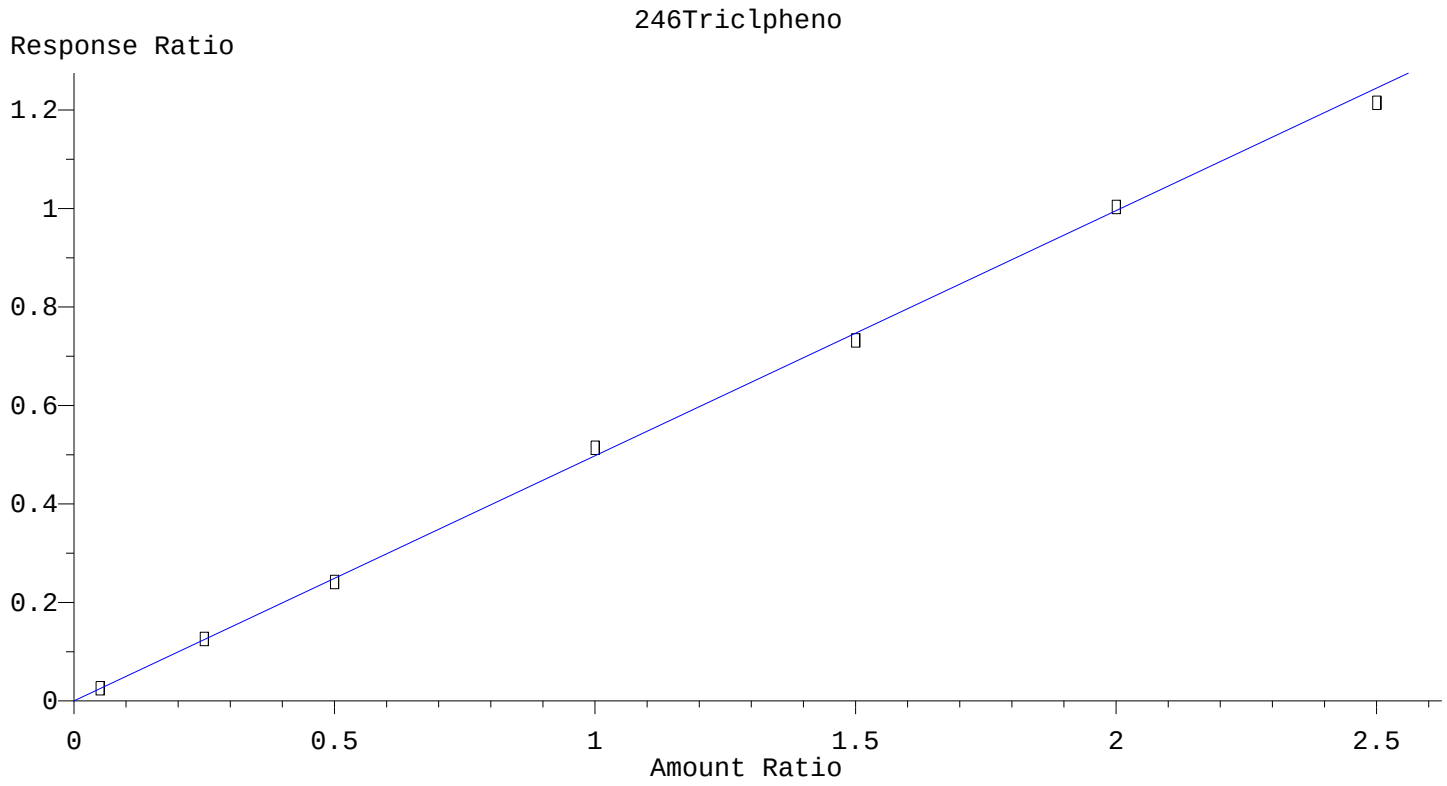
Resp Ratio = 5.38e-001 * Amt
RF Rel Std Dev = 6.5% Curve Fit: Avg RF



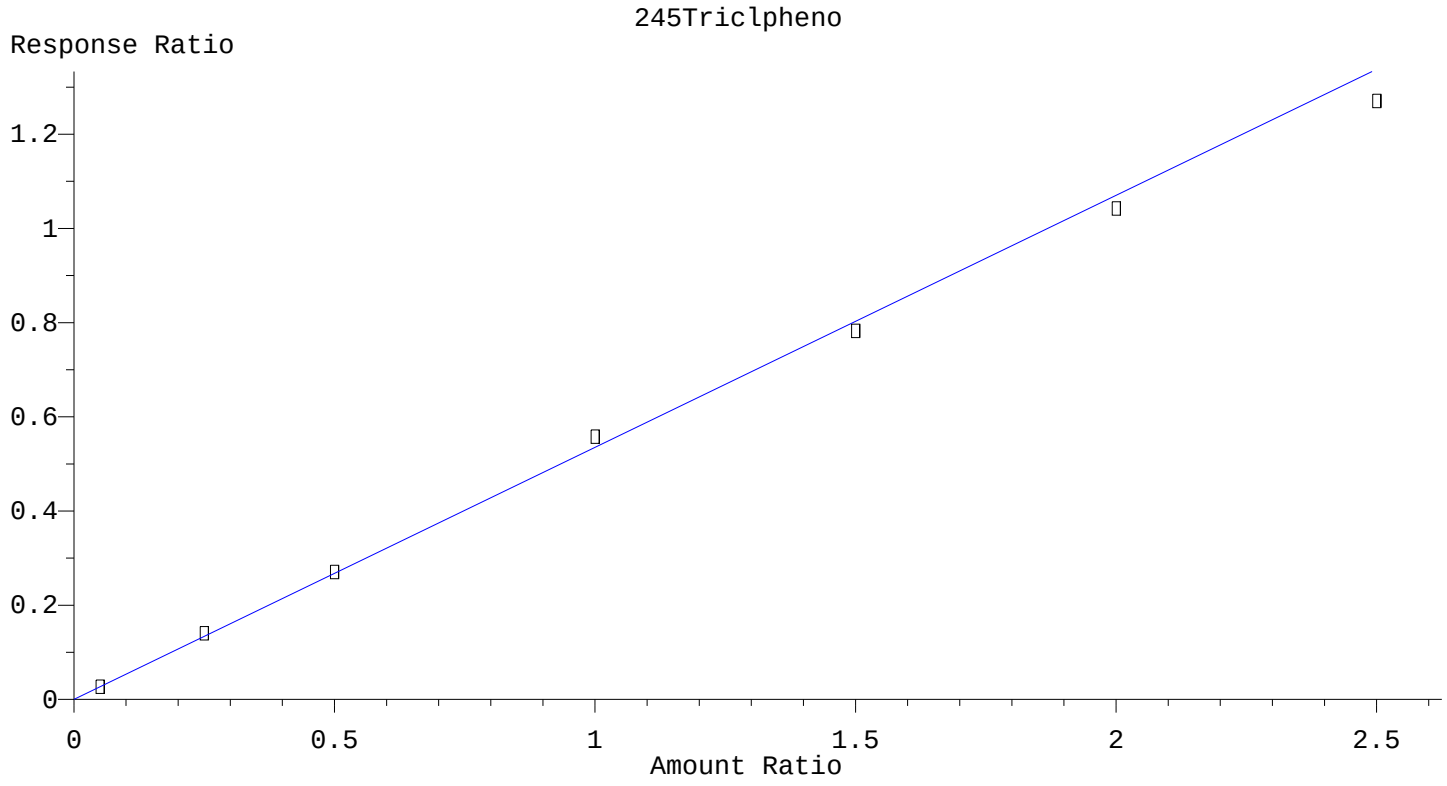
R = -1.52e-002 A*A + 4.63e-001 A - 1.02e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)



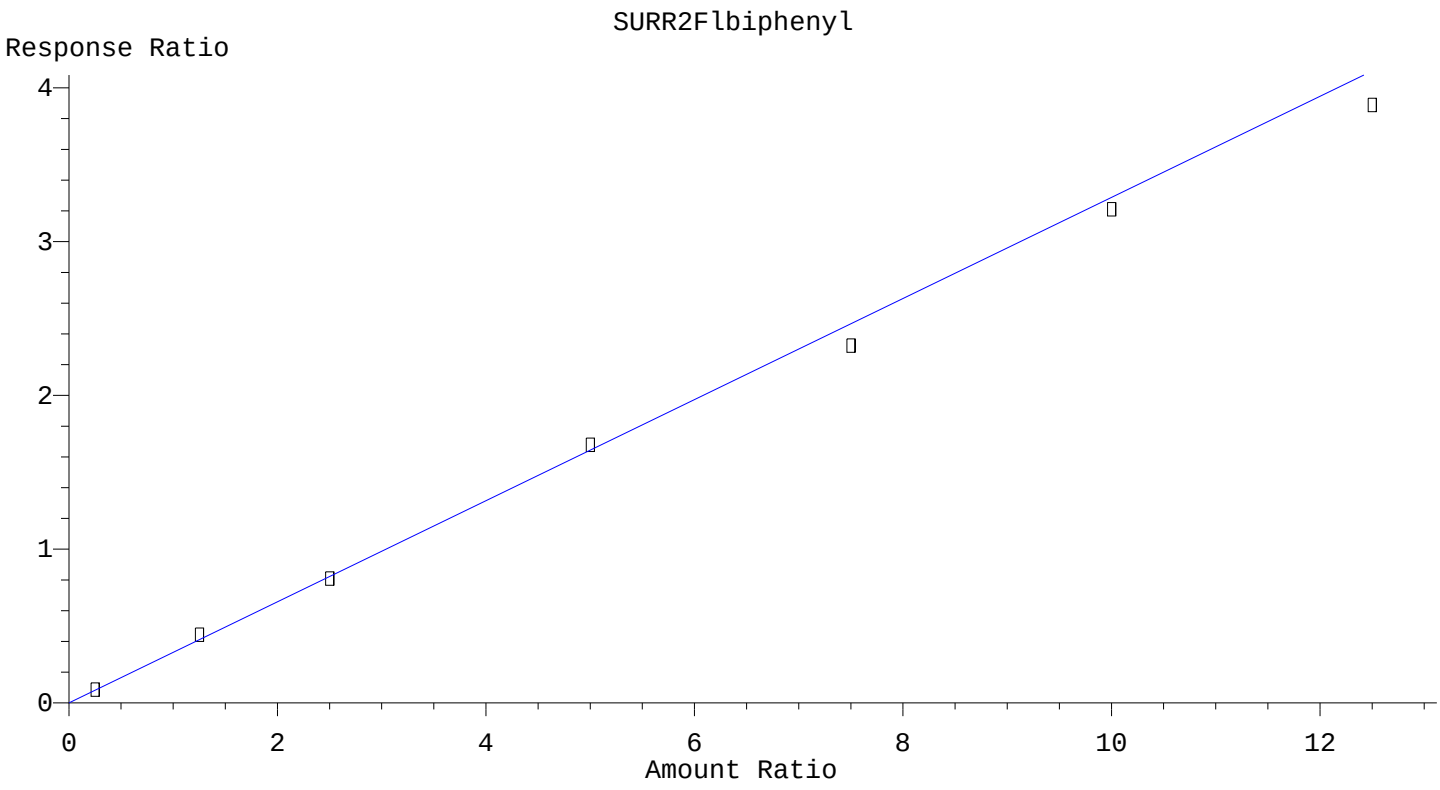
R = -4.99e-002 A*A + 8.26e-001 A + 4.90e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



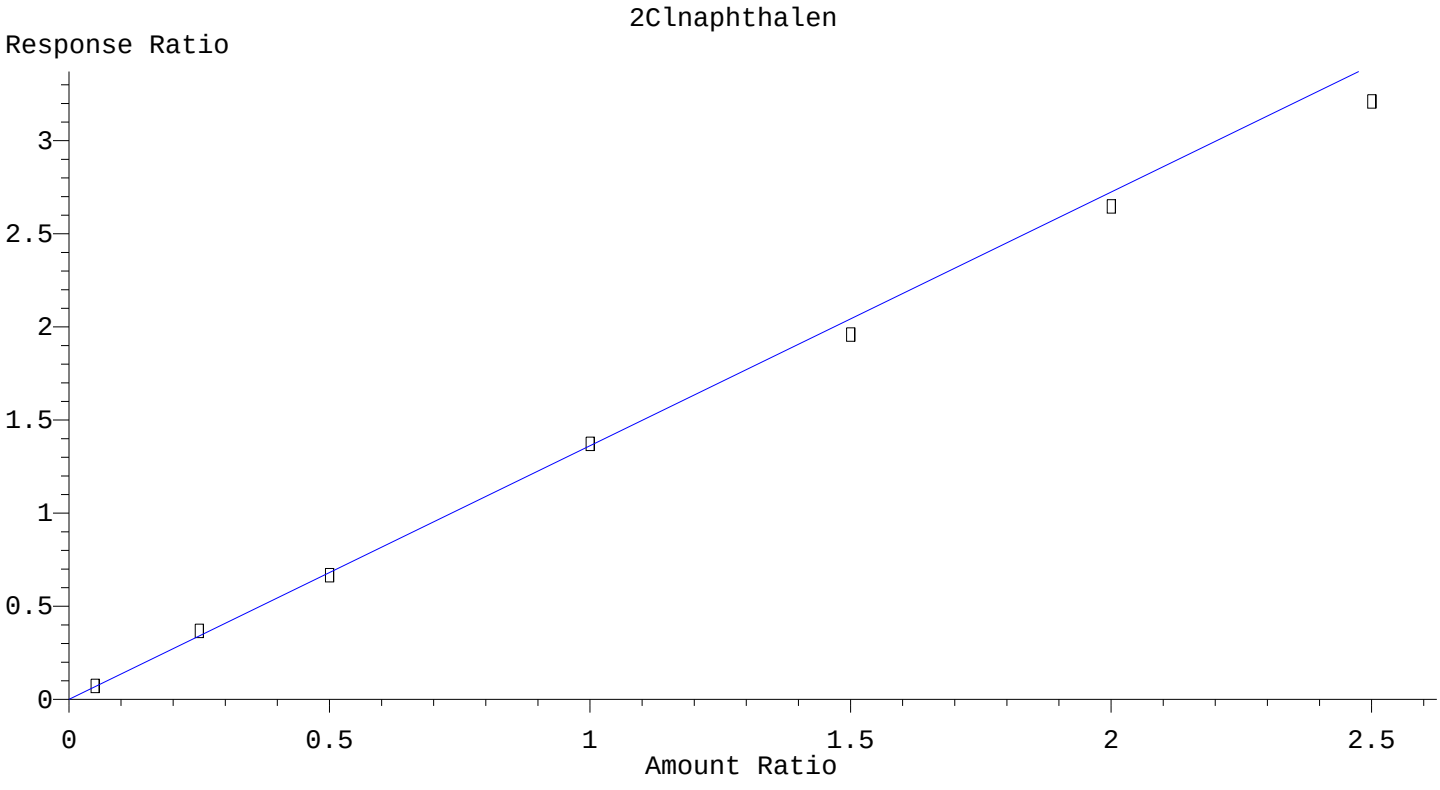
Resp Ratio = 4.98e-001 * Amt
RF Rel Std Dev = 2.5% Curve Fit: Avg RF



Resp Ratio = 5.35e-001 * Amt
RF Rel Std Dev = 3.7% Curve Fit: Avg RF

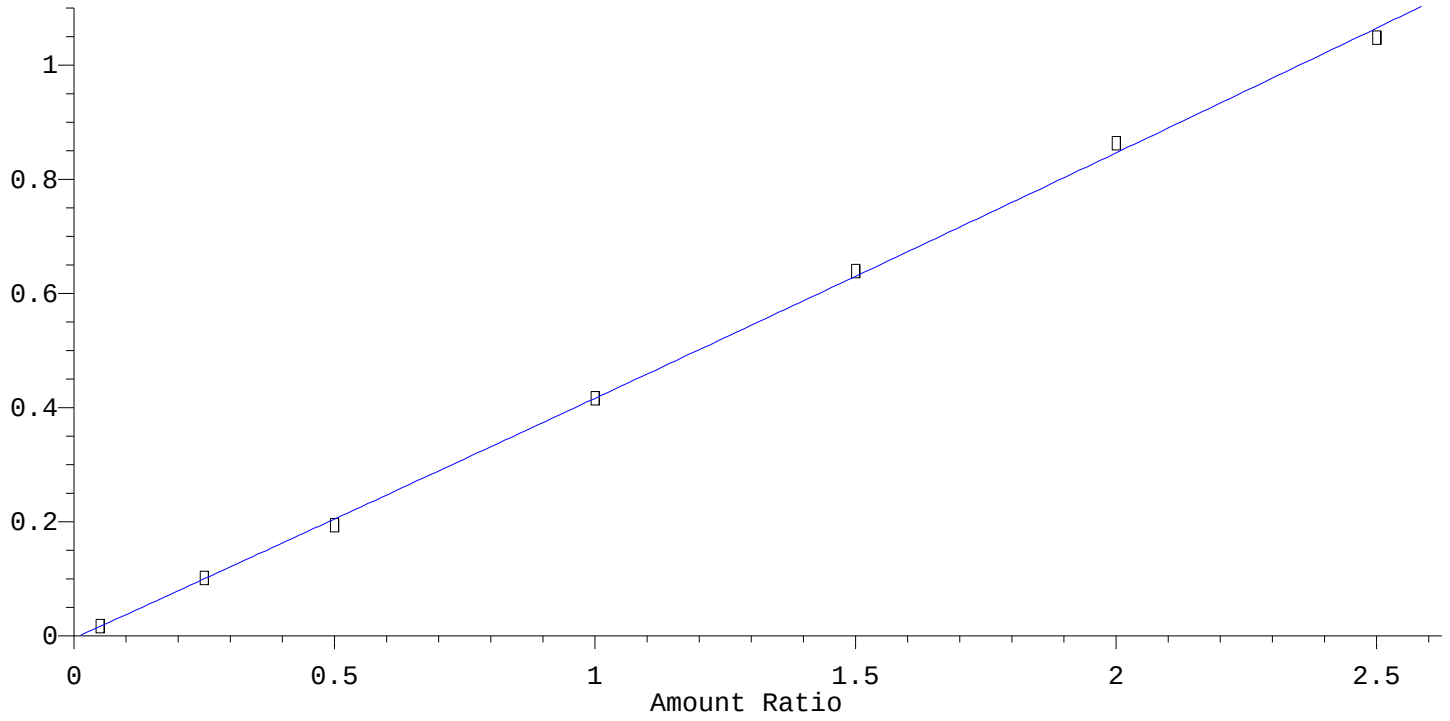


Resp Ratio = 3.29e-001 * Amt
RF Rel Std Dev = 5.2% Curve Fit: Avg RF



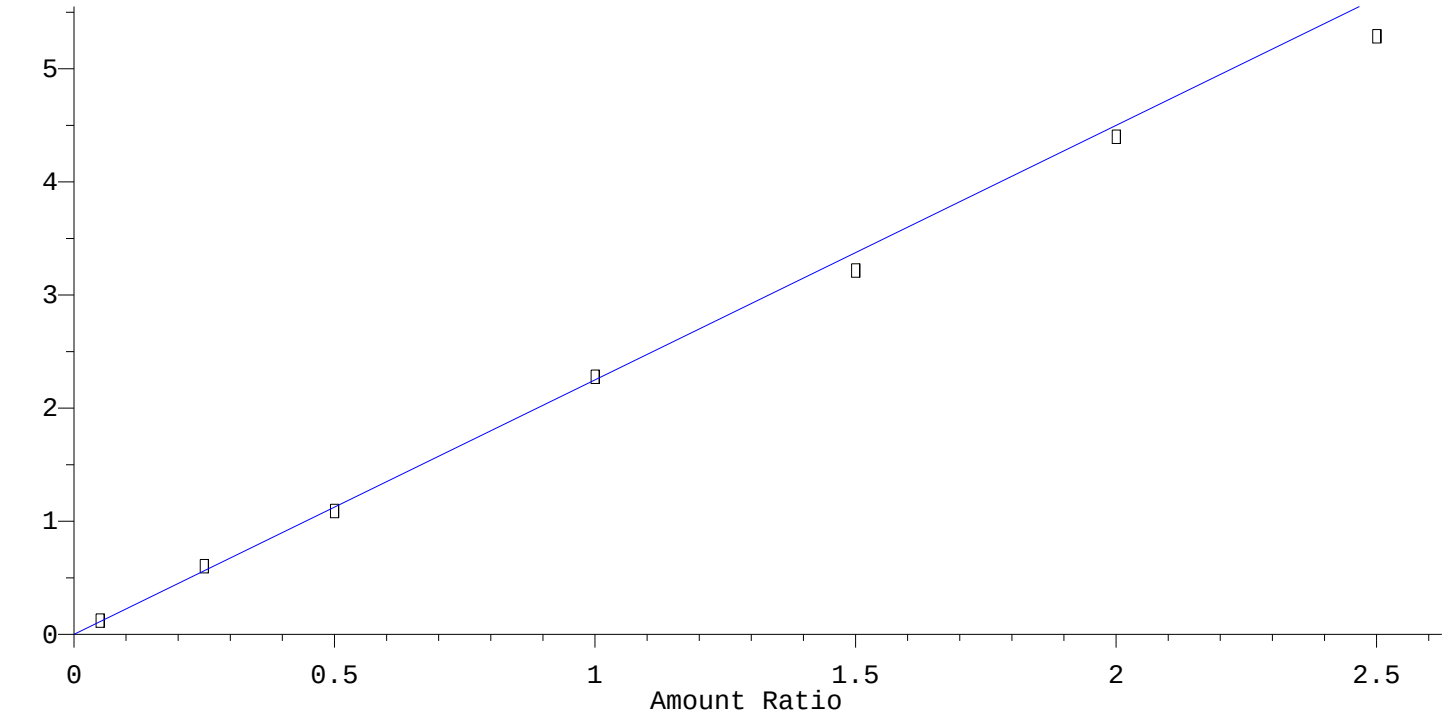
Resp Ratio = 1.36e+000 * Amt
RF Rel Std Dev = 5.3% Curve Fit: Avg RF

2Nitroaniline

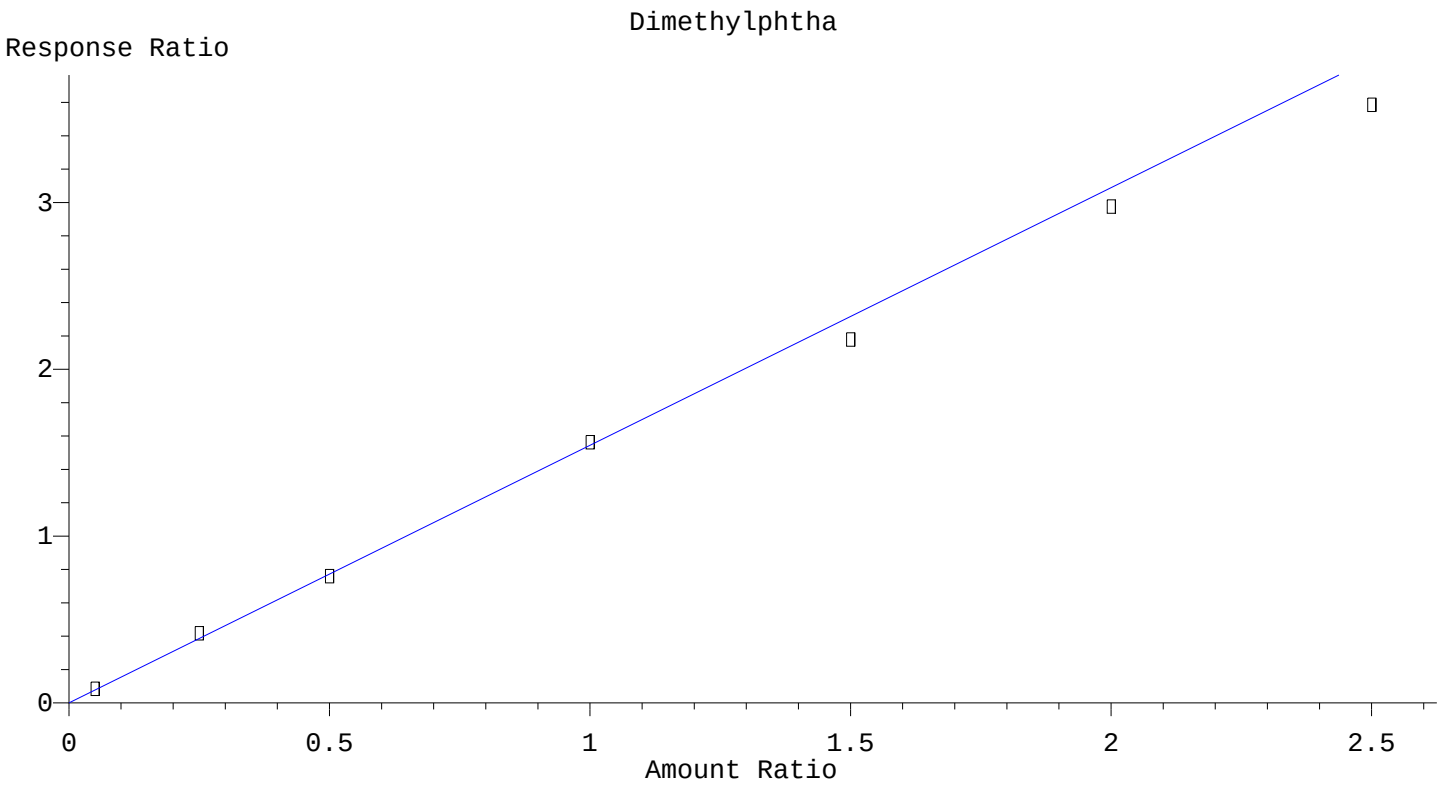


R = 4.80e-003 A*A + 4.16e-001 A - 4.23e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

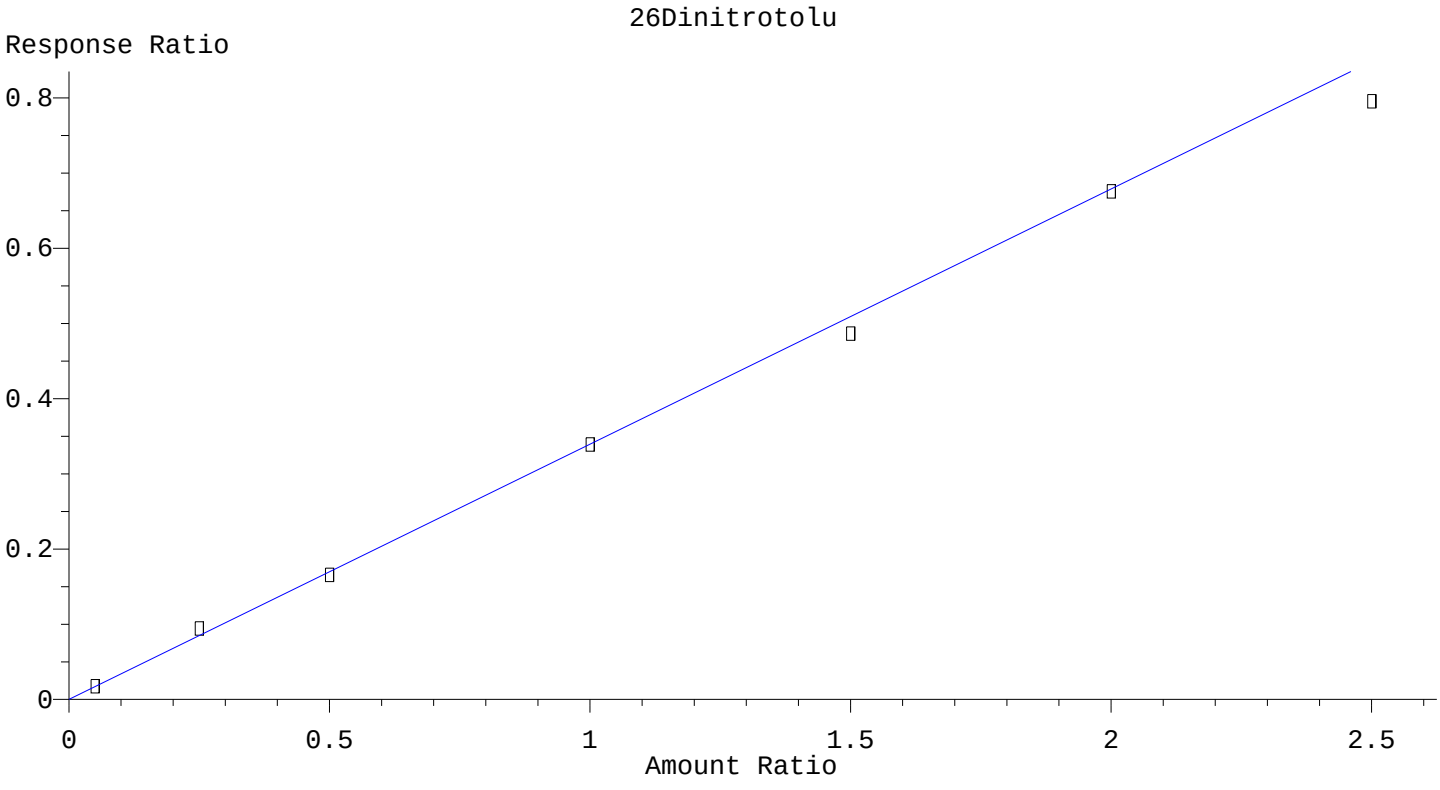
Acnaphthylene



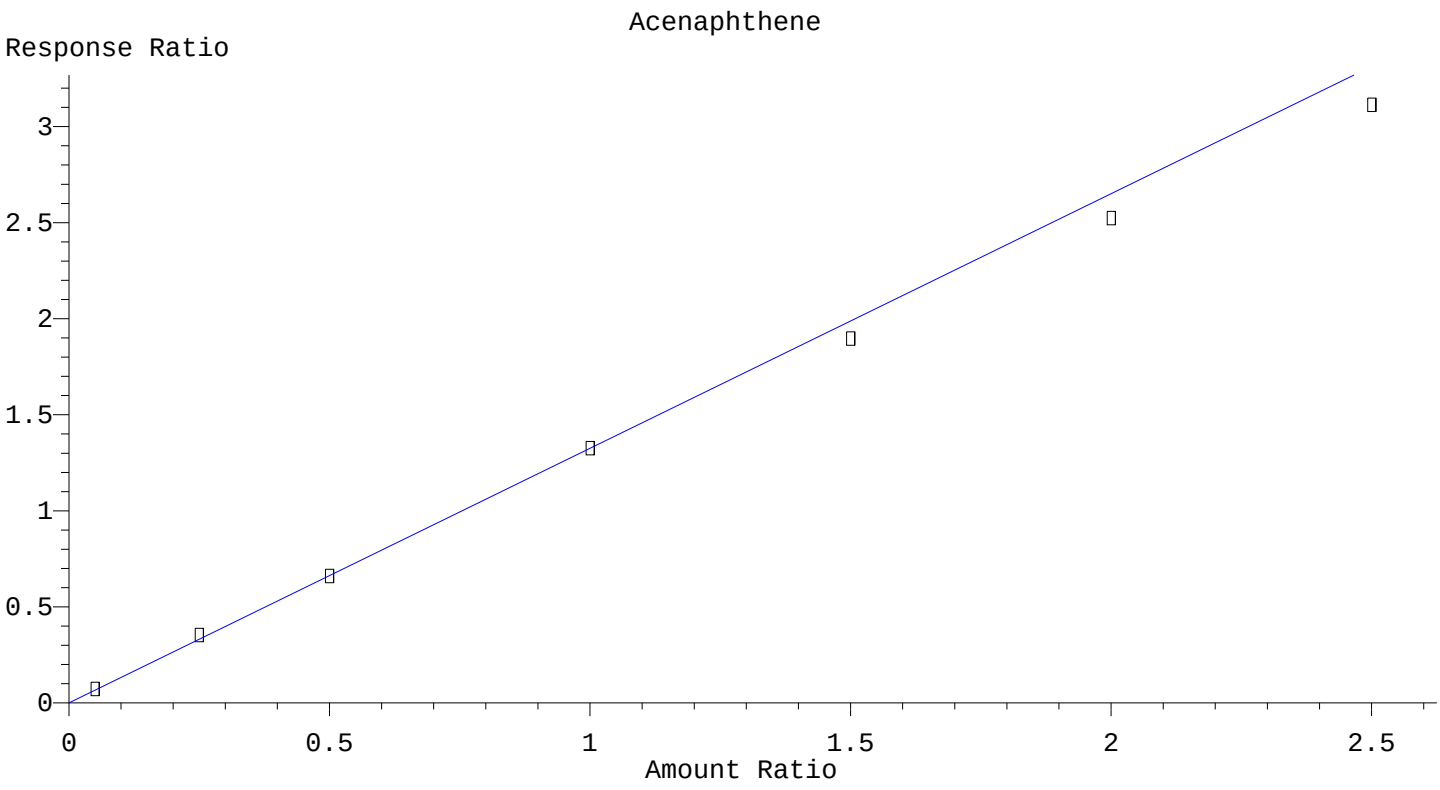
Resp Ratio = 2.25e+000 * Amt
RF Rel Std Dev = 5.5% Curve Fit: Avg RF



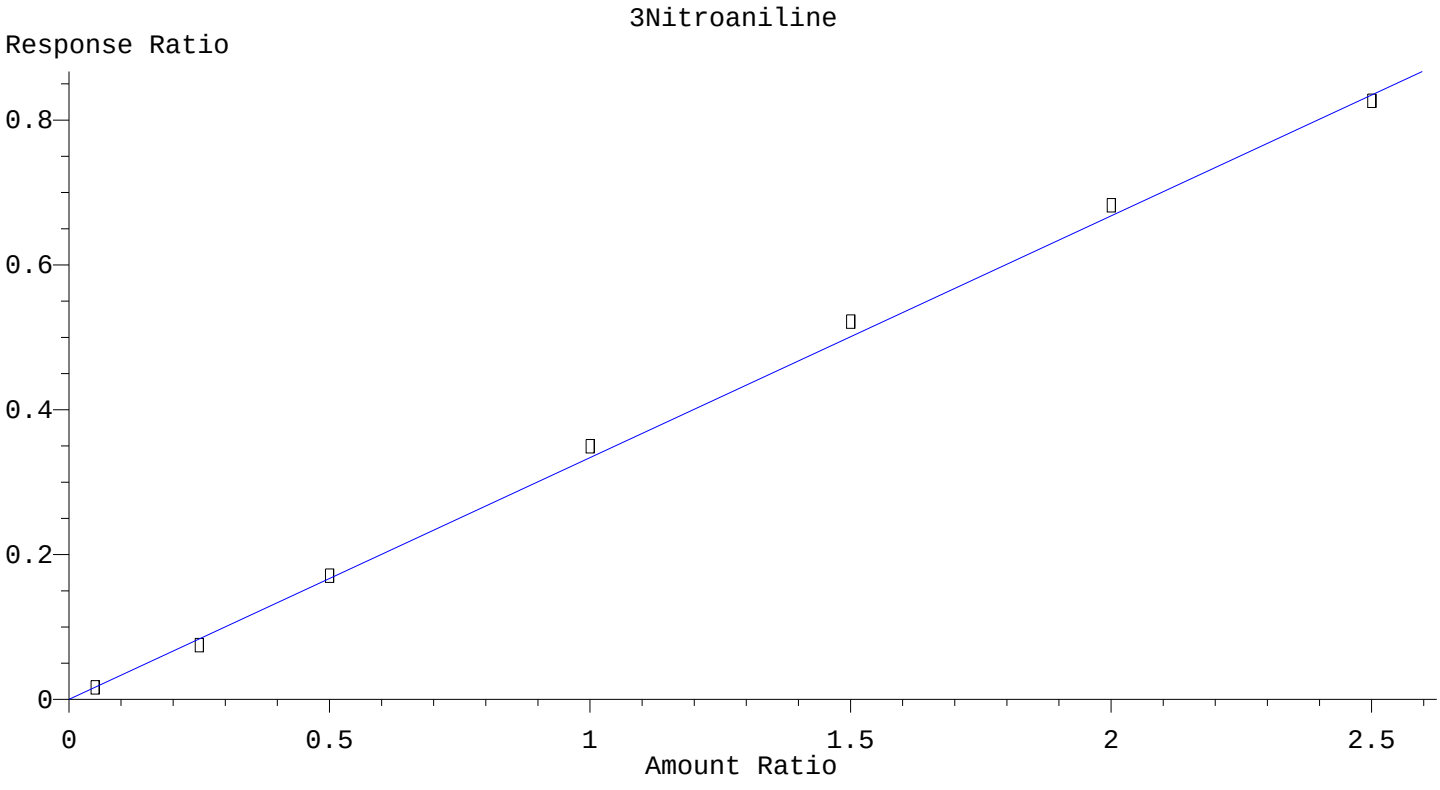
Resp Ratio = 1.54e+000 * Amt
RF Rel Std Dev = 6.5% Curve Fit: Avg RF



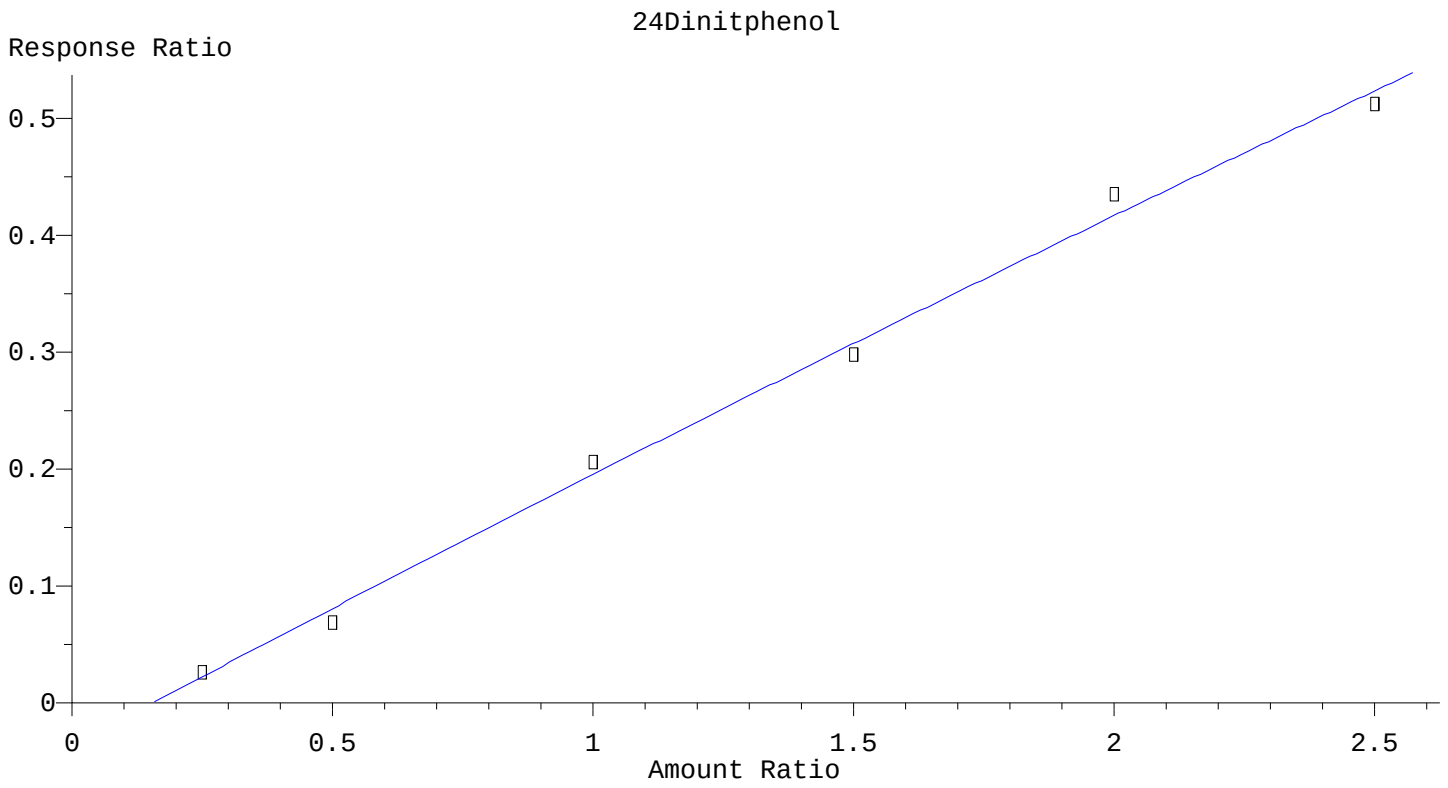
Resp Ratio = 3.39e-001 * Amt
RF Rel Std Dev = 5.7% Curve Fit: Avg RF



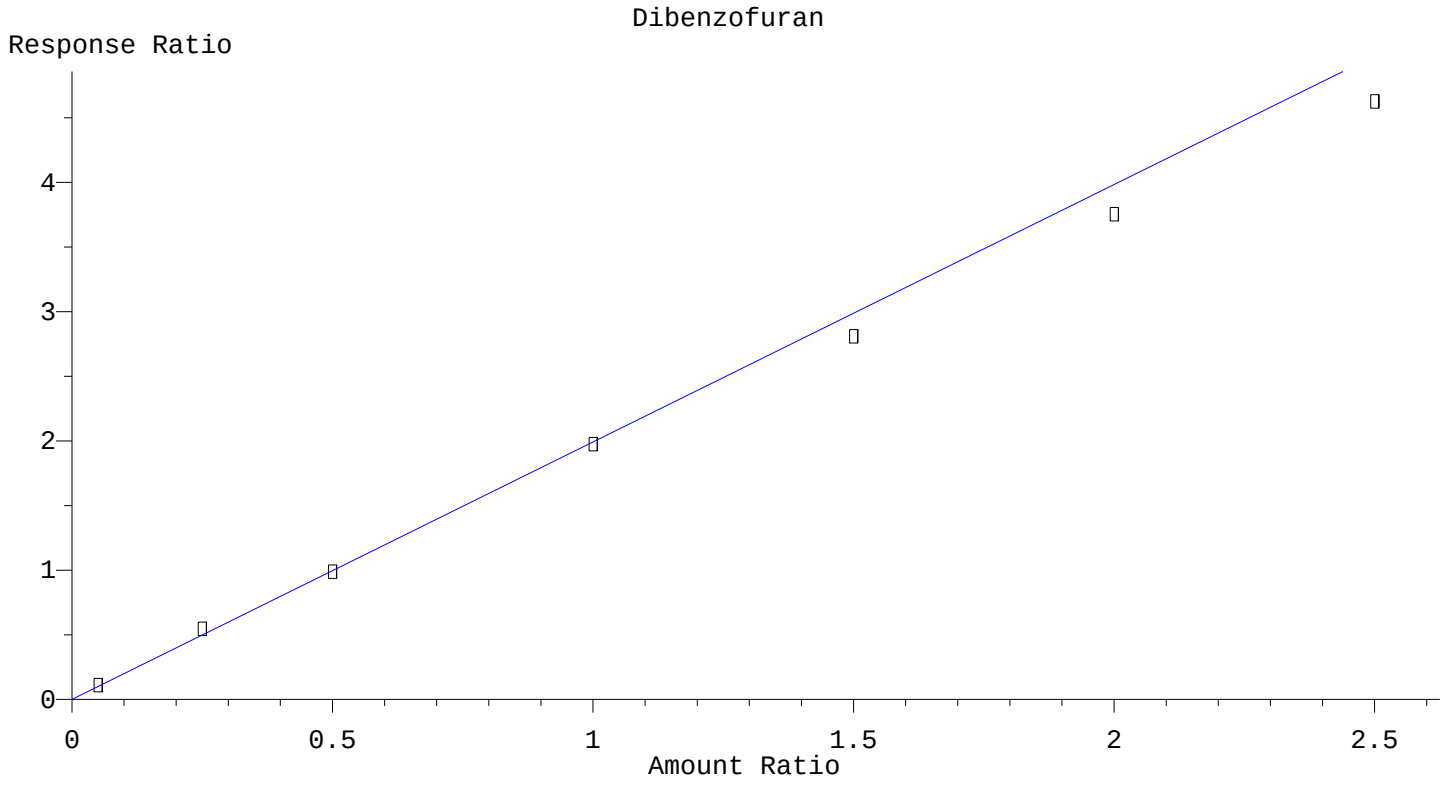
Resp Ratio = 1.33e+000 * Amt
RF Rel Std Dev = 5.9% Curve Fit: Avg RF



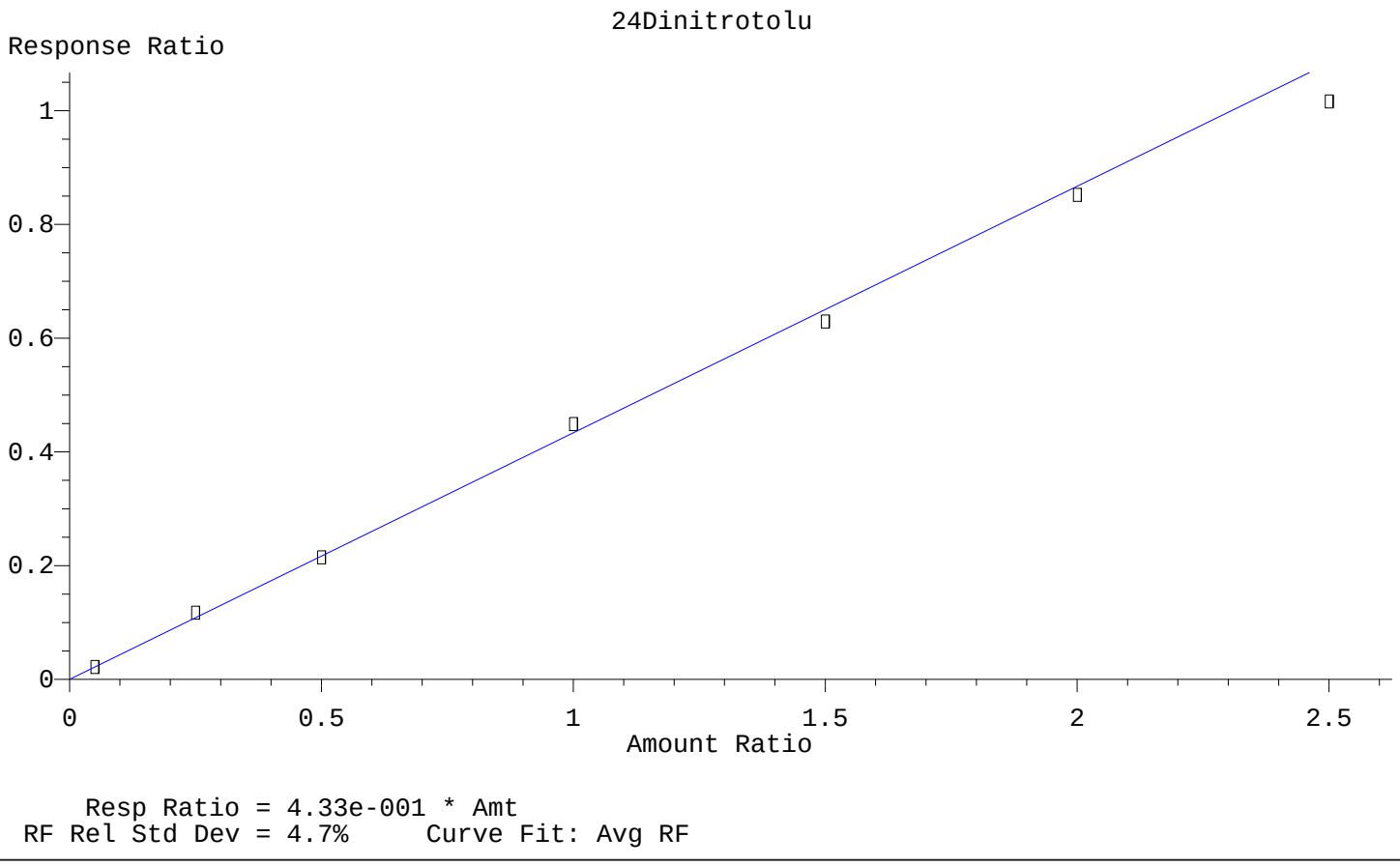
Resp Ratio = 3.34e-001 * Amt
RF Rel Std Dev = 5.1% Curve Fit: Avg RF



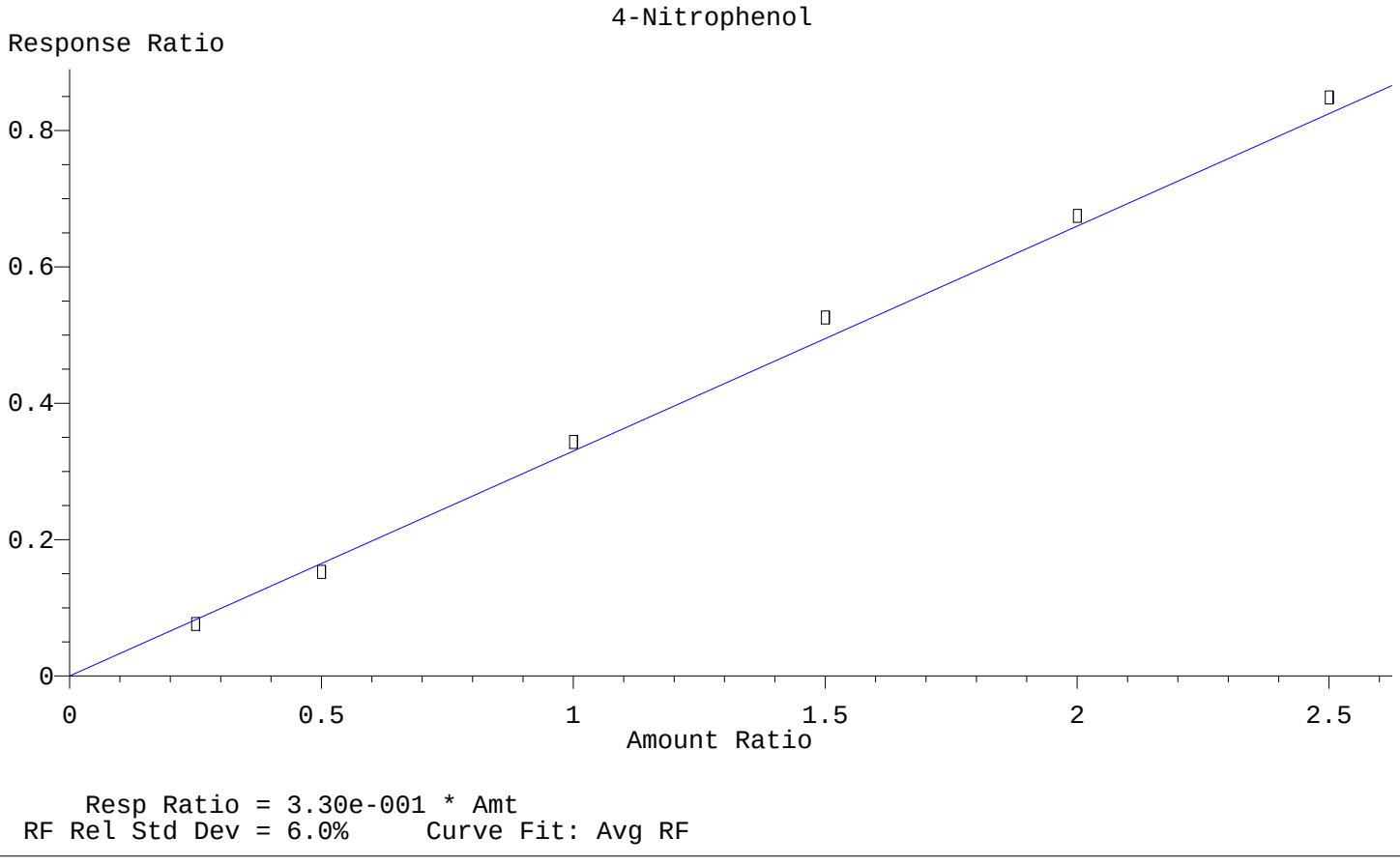
R = -5.32e-003 A*A + 2.37e-001 A - 3.66e-002
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a)



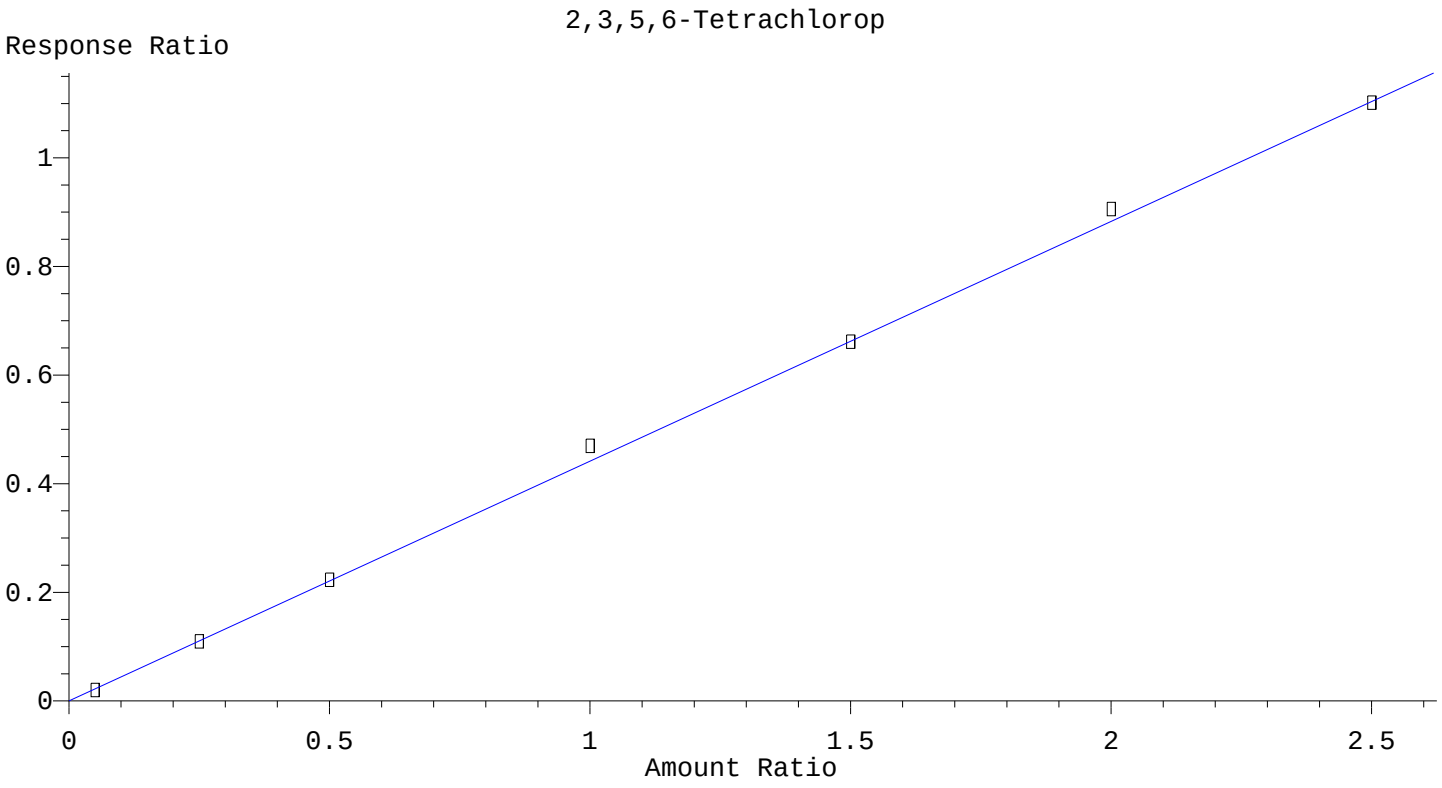
Resp Ratio = 1.99e+000 * Amt
RF Rel Std Dev = 7.4% Curve Fit: Avg RF



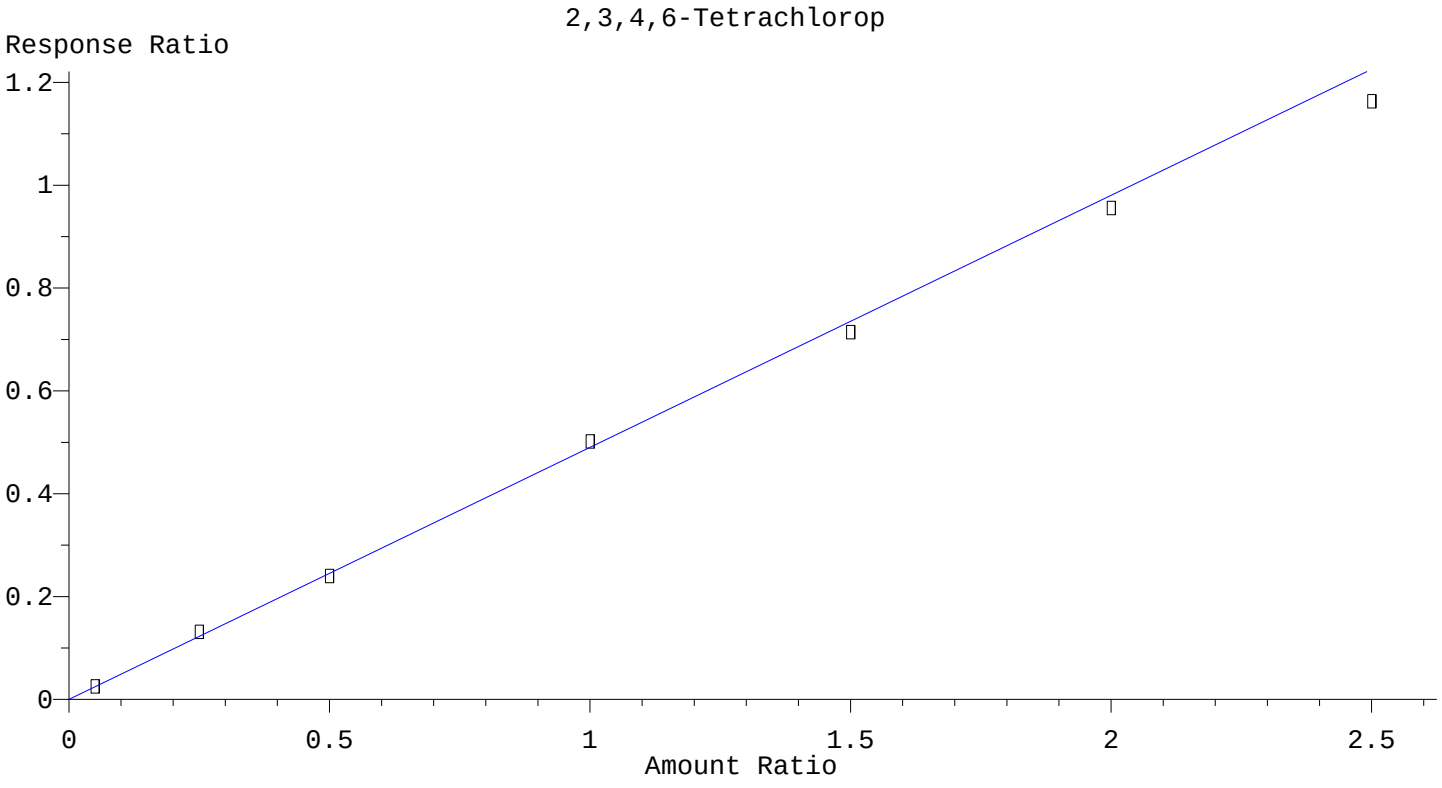
Resp Ratio = 4.33e-001 * Amt
RF Rel Std Dev = 4.7% Curve Fit: Avg RF



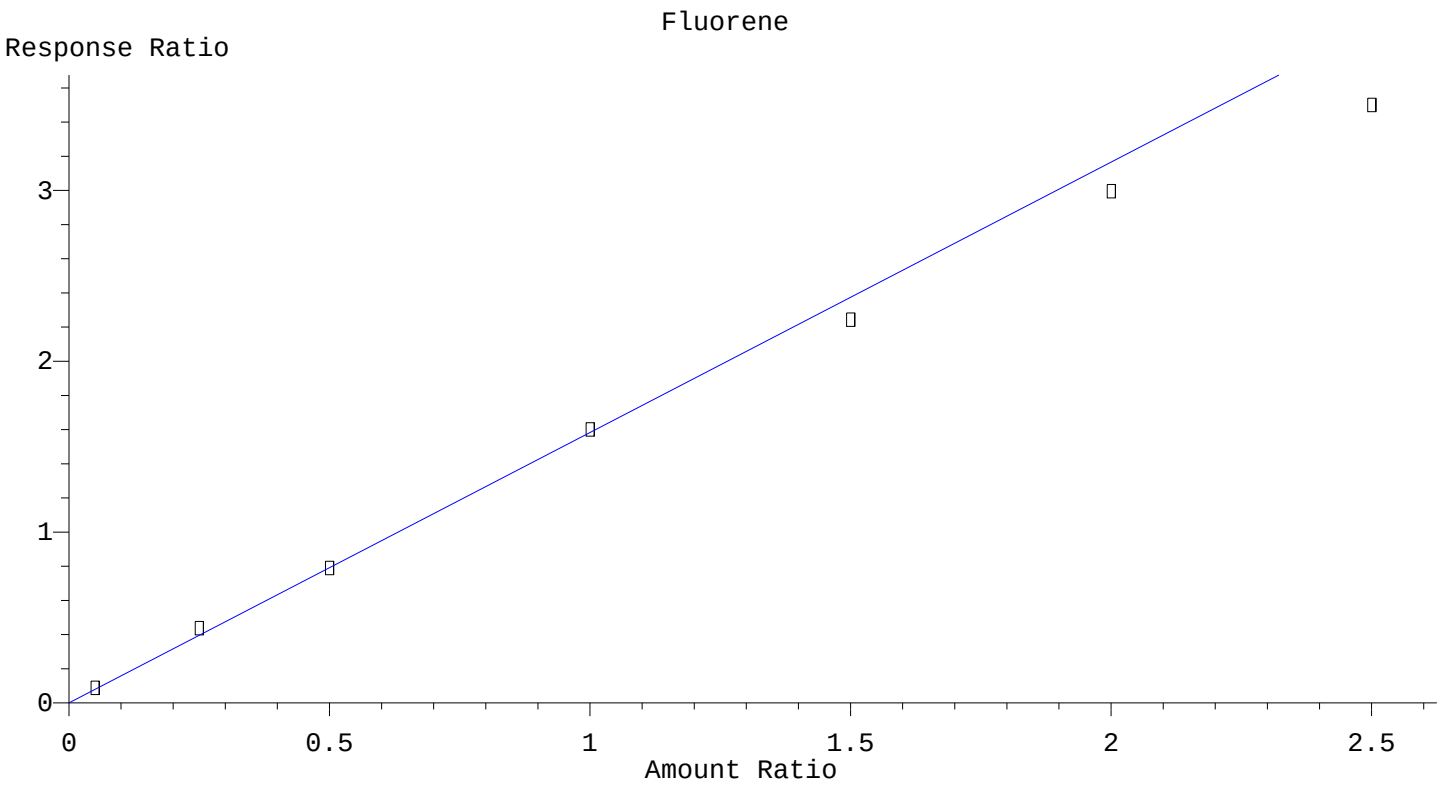
Resp Ratio = 3.30e-001 * Amt
RF Rel Std Dev = 6.0% Curve Fit: Avg RF



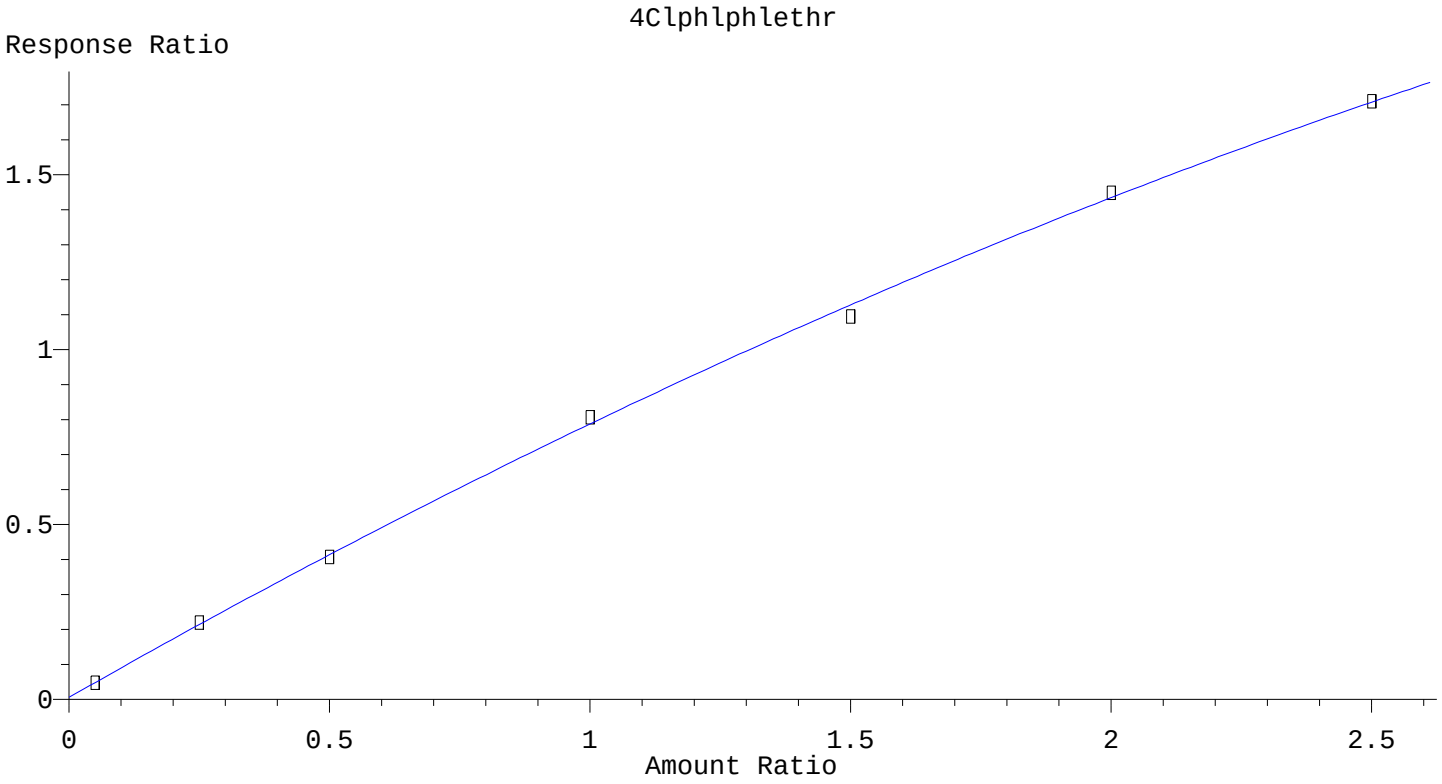
Resp Ratio = 4.42e-001 * Amt
RF Rel Std Dev = 4.6% Curve Fit: Avg RF



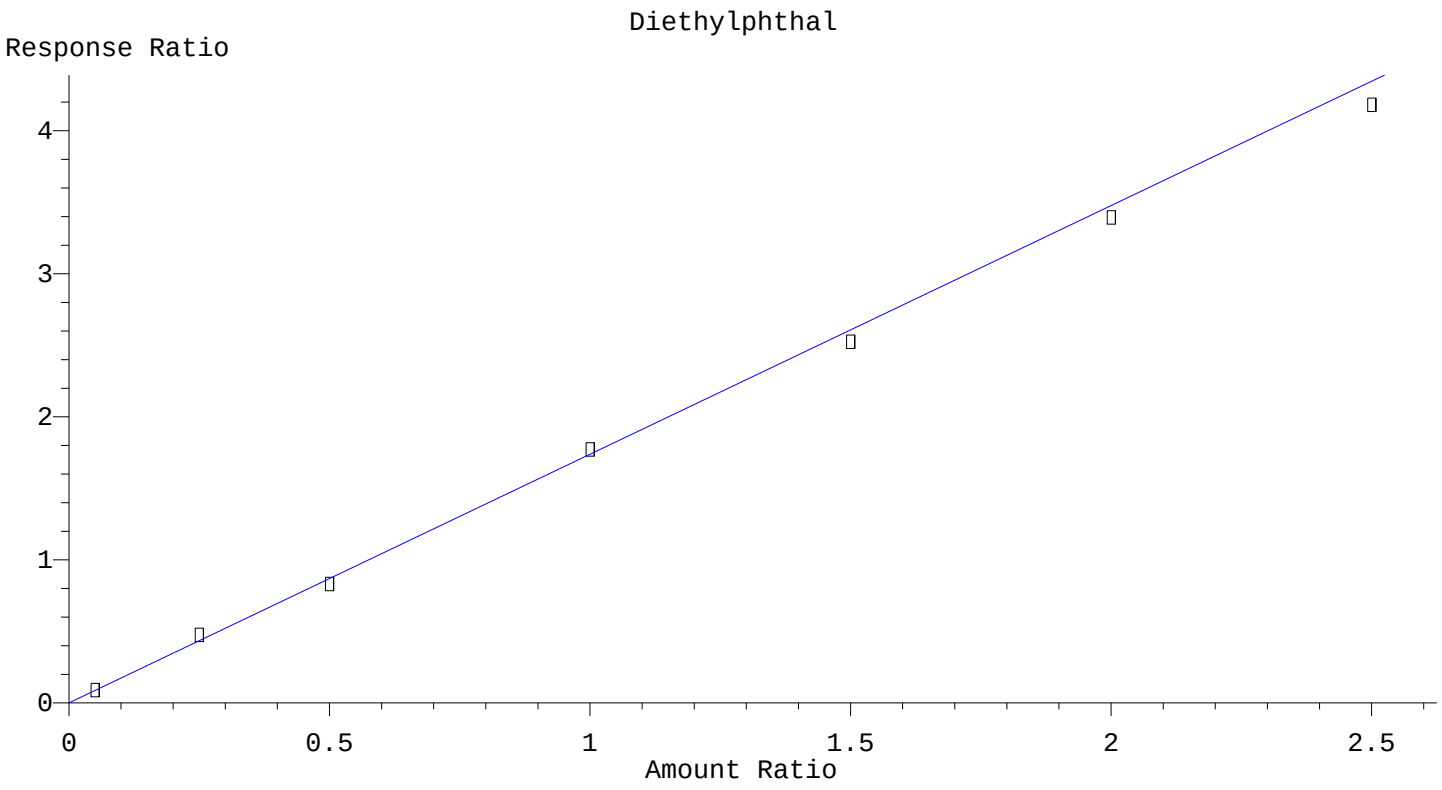
Resp Ratio = 4.90e-001 * Amt
RF Rel Std Dev = 4.3% Curve Fit: Avg RF



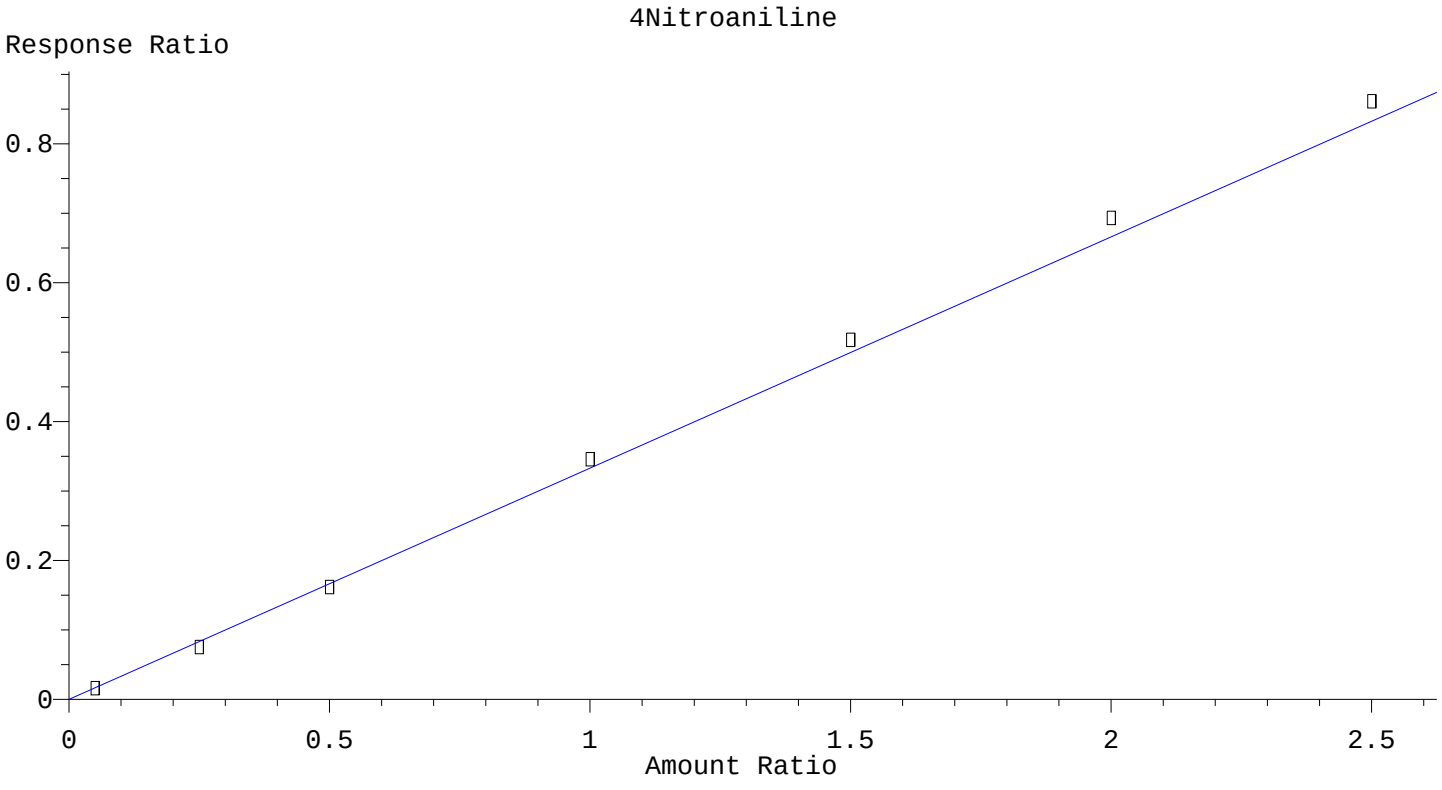
Resp Ratio = 1.58e+000 * Amt
RF Rel Std Dev = 8.5% Curve Fit: Avg RF



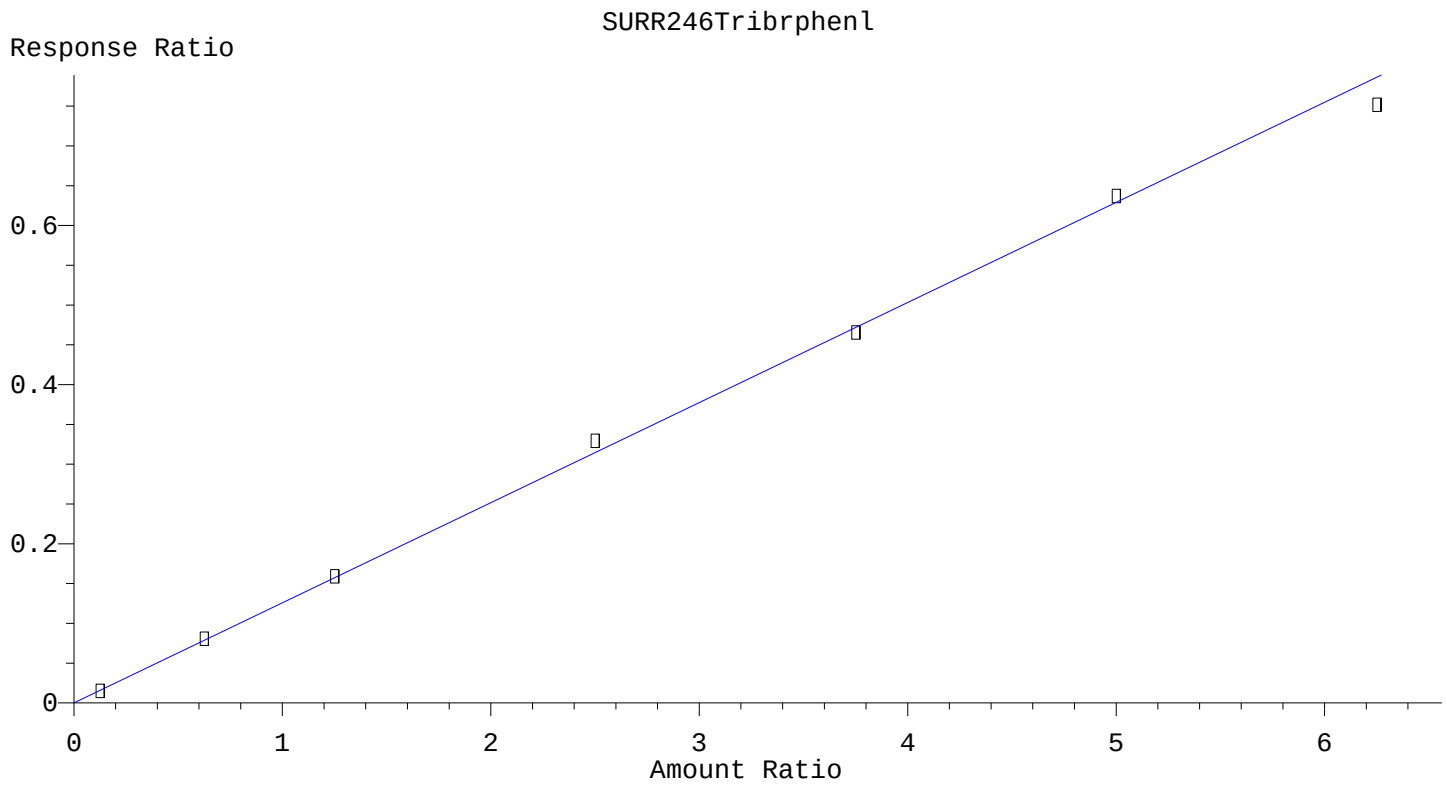
R = -6.73e-002 A*A + 8.49e-001 A + 5.86e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



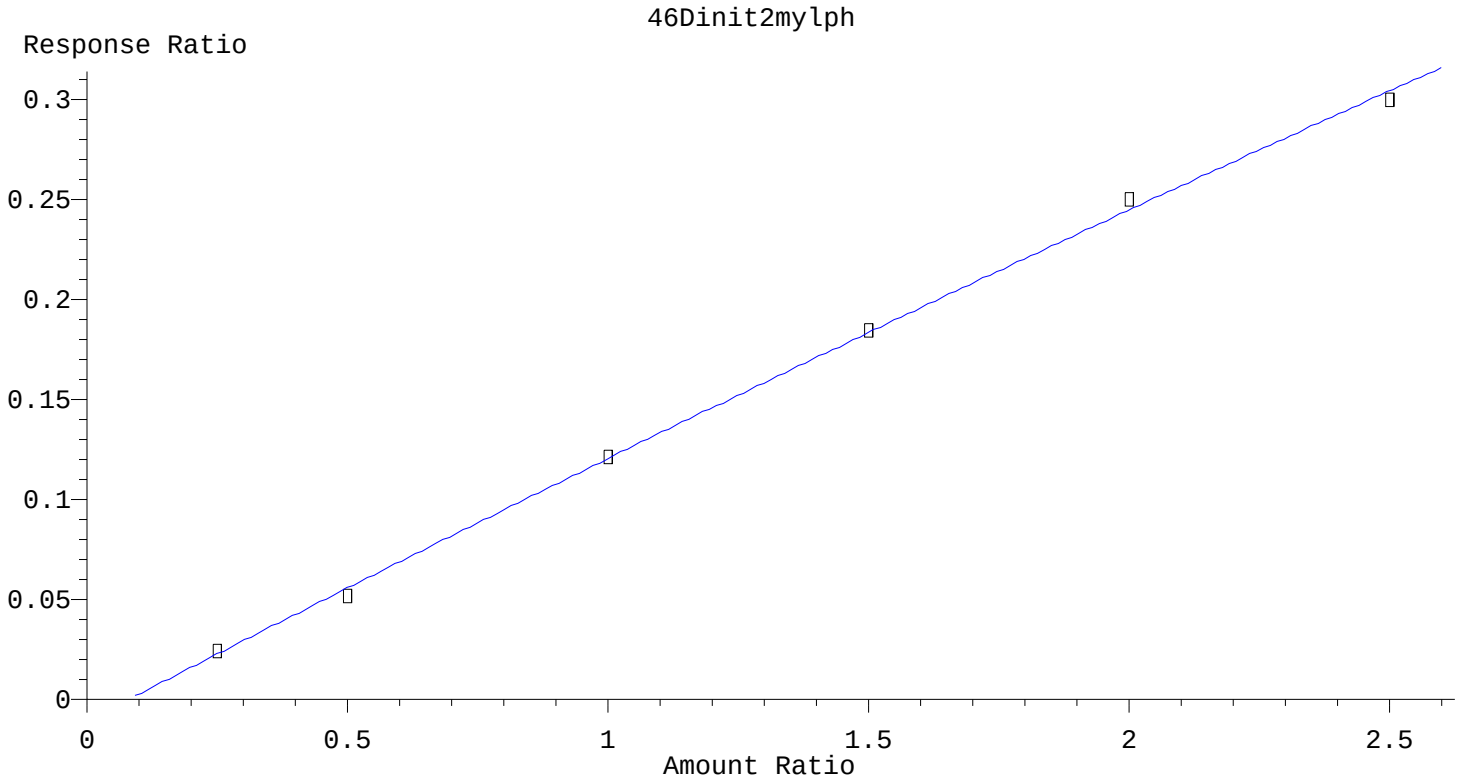
Resp Ratio = 1.74e+000 * Amt
RF Rel Std Dev = 4.9% Curve Fit: Avg RF



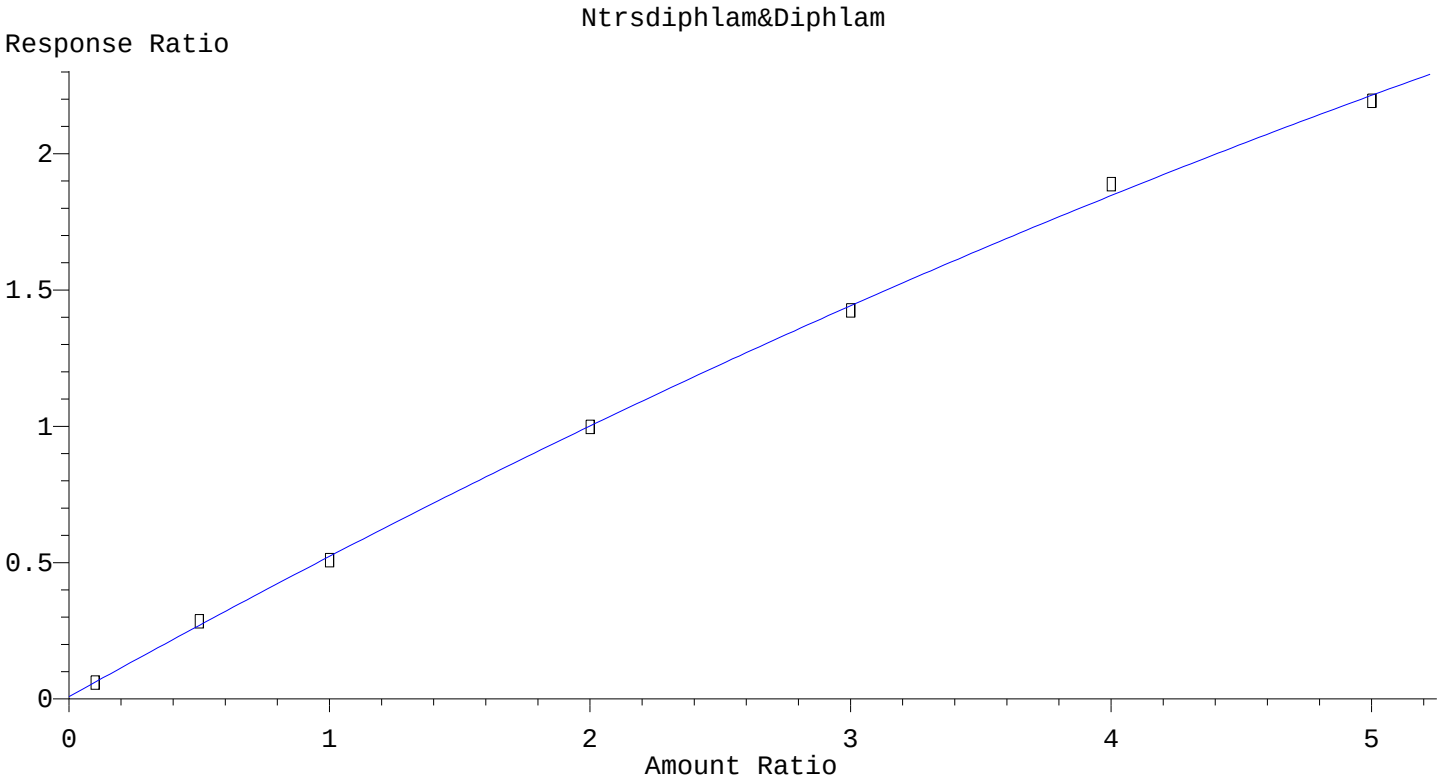
Resp Ratio = 3.33e-001 * Amt
RF Rel Std Dev = 5.2% Curve Fit: Avg RF



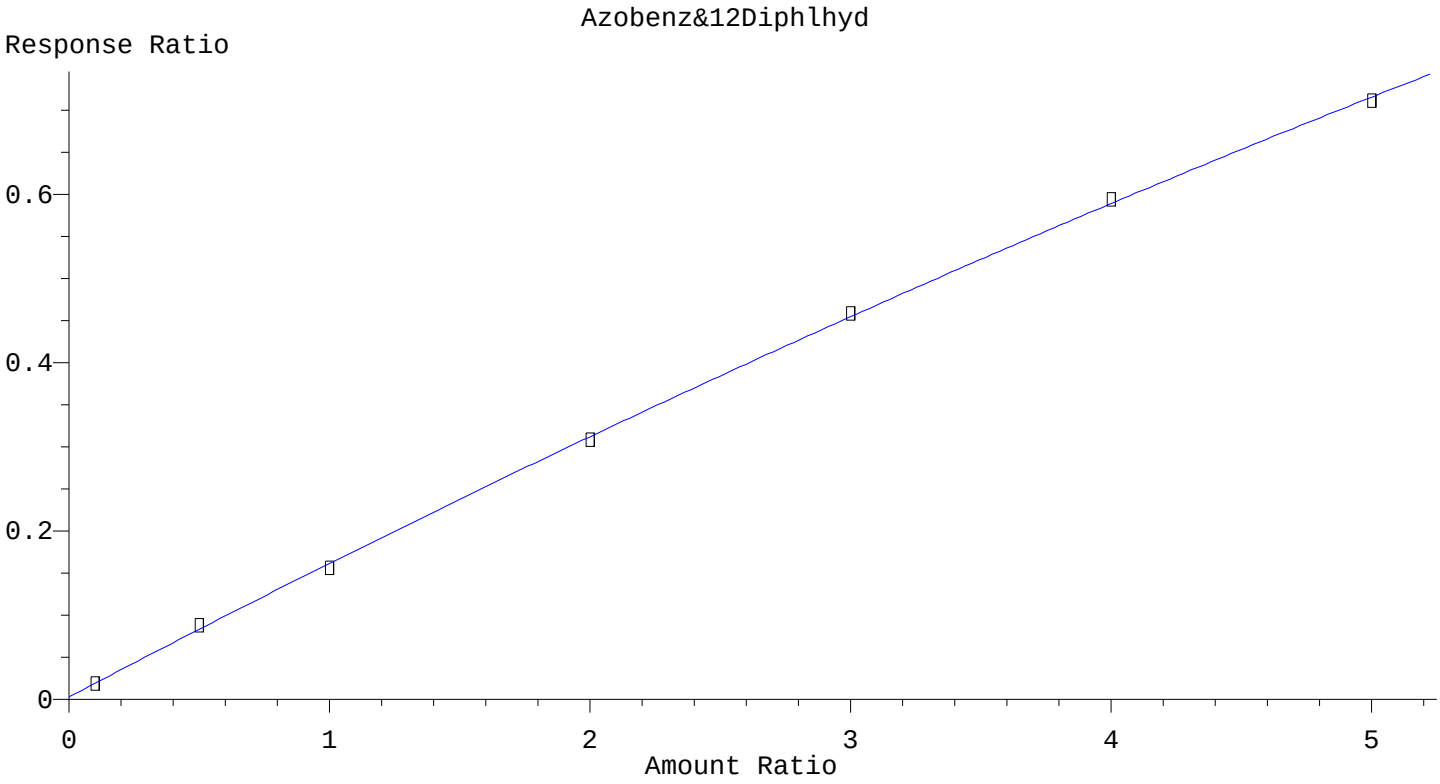
Resp Ratio = 1.26e-001 * Amt
RF Rel Std Dev = 3.3% Curve Fit: Avg RF



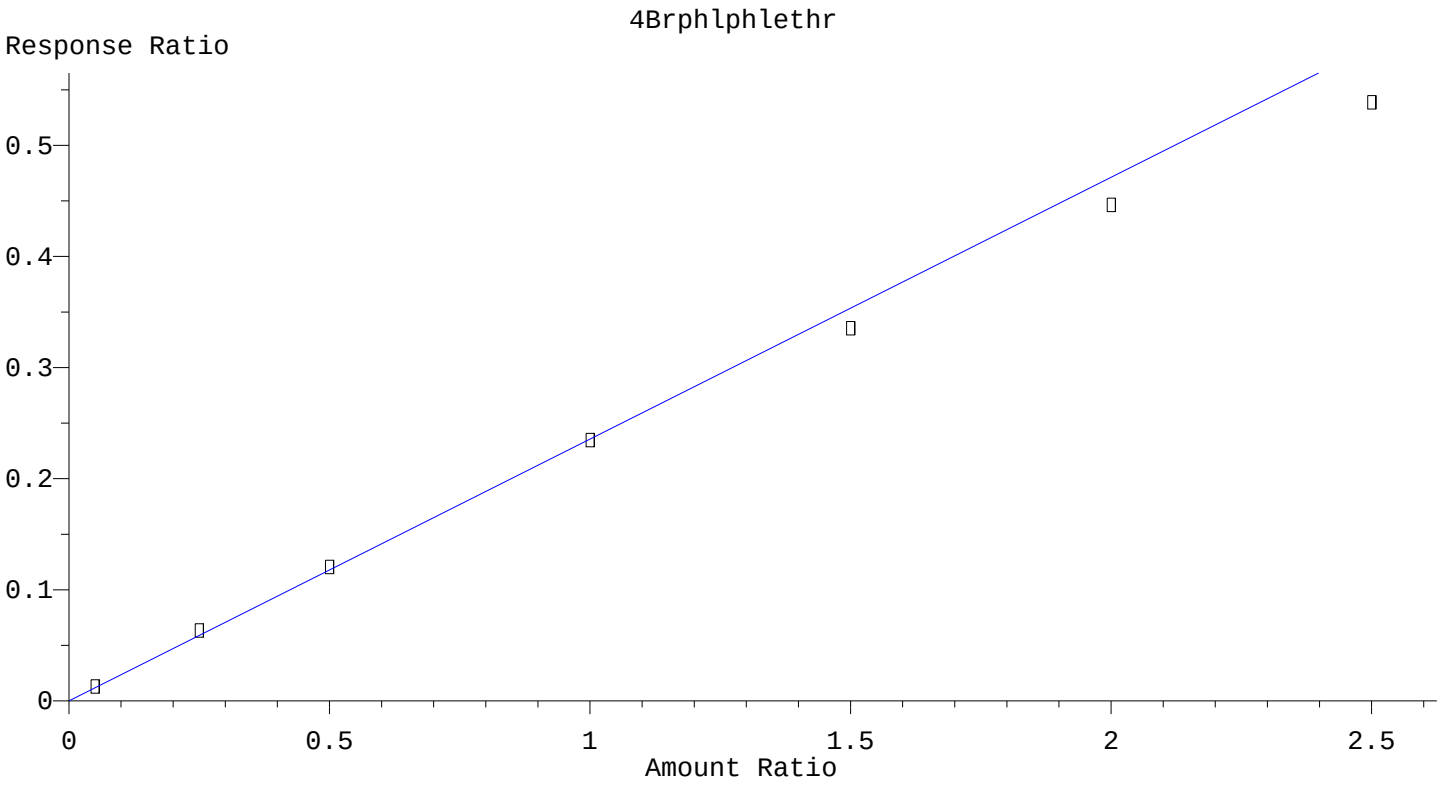
R = -3.47e-003 A*A + 1.35e-001 A - 1.08e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)



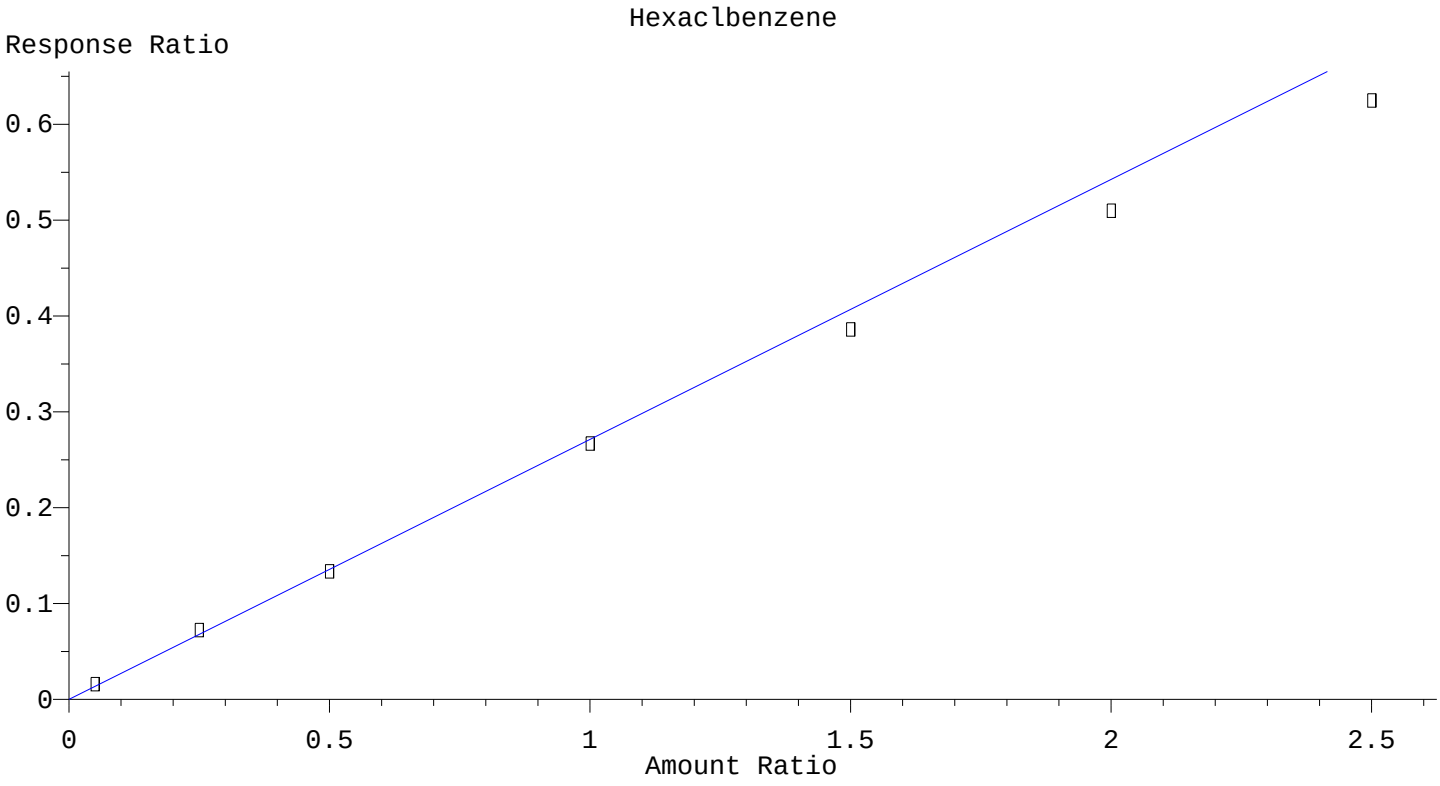
R = -1.84e-002 A*A + 5.33e-001 A + 7.88e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)



R = -4.01e-003 A*A + 1.63e-001 A + 2.97e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)

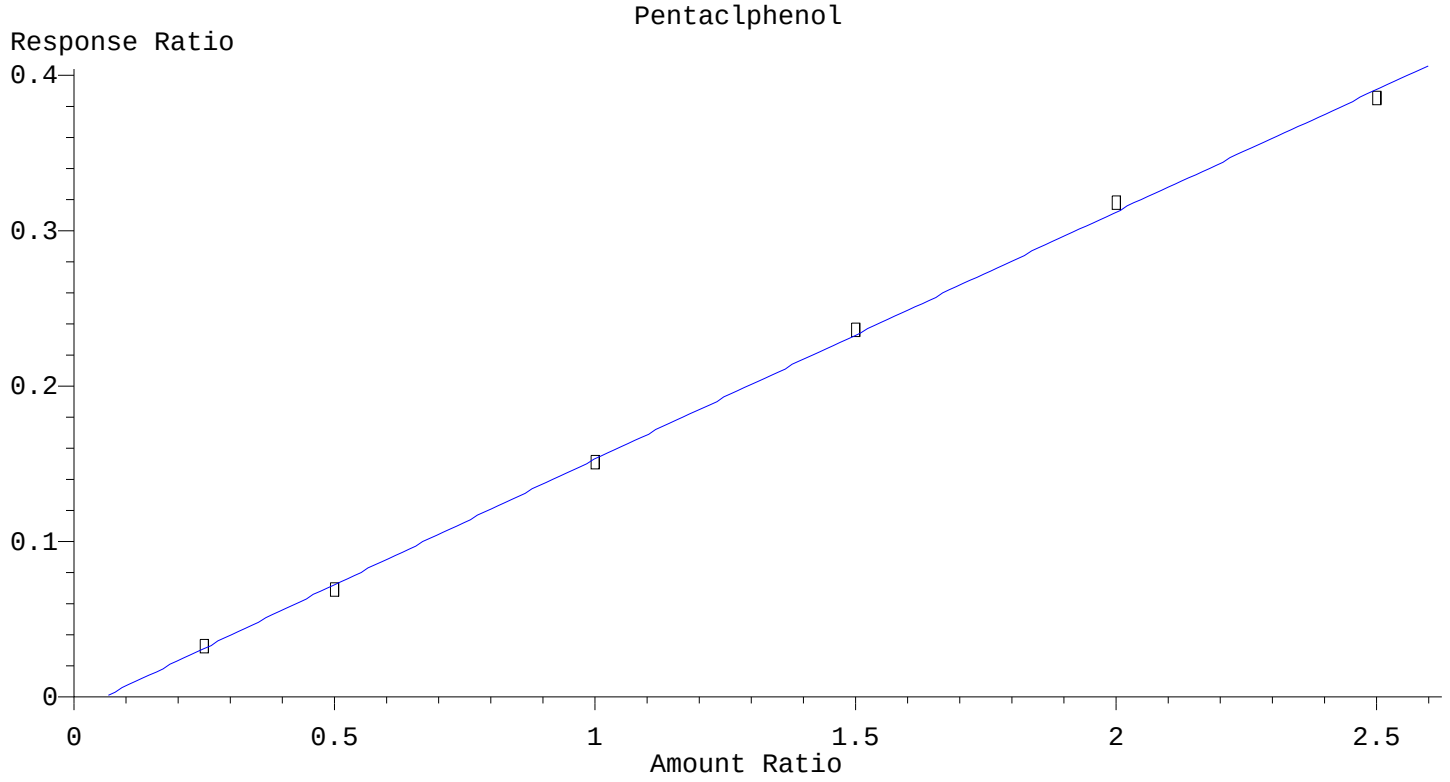


Resp Ratio = 2.36e-001 * Amt
RF Rel Std Dev = 7.0% Curve Fit: Avg RF



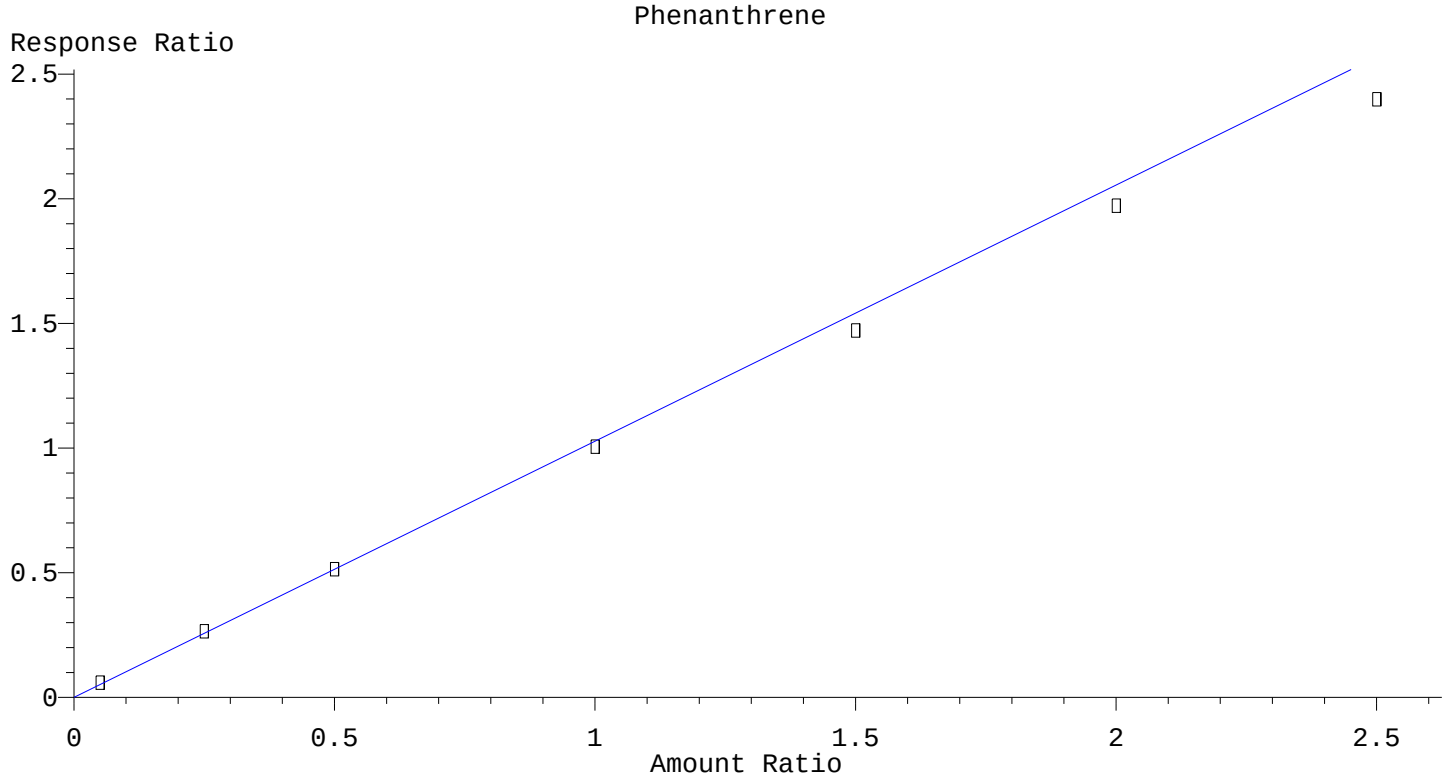
Resp Ratio = 2.72e-001 * Amt
RF Rel Std Dev = 8.6% Curve Fit: Avg RF

Pentaclphenol

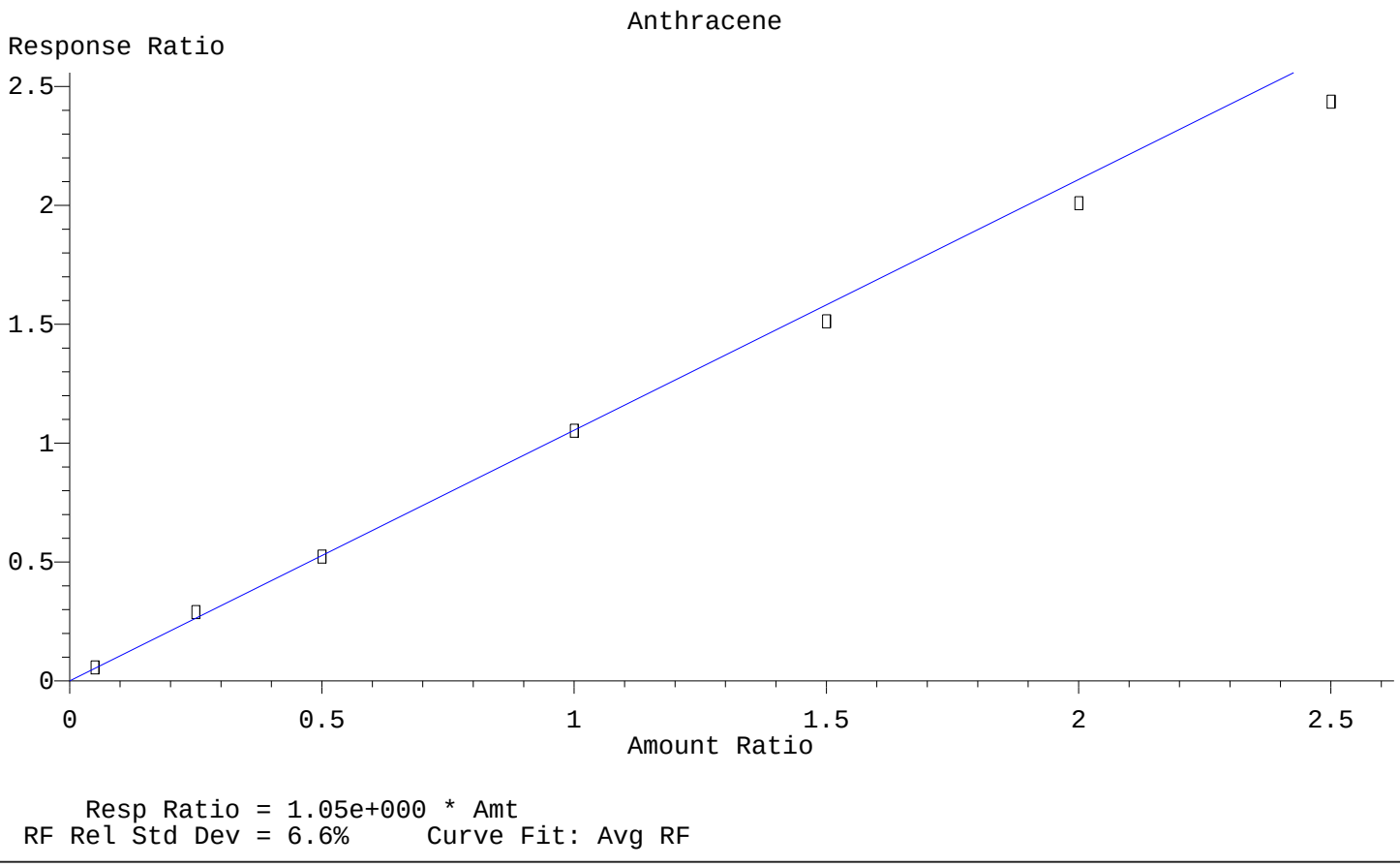


R = -1.60e-003 A*A + 1.64e-001 A - 9.50e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)

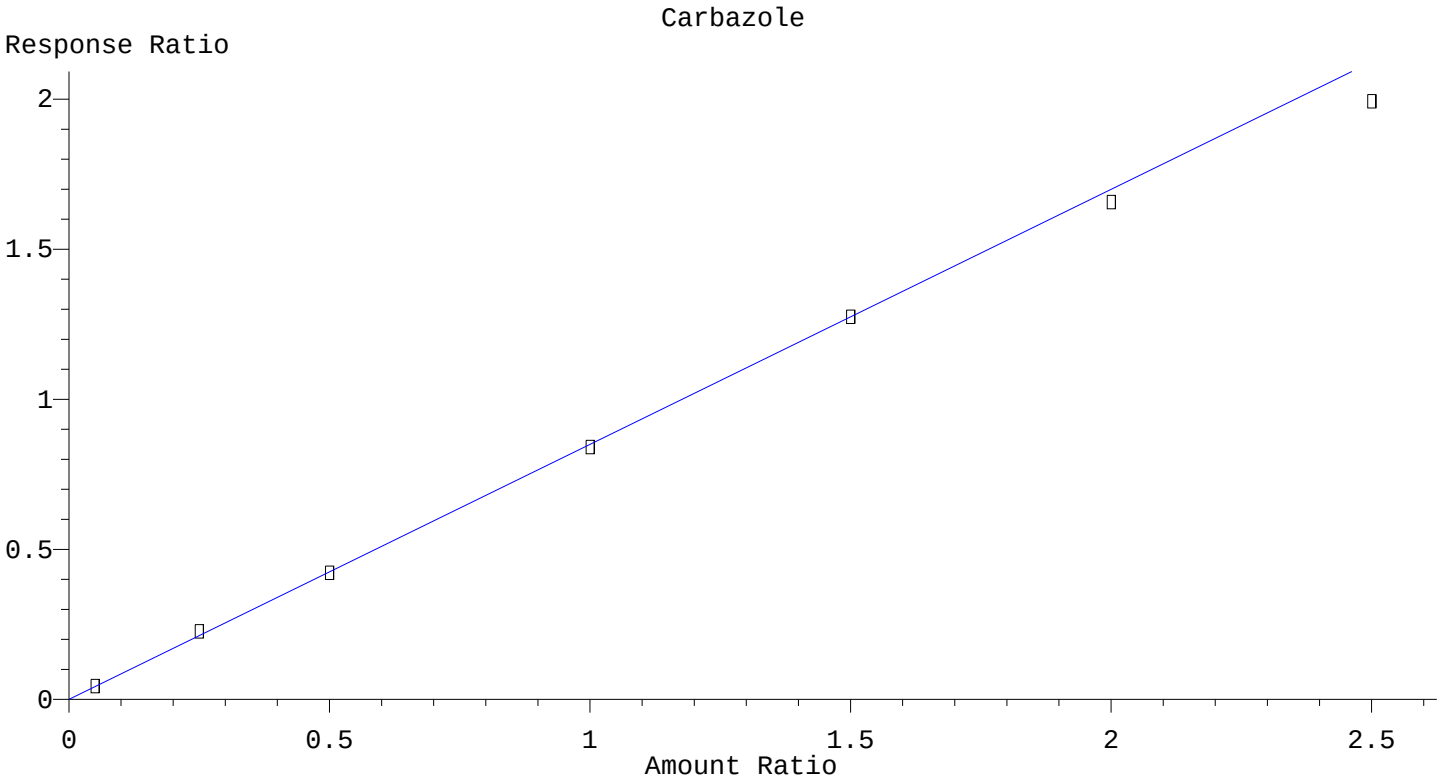
Phenanthrene



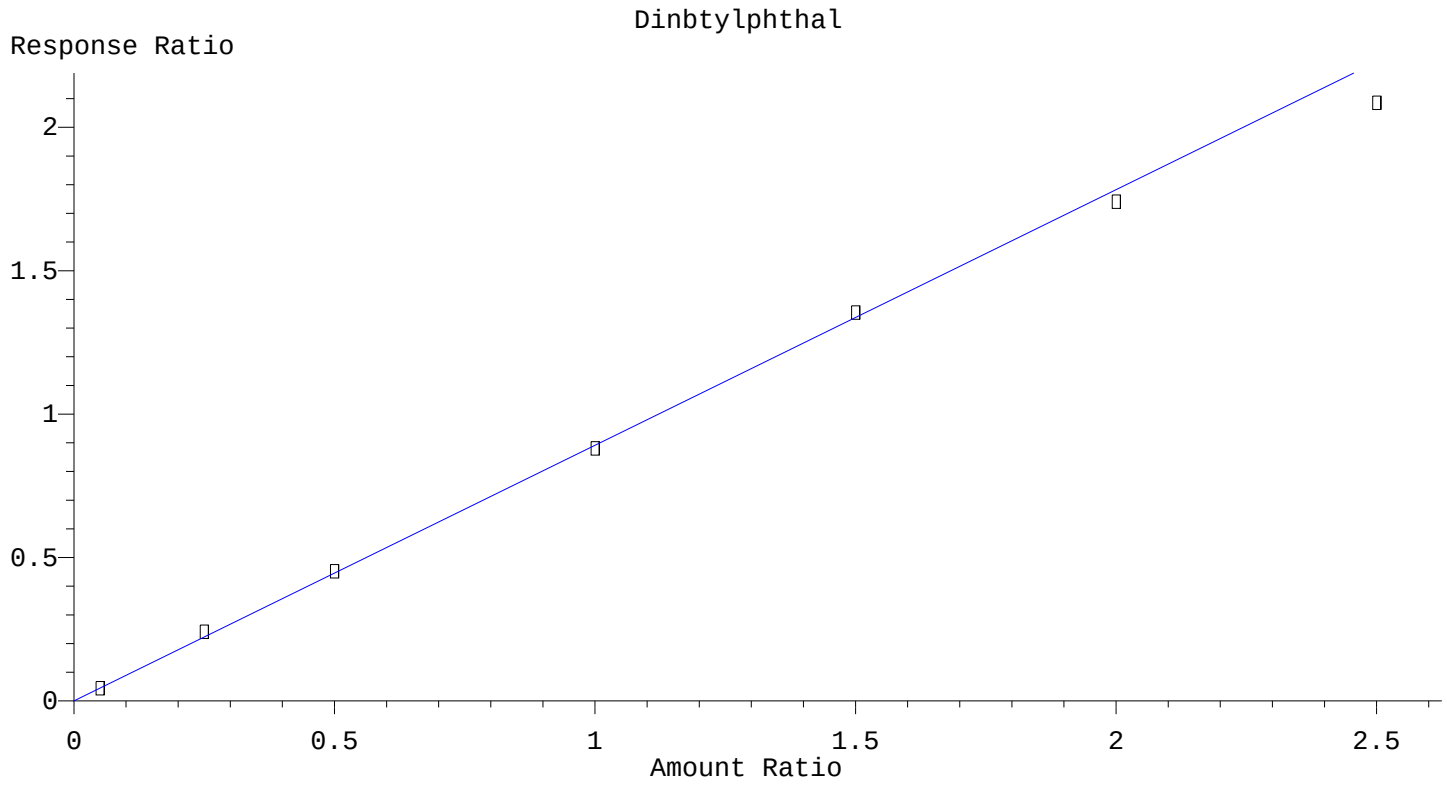
Resp Ratio = 1.03e+000 * Amt
RF Rel Std Dev = 7.1% Curve Fit: Avg RF



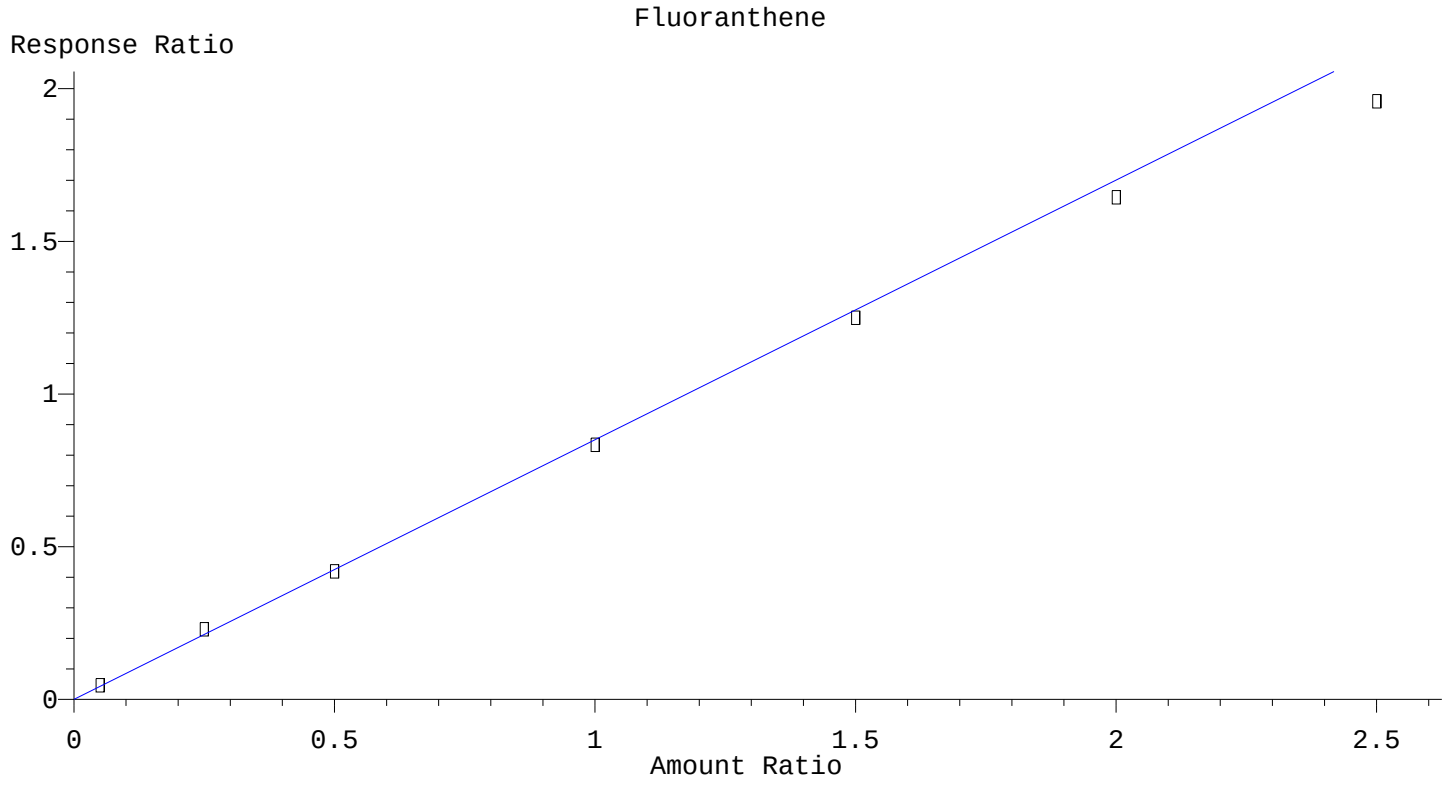
Resp Ratio = 1.05e+000 * Amt
RF Rel Std Dev = 6.6% Curve Fit: Avg RF



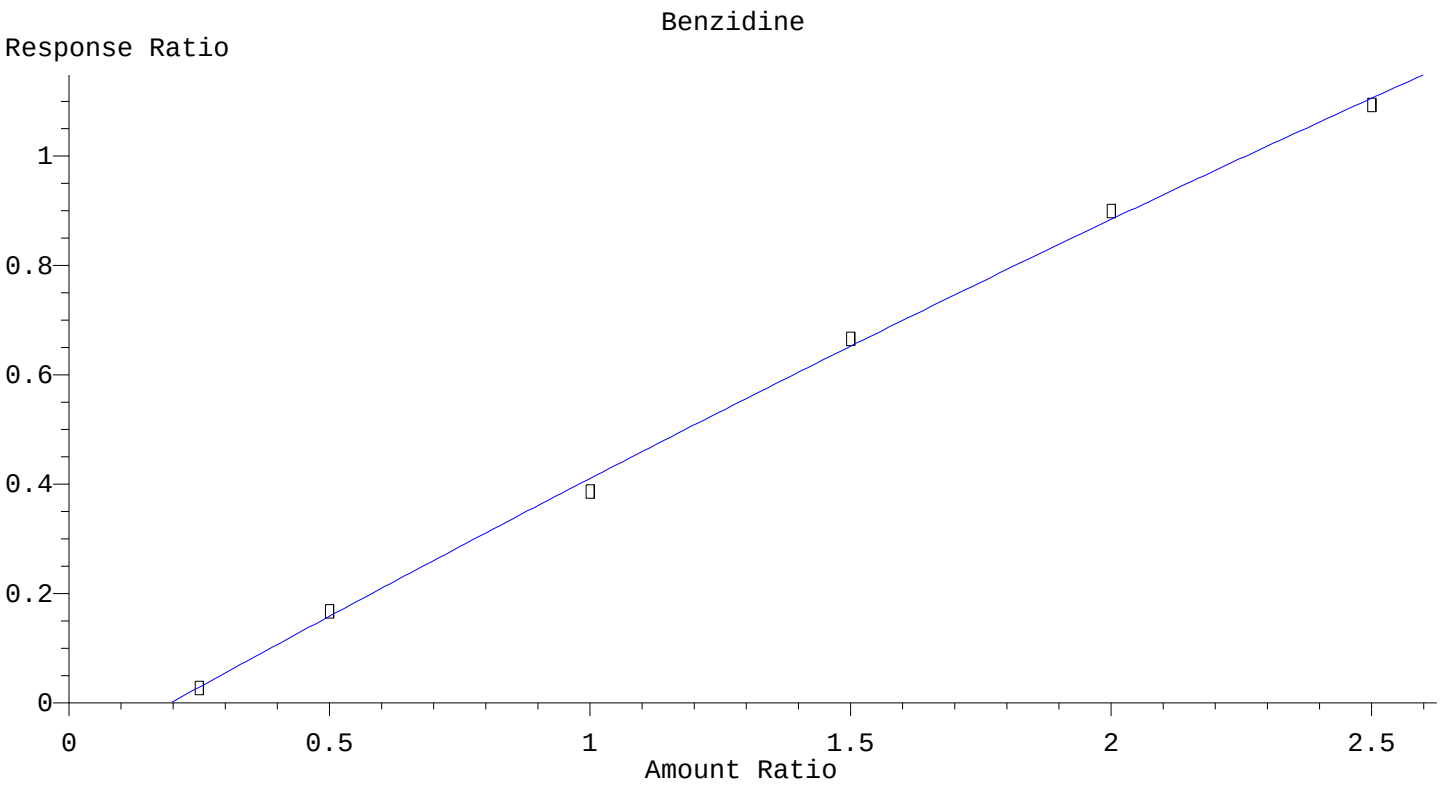
Resp Ratio = 8.50e-001 * Amt
RF Rel Std Dev = 4.2% Curve Fit: Avg RF



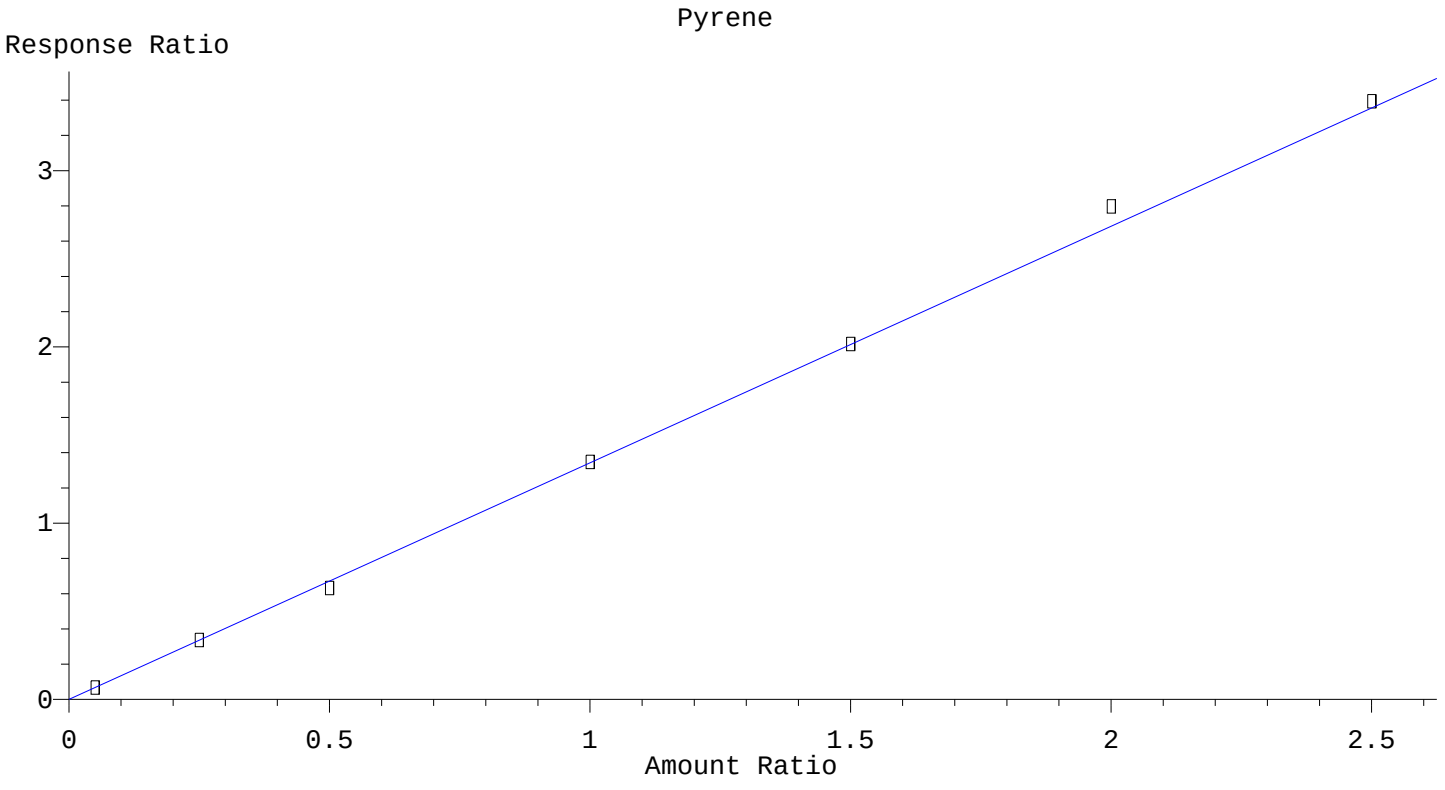
Resp Ratio = 8.92e-001 * Amt
RF Rel Std Dev = 4.4% Curve Fit: Avg RF



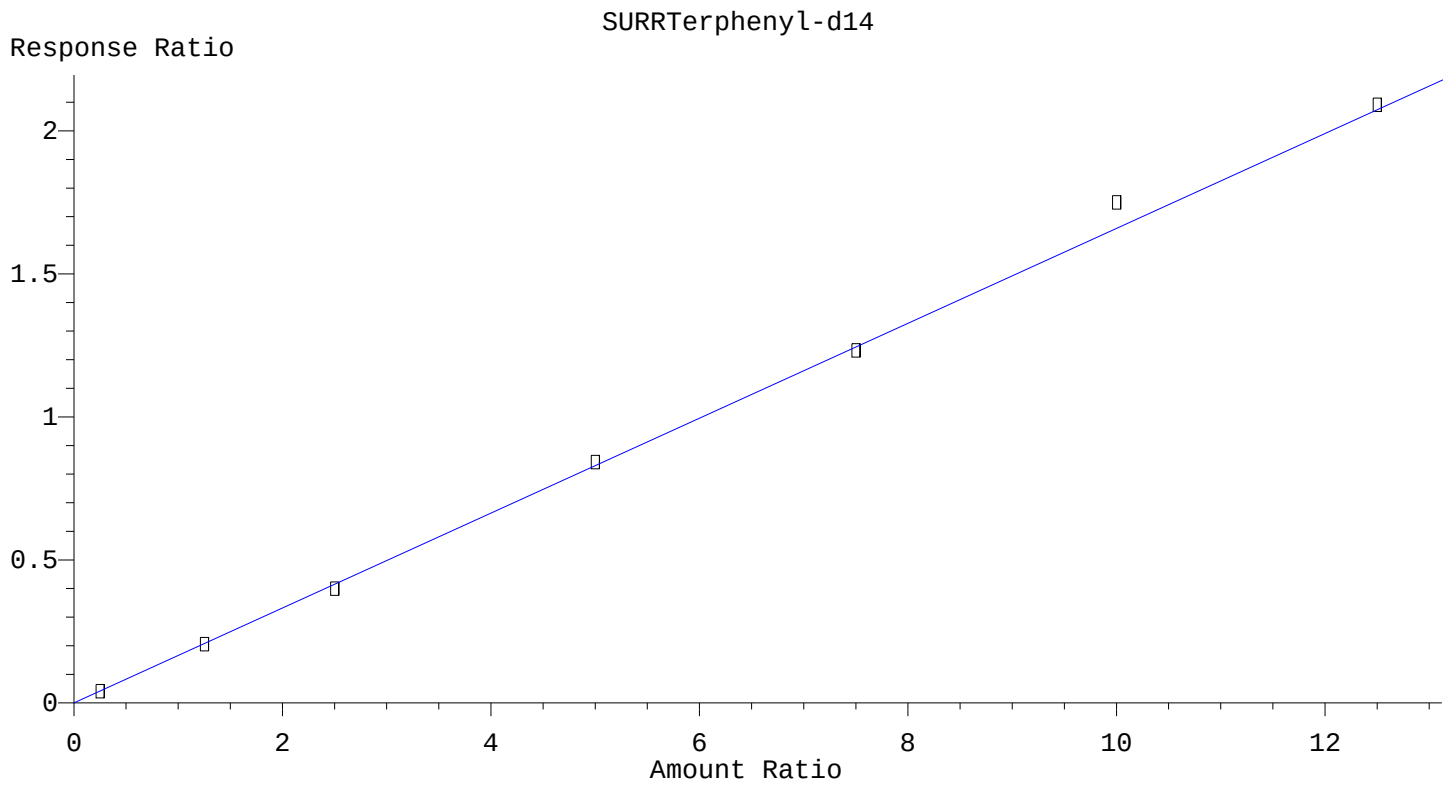
Resp Ratio = 8.51e-001 * Amt
RF Rel Std Dev = 6.1% Curve Fit: Avg RF



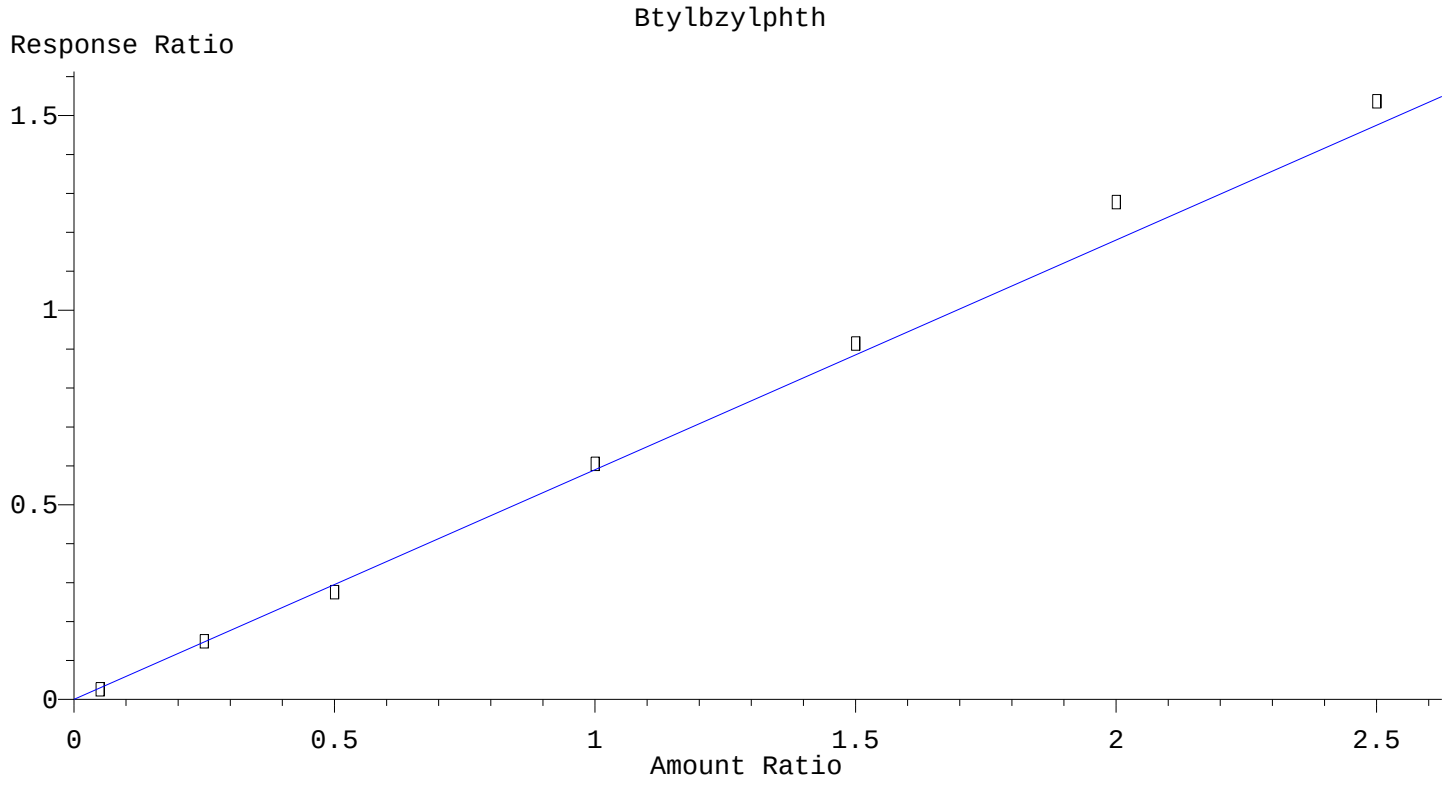
R = -2.01e-002 A*A + 5.34e-001 A - 1.04e-001
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)



Resp Ratio = 1.34e+000 * Amt
RF Rel Std Dev = 3.0% Curve Fit: Avg RF

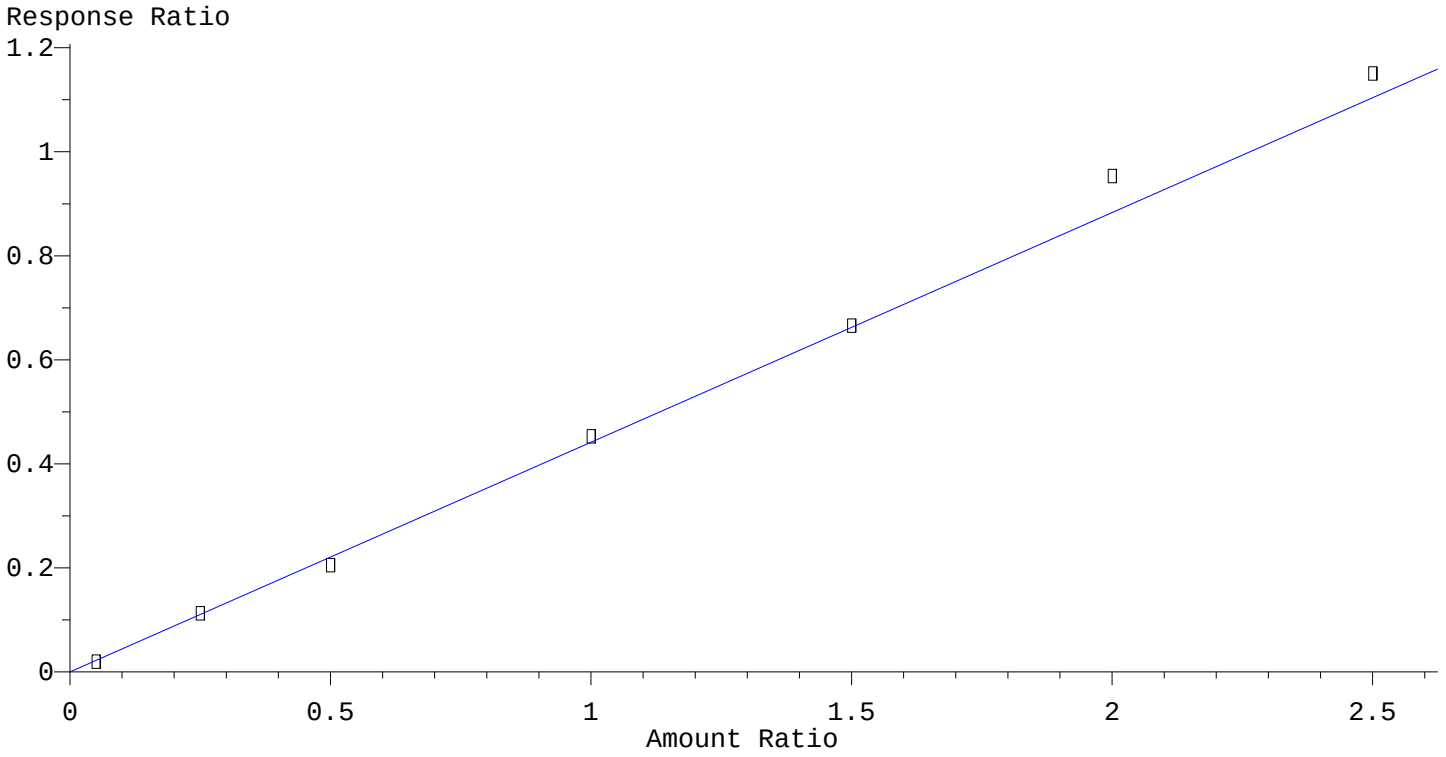


Resp Ratio = 1.66e-001 * Amt
RF Rel Std Dev = 2.9% Curve Fit: Avg RF



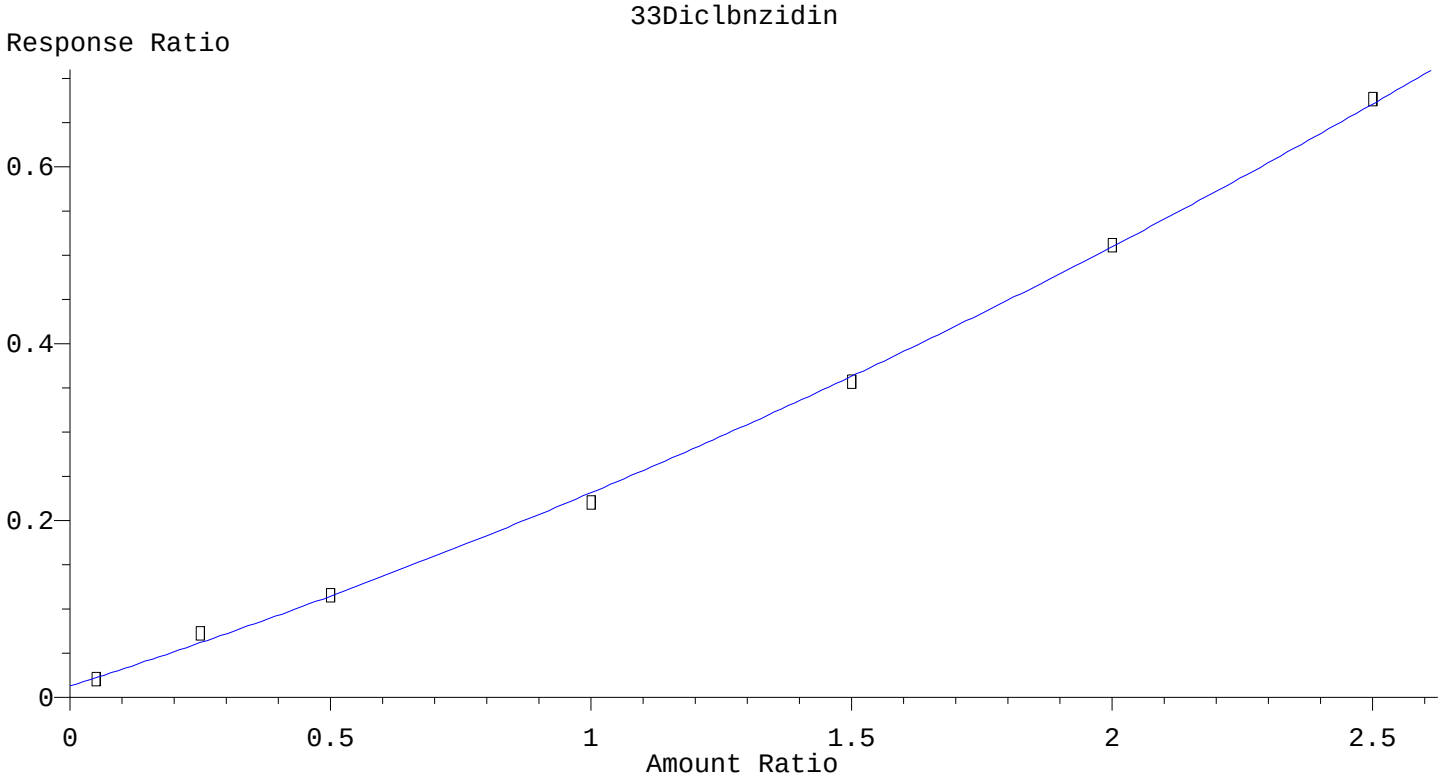
Resp Ratio = 5.90e-001 * Amt
RF Rel Std Dev = 7.2% Curve Fit: Avg RF

bis2Ethlhxlad



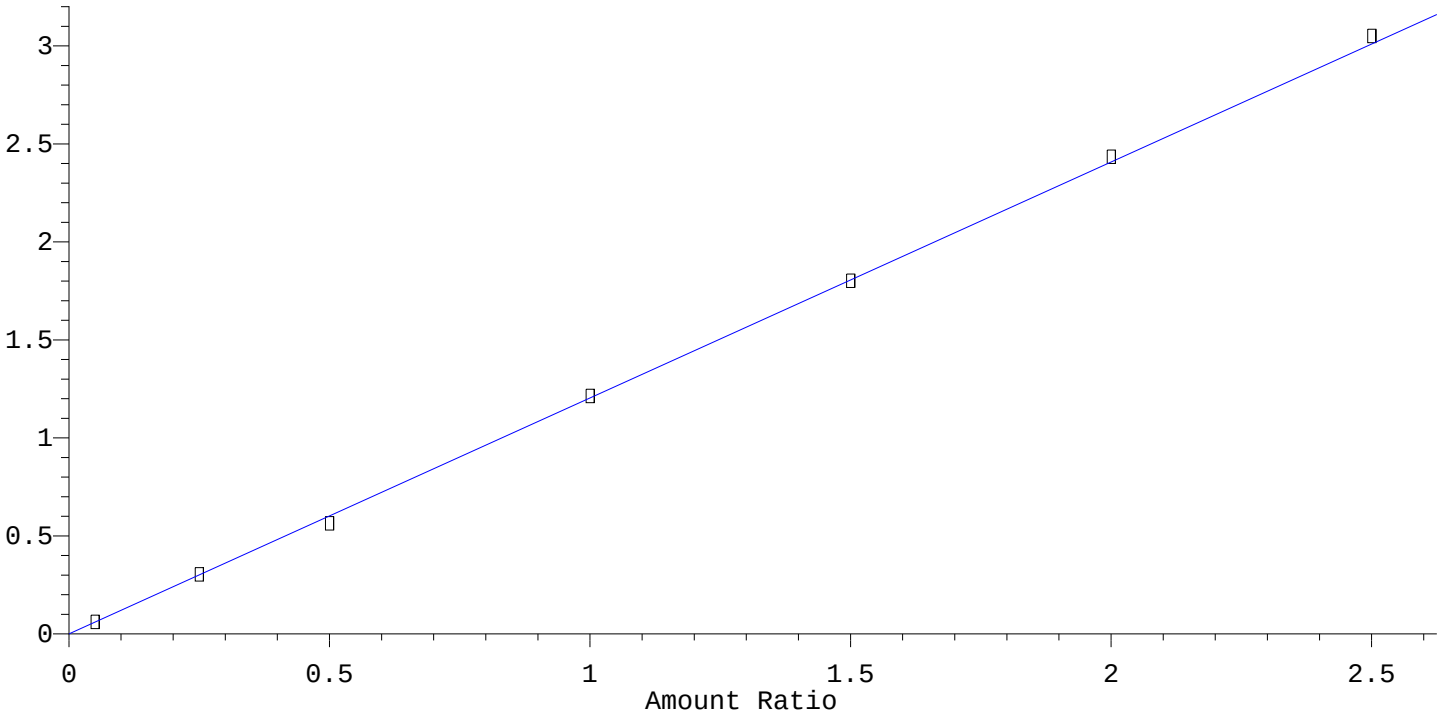
Resp Ratio = 4.41e-001 * Amt
RF Rel Std Dev = 6.4% Curve Fit: Avg RF

33Diclbnzidin



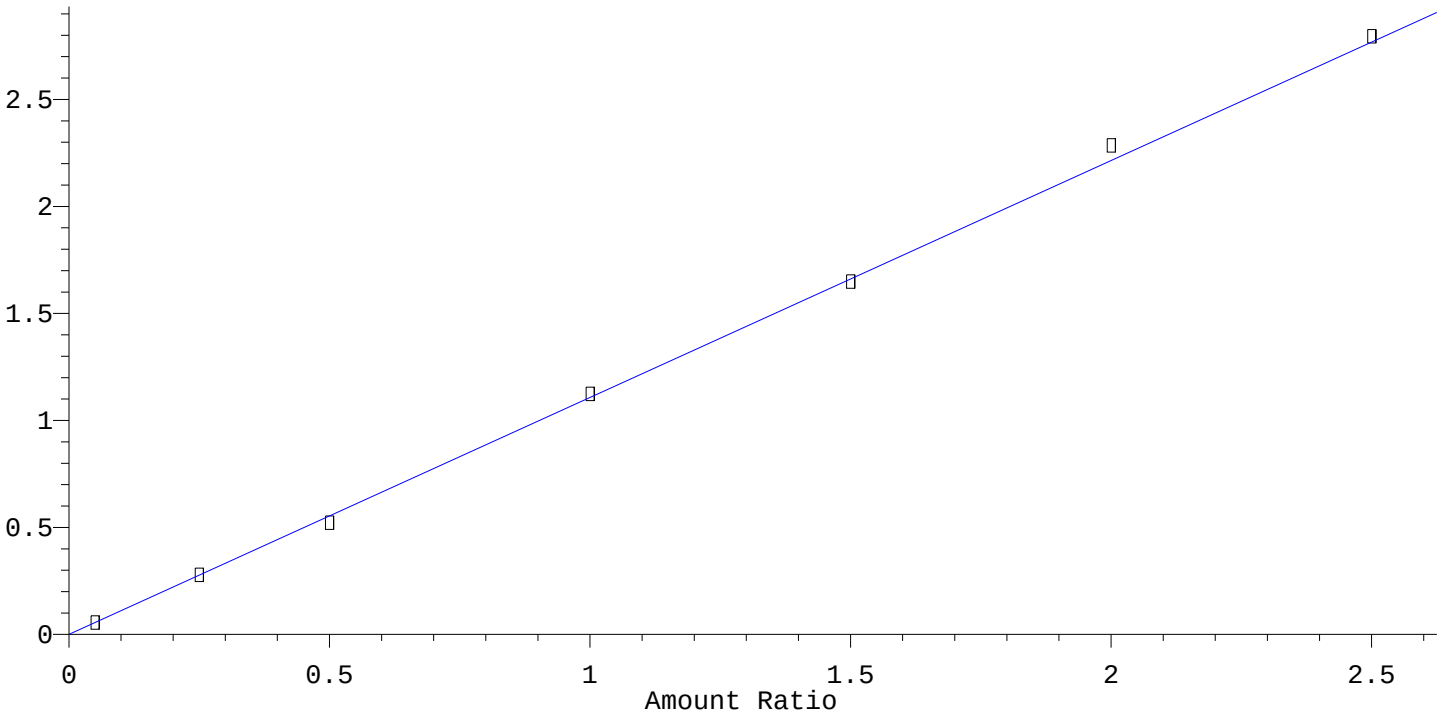
R = 2.98e-002 A*A + 1.89e-001 A + 1.27e-002
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a)

B[a]anthracen



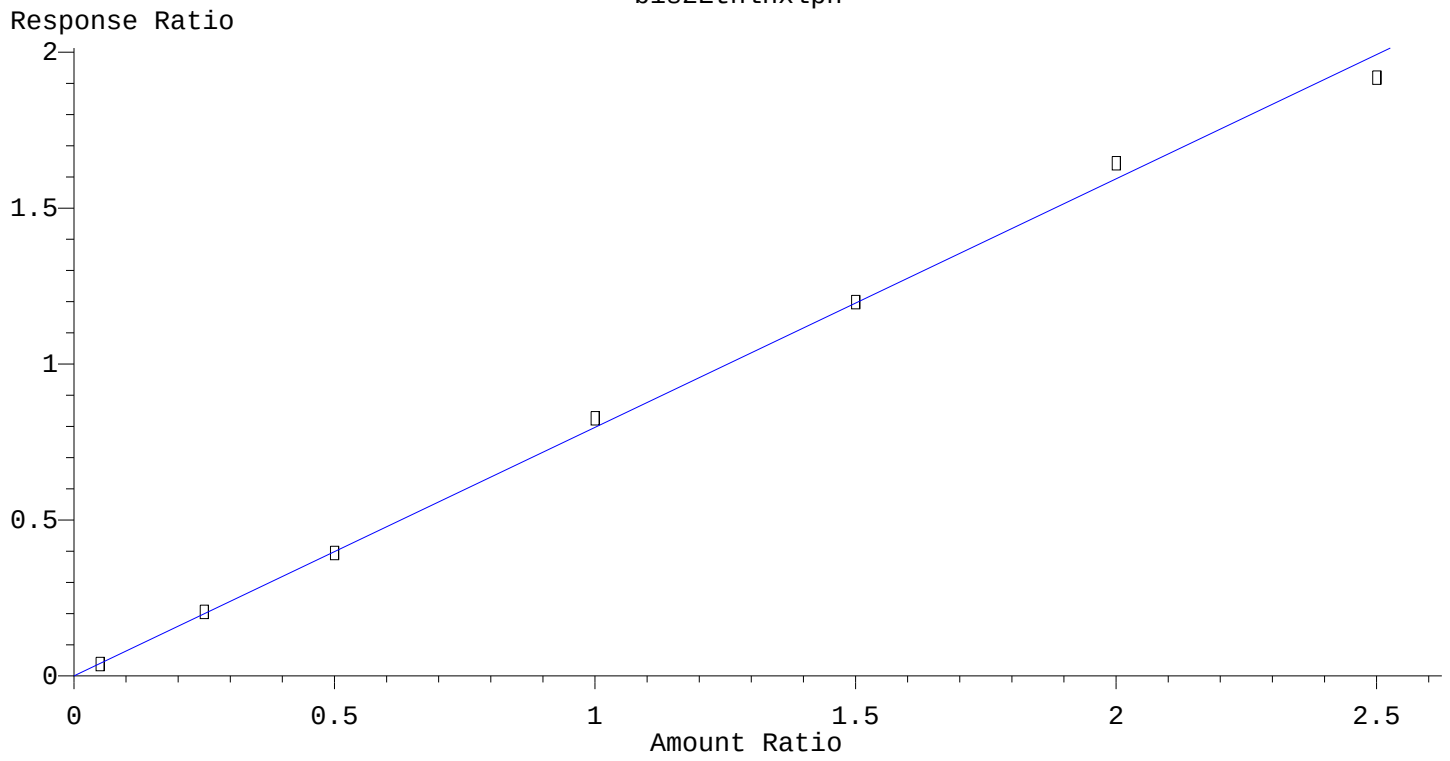
Resp Ratio = 1.20e+000 * Amt
RF Rel Std Dev = 2.8% Curve Fit: Avg RF

Chrysene



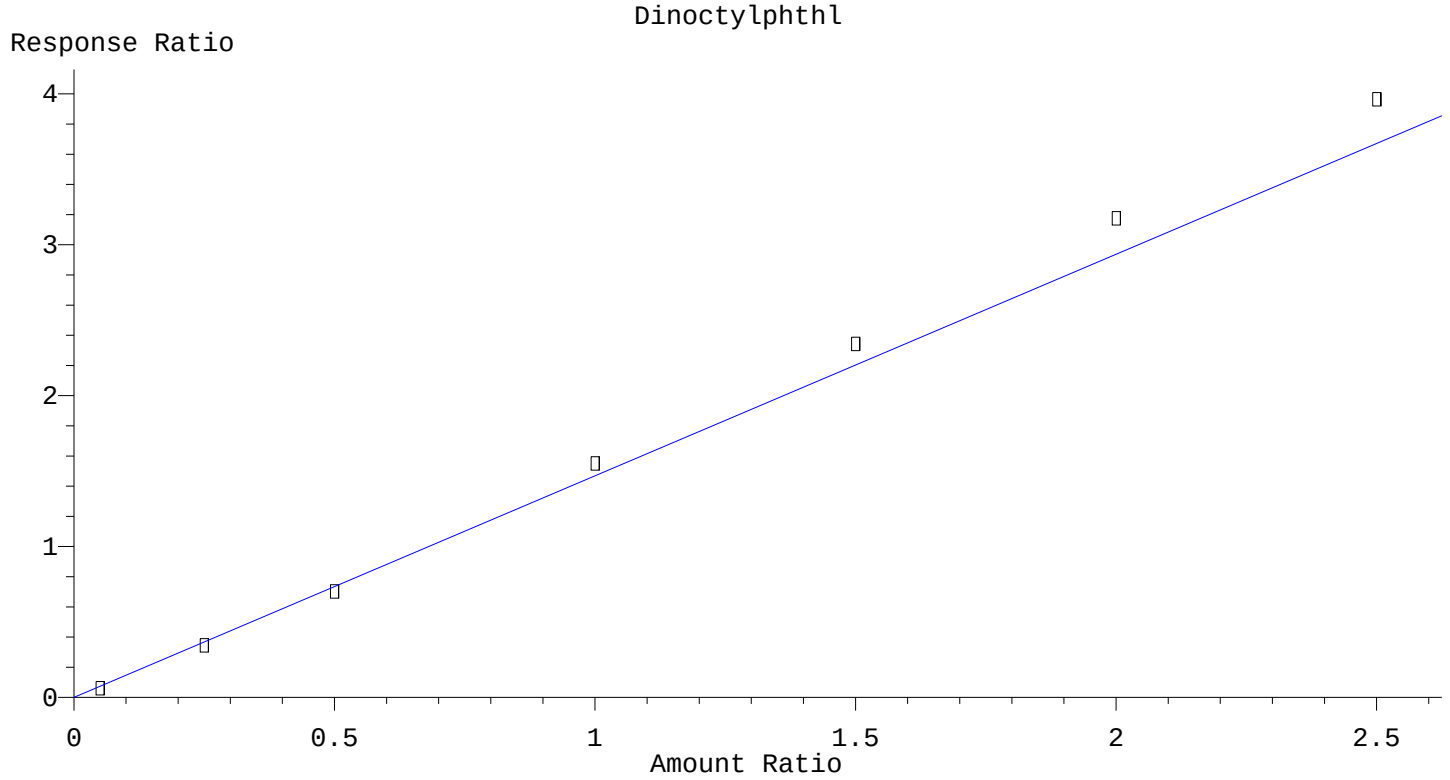
Resp Ratio = 1.11e+000 * Amt
RF Rel Std Dev = 2.8% Curve Fit: Avg RF

bis2Ethlhxlph

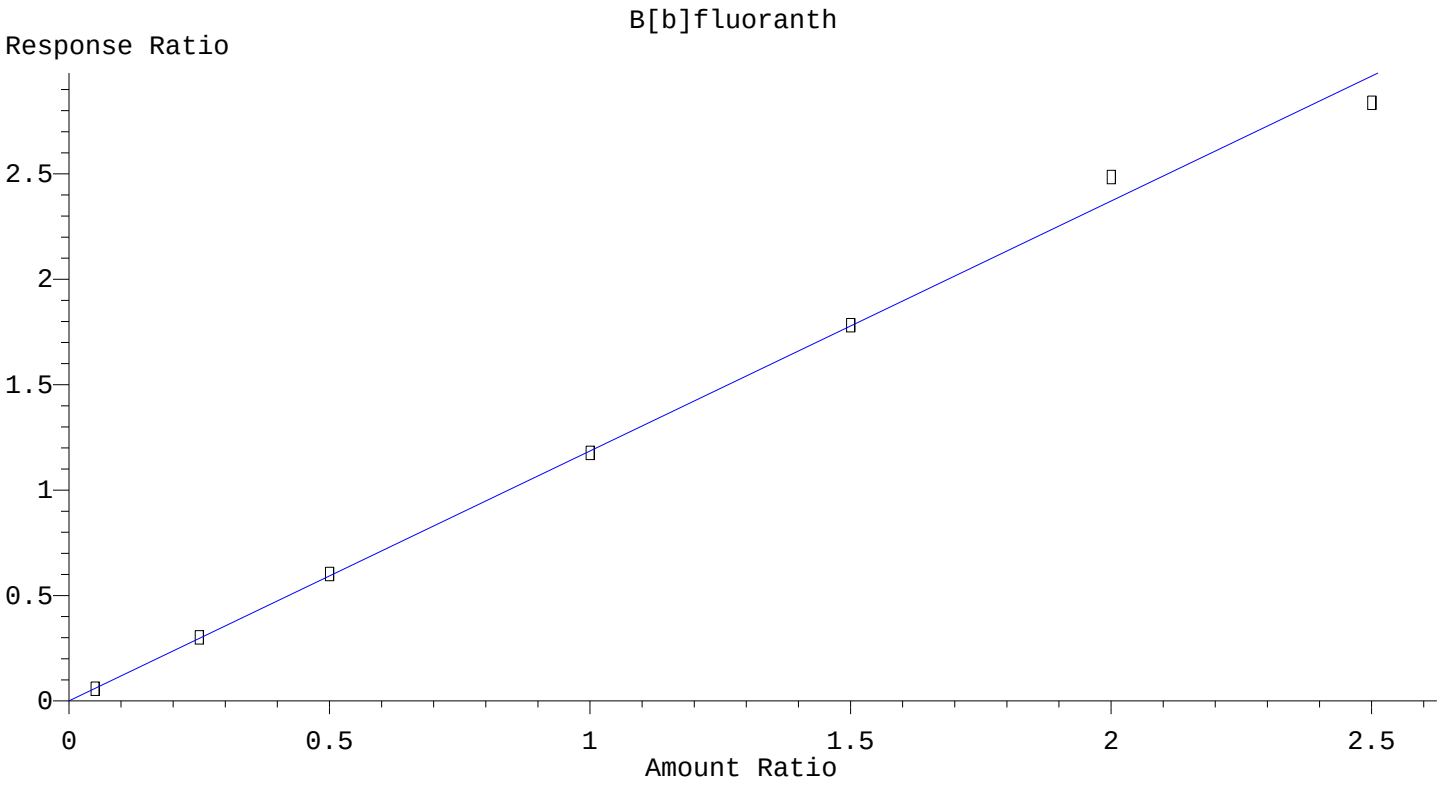


Resp Ratio = 7.97e-001 * Amt
RF Rel Std Dev = 3.4% Curve Fit: Avg RF

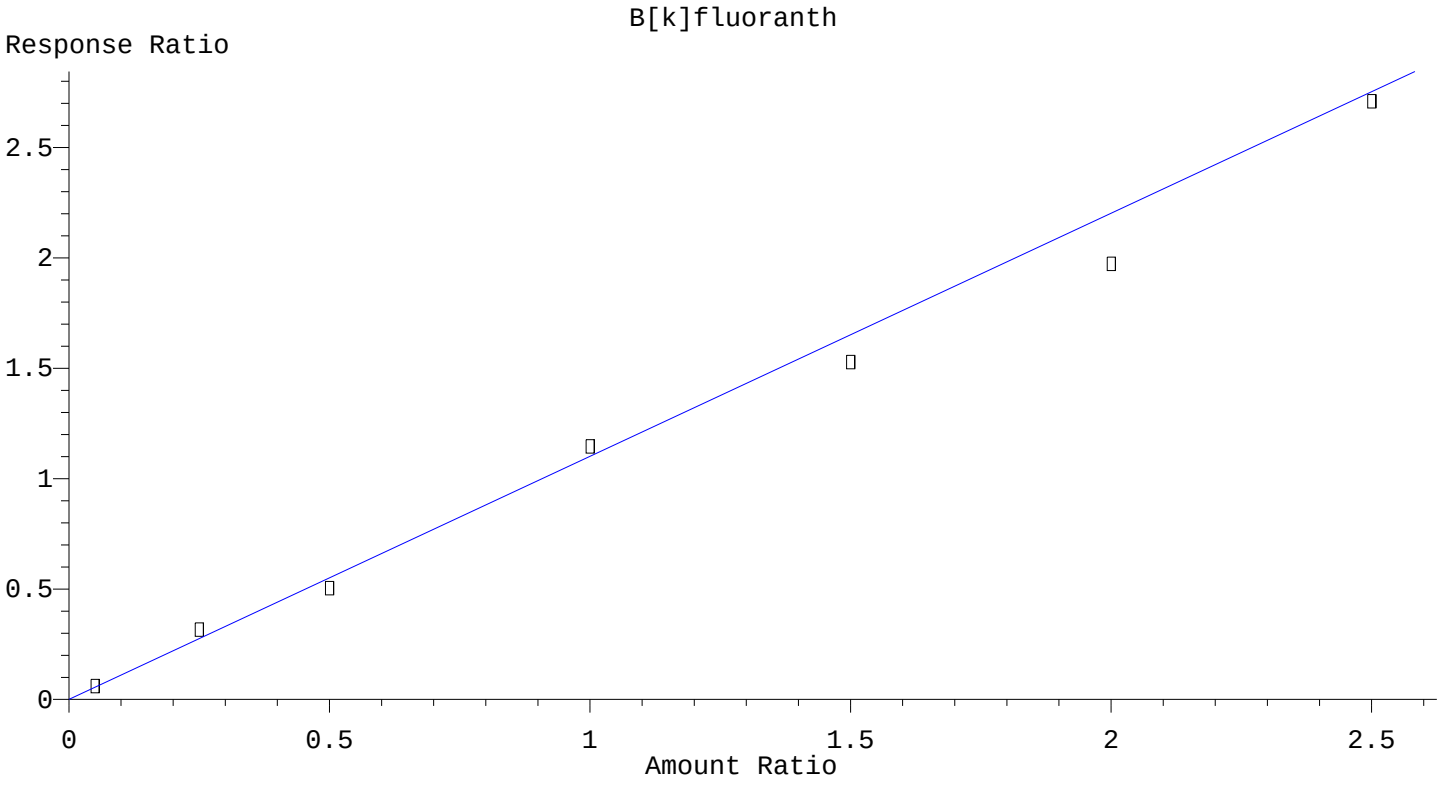
Dinoctylphthl



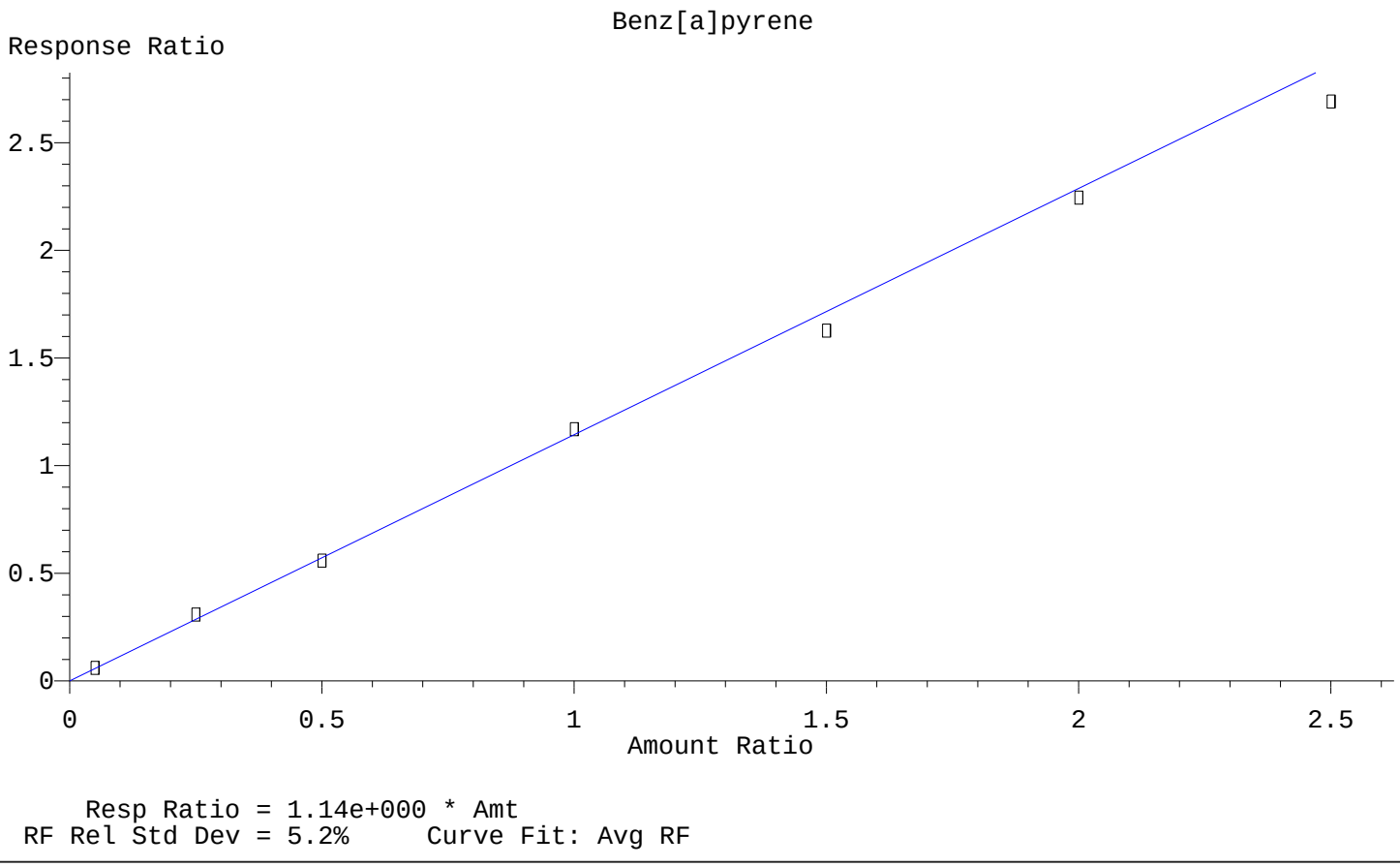
Resp Ratio = 1.47e+000 * Amt
RF Rel Std Dev = 9.7% Curve Fit: Avg RF



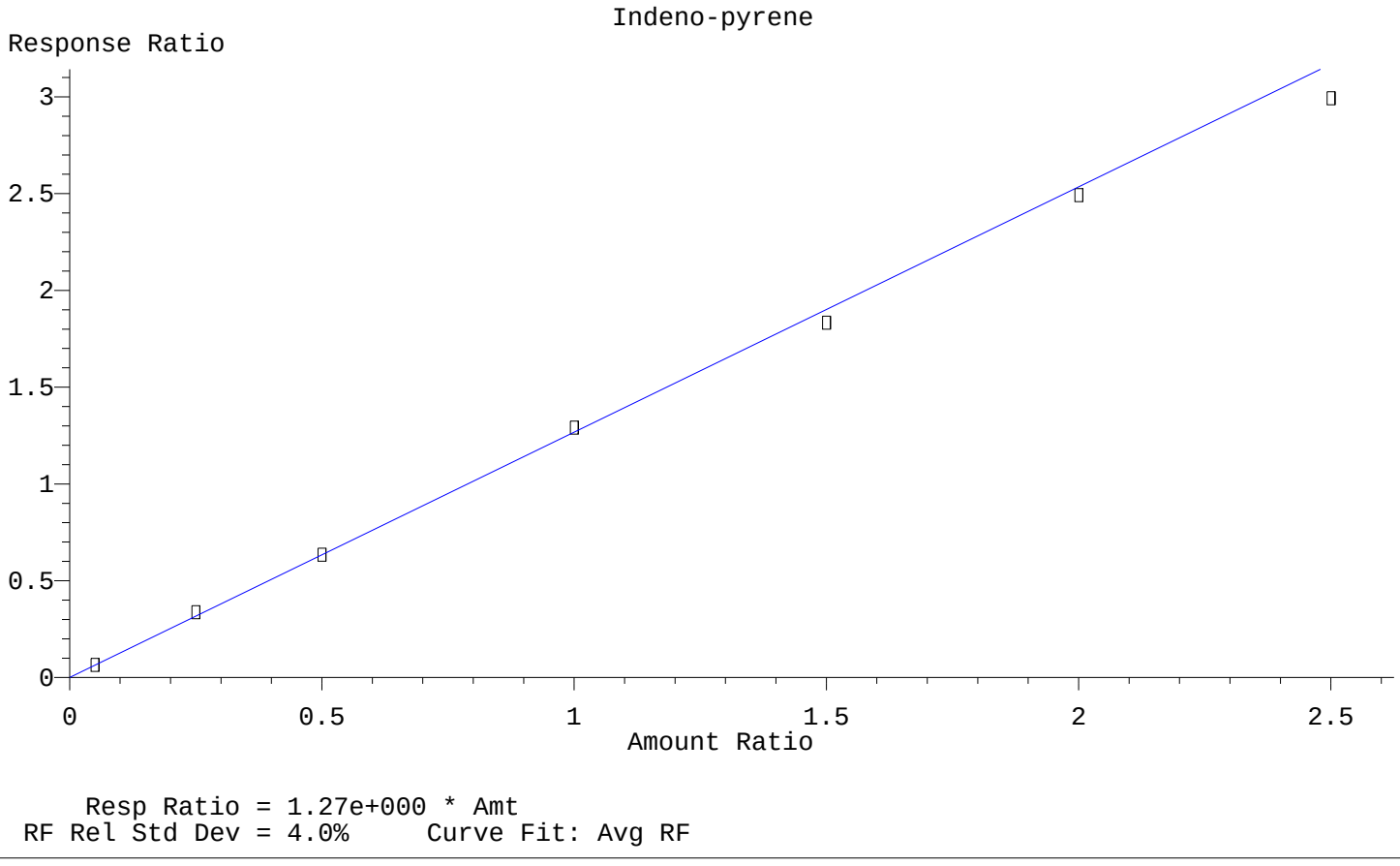
Resp Ratio = 1.19e+000 * Amt
RF Rel Std Dev = 3.1% Curve Fit: Avg RF



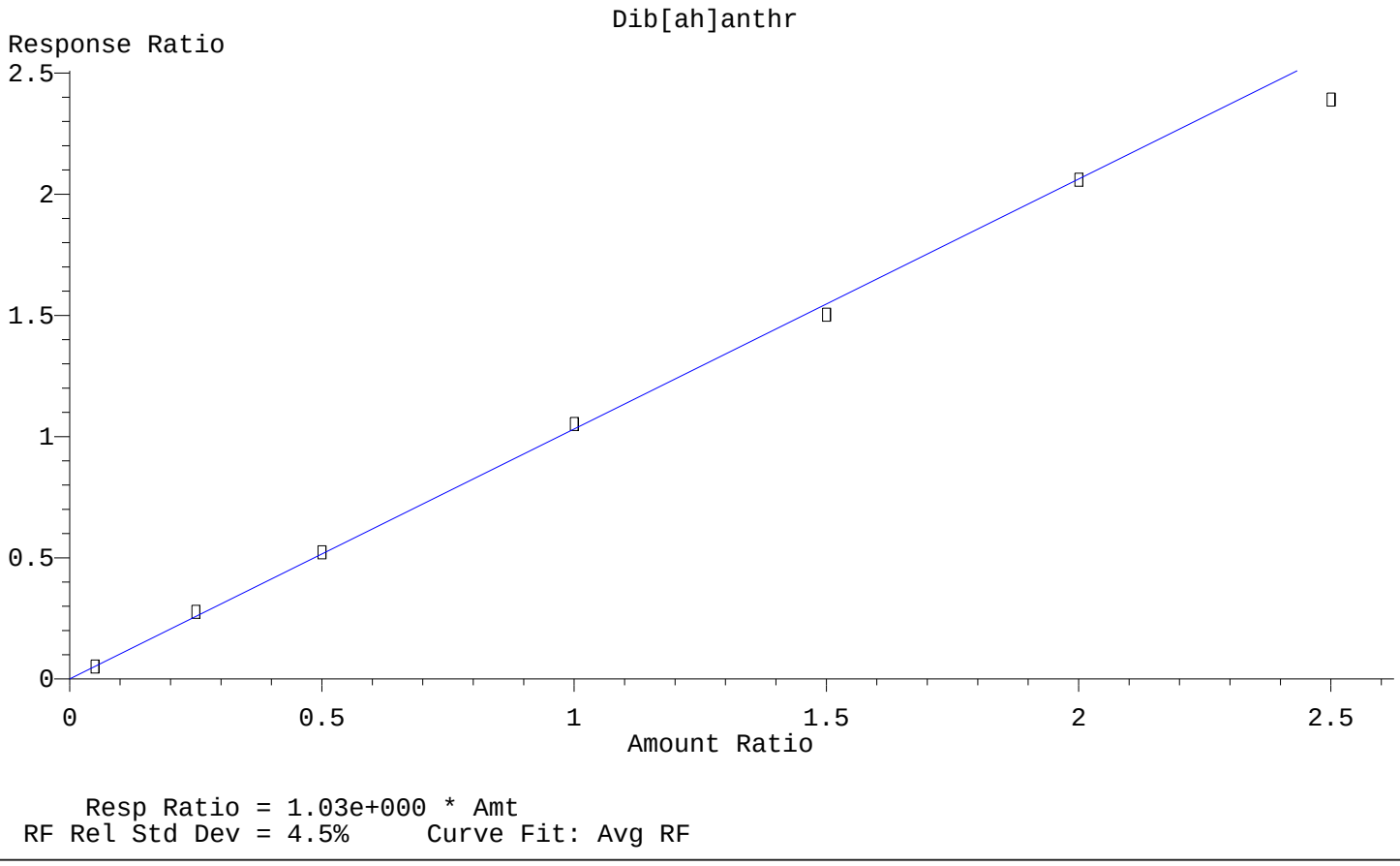
Resp Ratio = 1.10e+000 * Amt
RF Rel Std Dev = 9.7% Curve Fit: Avg RF



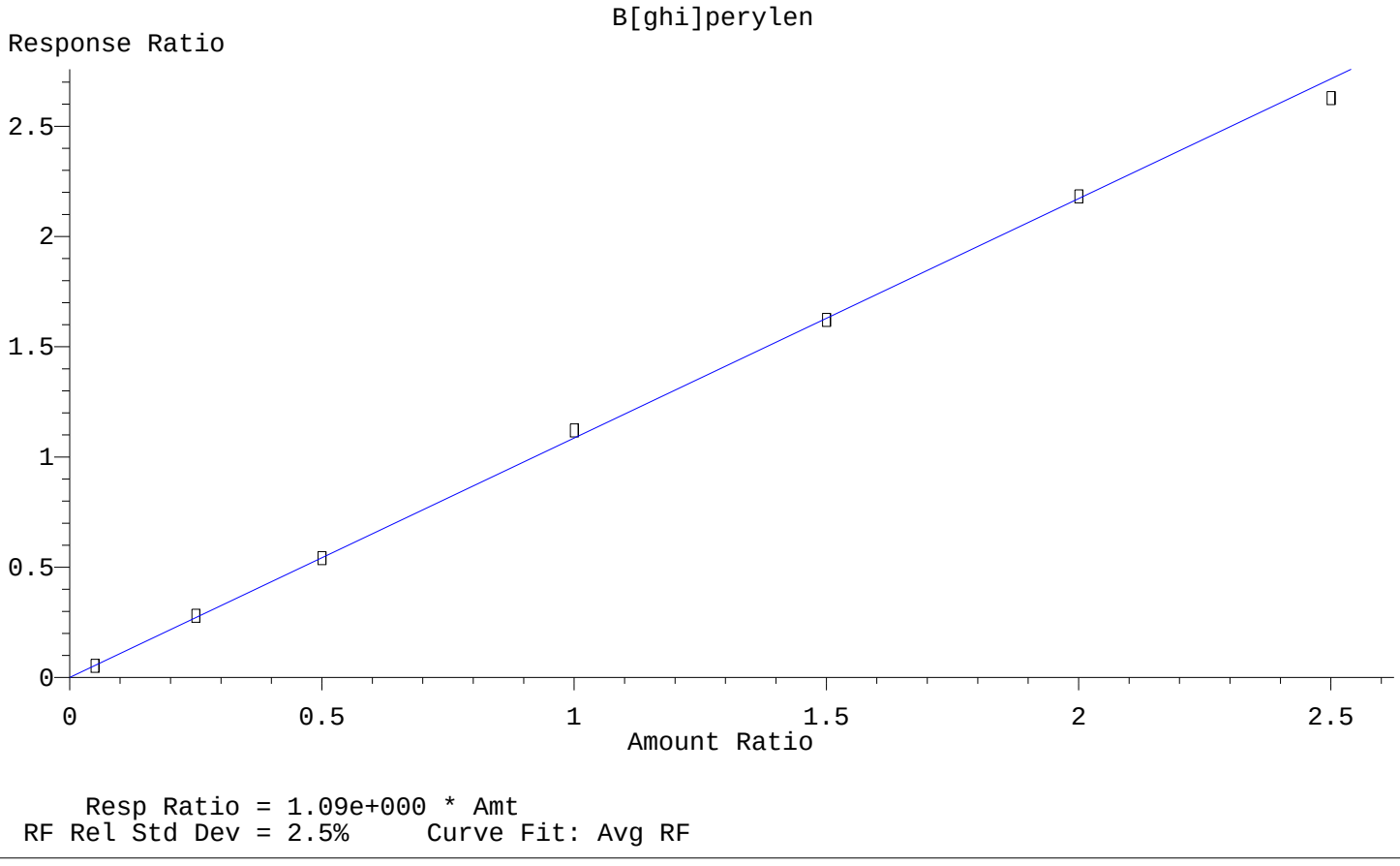
Resp Ratio = 1.14e+000 * Amt
RF Rel Std Dev = 5.2% Curve Fit: Avg RF



Resp Ratio = 1.27e+000 * Amt
RF Rel Std Dev = 4.0% Curve Fit: Avg RF



Resp Ratio = 1.03e+000 * Amt
RF Rel Std Dev = 4.5% Curve Fit: Avg RF



Resp Ratio = 1.09e+000 * Amt
RF Rel Std Dev = 2.5% Curve Fit: Avg RF

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1IB01.D Vial: 2
Acq On : 9 Nov 2016 11:04 Operator: JJY
Sample : InstrumentBlank Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 21 18:17:03 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 21 18:16:53 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

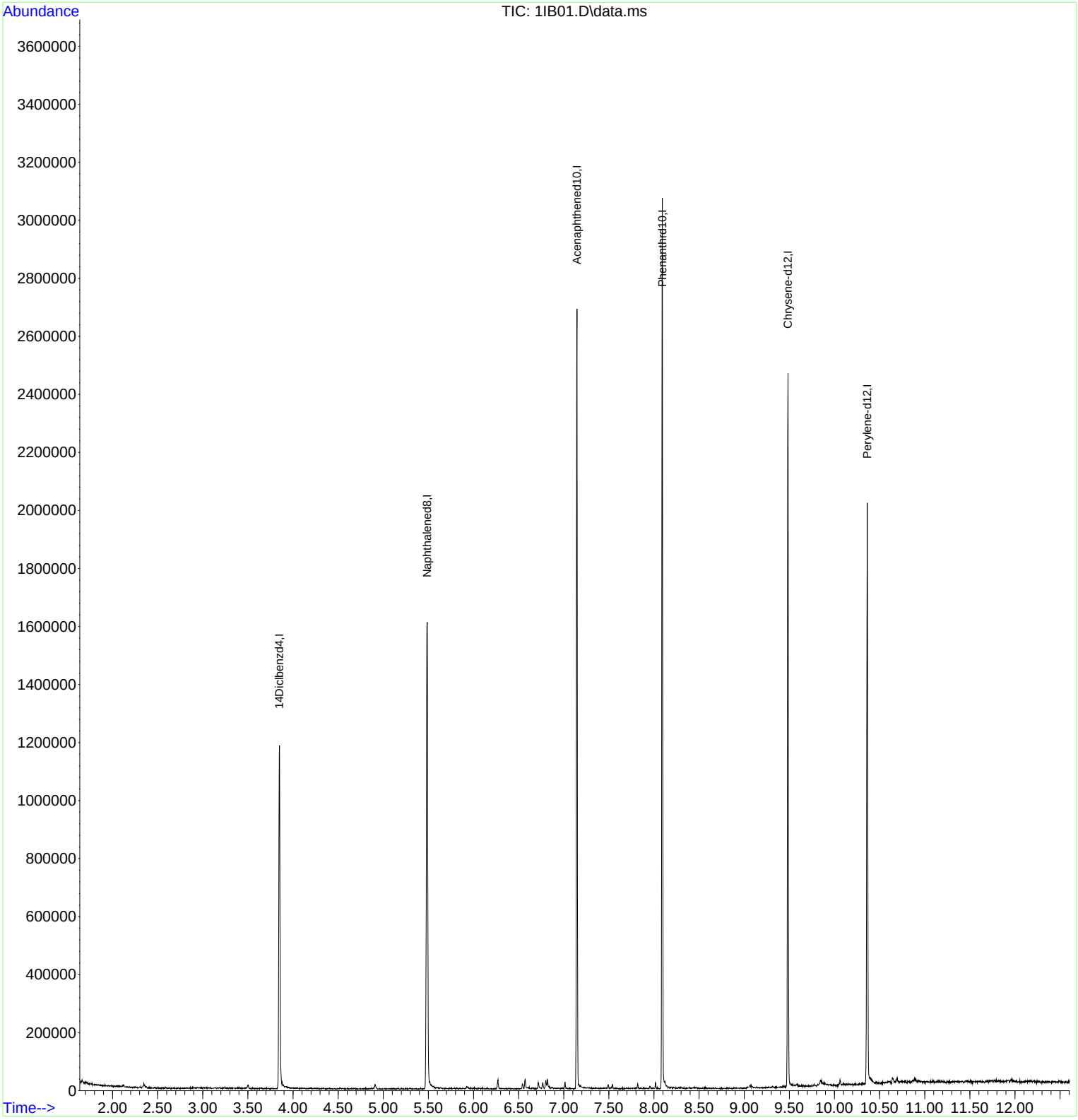
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.847	152	179217	20.00	ug/mL	0.00
21) Naphthalened8	5.487	136	839339	20.00	ug/mL	0.00
39) Acenaphthened10	7.146	164	385305	20.00	ug/mL	0.00
63) Phenanthrd10	8.092	188	844654	20.00	ug/mL	0.00
75) Chrysene-d12	9.485	240	599851	20.00	ug/mL	0.00
86) Perylene-d12	10.363	264	584298	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	0.000	112	0	0.00	%REC	
Spiked Amount 100.000	Range 20 - 110		Recovery =	0.00%#		
7) SURRPhenol-d5	0.000	99	0	0.00	%REC	
Spiked Amount 100.000	Range 10 - 115		Recovery =	0.00%#		
22) SURRNitrbenzened5	0.000	82	0	0.00	%REC	
Spiked Amount 100.000	Range 40 - 110		Recovery =	0.00%#		
44) SUR2Flbiphenyl	0.000	172	0	0.00	%REC	
Spiked Amount 100.000	Range 50 - 110		Recovery =	0.00%#		
62) SURR246Tribrphenl	0.000	330	0	0.00	%REC	
Spiked Amount 100.000	Range 40 - 125		Recovery =	0.00%#		
78) SURRTerphenyl-d14	0.000	244	0	0.00	%REC	
Spiked Amount 100.000	Range 50 - 135		Recovery =	0.00%#		
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1IB01.D Vial: 2
Acq On : 9 Nov 2016 11:04 Operator: JJY
Sample : InstrumentBlank Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 21 18:17:03 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 21 18:16:53 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL7.D Vial: 13
Acq On : 9 Nov 2016 14:41 Operator: JJY
Sample : ICAL 50ug/ml SVMS7214 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:26:30 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:26:04 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.853	152	189865	20.00	ug/mL	0.00
21) Naphthalened8	5.493	136	888309	20.00	ug/mL	0.00
39) Acenaphthened10	7.152	164	383205	20.00	ug/mL	0.00
63) Phenanthrd10	8.098	188	841390	20.00	ug/mL	0.00
75) Chrysene-d12	9.493	240	499824	20.00	ug/mL	0.00
86) Perylene-d12	10.369	264	559911	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.722	112	553422	124.50	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 124.50%#			
7) SURRPhenol-d5	3.495	99	621141	125.12	%REC	0.01
Spiked Amount 100.000	Range 10 - 115		Recovery = 125.12%#			
22) SURRNitrbenzened5	4.515	82	615054	240.61	%REC	0.01
Spiked Amount 100.000	Range 40 - 110		Recovery = 240.61%#			
44) SURR2Flbiphenyl	6.658	172	1490173	241.42	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 241.42%#			
62) SURR246Tribrphenl	7.678	330	288018	117.65	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 117.65%			
78) SURRTerphenyl-d14	8.891	244	1045100	247.12	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 247.12%#			
Target Compounds						Qvalue
2) Ntrsdimeth	1.998	74	326284	50.7121	ug/mL	99
3) Pyridine	2.006	79	595191	50.9367	ug/mL	95
5) Aniline	3.524	93	831447	50.2985	ug/mL	97
6) bis2Clethletr	3.595	93	521846	50.4215	ug/mL	99
8) Phenol	3.509	94	717748	49.5392	ug/mL	95
9) 2-Cl-phenol	3.634	128	584952	49.5372	ug/mL	96
10) 13Diclbenz	3.794	146	671848	49.6098	ug/mL	97
11) 14Diclbenz	3.873	146	666894	48.9994	ug/mL	96
12) 12Diclbenz	4.038	146	623404	48.0231	ug/mL	98
13) Benzyl alcoho	4.027	108	383967	48.9010	ug/mL	91
14) bis2clispreth	4.190	45	1180352	47.9078	ug/mL	98
15) 2Methylphenol	4.166	107	439332	47.9177	ug/mL	95
16) Ntrspyrrol	4.328	100	282408	49.1720	ug/mL	92
17) Acetophenone	4.339	105	853063	48.6218	ug/mL	99
18) Hexaclethane	4.433	117	284120	49.0170	ug/mL	98
19) N-Ntrsdinprop	4.359	70	427462	49.1287	ug/mL	92
20) 3&4Methylphenol	4.373	107	583817	48.7164	ug/mL	99
23) Nitrobenzene	4.541	77	615954	47.7940	ug/mL	95
24) Isophorone	4.873	82	1099246	47.3610	ug/mL	97
25) 2-Nitrophenol	4.956	139	310171	47.0603	ug/mL	90
26) 24Dimthpheno	5.072	122	459071	47.3221	ug/mL	97
27) bis2clethoxym	5.211	93	706511	47.9537	ug/mL	98
28) 24Diclphenol	5.322	162	584999	46.3107	ug/mL	99
29) 124Triclbenz	5.430	180	704183	47.0353	ug/mL	97
30) Benzoic acid	5.359	122	347778	48.8838	ug/mL	94
31) Naphthalene	5.527	128	1904744	47.8148	ug/mL	99
32) 4-Cl-aniline	5.638	127	734240	46.9443	ug/mL	98
33) 26Diclphenol	5.635	162	518433	45.2063	ug/mL	94
34) Hexaclprop	5.649	213	526886	45.5758	ug/mL	94
35) Hexaclbutdien	5.717	225	494540	45.2726	ug/mL	98
36) 4Cl3methylphe	6.220	107	616141	48.3258	ug/mL	96
37) 2Methylnaphth	6.314	142	1336389	47.5841	ug/mL	98
38) 1Methylnaphth	6.405	141	1098529	47.3324	ug/mL	97
40) Hxclcycpentdi	6.470	237	399135	47.1053	ug/mL	97

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL7.D Vial: 13
Acq On : 9 Nov 2016 14:41 Operator: JJY
Sample : ICAL 50ug/ml SVMS7214 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:26:30 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:26:04 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

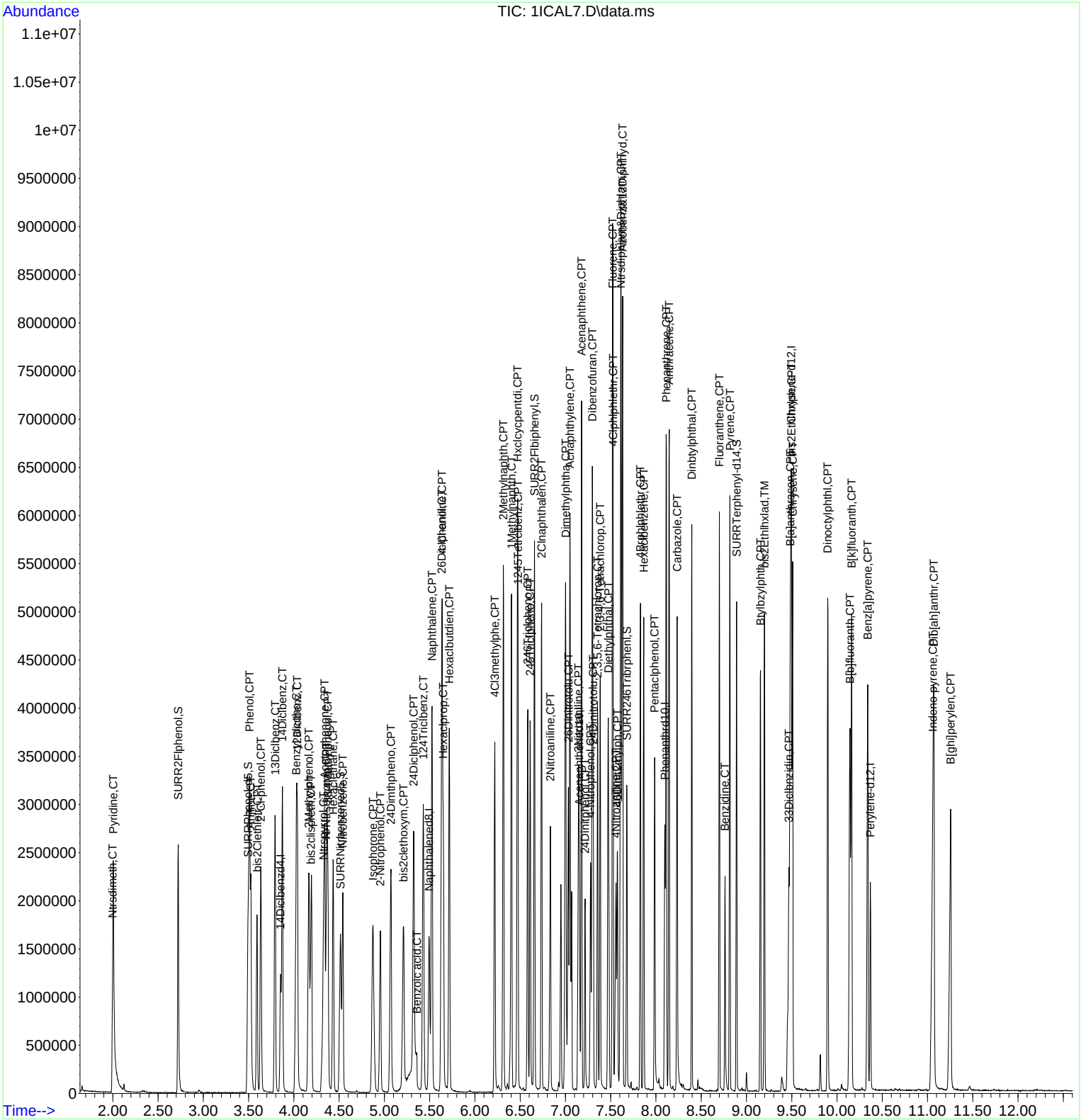
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.476	216	672292	46.4514	ug/mL	98
42) 246Triclpheno	6.584	196	465478	48.4790	ug/mL	98
43) 245Triclpheno	6.609	196	486823	47.6273	ug/mL	95
45) 2Clnaphthalen	6.737	162	1230385	48.1514	ug/mL	99
46) 2Nitroaniline	6.834	65	401648	49.3610	ug/mL	90
47) Acnaphthylene	7.050	152	2025792	47.9034	ug/mL	99
48) Dimethylphtha	7.002	163	1373892	47.7779	ug/mL	96
49) 26Dinitrotolu	7.033	165	304784	47.6664	ug/mL	96
50) Acenaphthene	7.178	154	1192962	48.4972	ug/mL	95
51) 3Nitroaniline	7.144	138	316736	47.7550	ug/mL	85
52) 24Dinitphenol	7.217	184	196304	49.4073	ug/mL	81
53) Dibenzofuran	7.297	168	1772666	48.4957	ug/mL	95
54) 24Dinitrotolu	7.306	165	389418	47.1058	ug/mL	89
55) 4-Nitrophenol	7.277	65	325133	49.3804	ug/mL	94
56) 2,3,5,6-Tetrachlorop	7.357	232	422144	48.4796	ug/mL	95
57) 2,3,4,6-Tetrachlorop	7.385	232	445710	47.9465	ug/mL	97
58) Fluorene	7.521	166	1341332	45.7238	ug/mL	97
59) 4Clphlphlethr	7.527	204	655186	45.3872	ug/mL	98
60) Diethylphthal	7.473	149	1602068	48.6946	ug/mL	95
61) 4Nitroaniline	7.558	138	330032	49.8089	ug/mL	97
64) 46Dinit2mylph	7.575	198	252297	48.7230	ug/mL	93
65) Ntrsdiphlam&Diphlam	7.612	169	1845808	91.0394	ug/mL	97
66) Azobenz&12Diphlhyd	7.632	182	598523	93.6717	ug/mL	94
67) 4Brphlphlethr	7.828	248	453228	47.4284	ug/mL	96
68) Hexaclbenzene	7.865	284	525639	48.1158	ug/mL	97
69) Pentaclphenol	7.985	266	324202	49.4555	ug/mL	98
70) Phenanthrene	8.115	178	2018445	48.4253	ug/mL	99
71) Anthracene	8.147	178	2049829	47.6940	ug/mL	100
72) Carbazole	8.235	167	1676754	47.4689	ug/mL	99
73) Dinbtylphthal	8.397	149	1754714	47.1651	ug/mL	99
74) Fluoranthene	8.701	202	1647988	47.2167	ug/mL	98
76) Benzidine	8.763	184	546483	51.2558	ug/mL	99
77) Pyrene	8.817	202	1695986	49.7860	ug/mL	99
79) Btylbzylphth	9.155	149	768089	49.7534	ug/mL	98
80) bis2Ethlhxlad	9.198	129	574926	50.2584	ug/mL	99
81) 33Diclbnzidin	9.468	252	338174	56.8441	ug/mL	98
82) B[a]anthracen	9.485	228	1524793	50.4014	ug/mL	98
83) Chrysene	9.510	228	1397049	49.8276	ug/mL	98
84) bis2Ethlhxlph	9.496	149	958610	47.0303	ug/mL	94
85) Dinoctylphthl	9.897	149	1980986	50.6063	ug/mL	97
87) B[b]fluoranth	10.144	252	1588301	47.1948	ug/mL	98
88) B[k]fluoranth	10.161	252	1516748	51.5877	ug/mL	98
89) Benz[a]pyrene	10.340	252	1506786	47.8190	ug/mL	99
90) Indeno-pyrene	11.059	276	1675523	47.7629	ug/mL	91
91) Dib[ah]anthr	11.070	278	1338323	46.5103	ug/mL	98
92) B[ghi]perylen	11.255	276	1471060	47.8816	ug/mL	96

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL7.D Vial: 13
Acq On : 9 Nov 2016 14:41 Operator: JJY
Sample : ICAL 50ug/ml SVMS7214 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:26:30 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:26:04 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL6.D Vial: 14
Acq On : 9 Nov 2016 15:01 Operator: JJY
Sample : ICAL 40ug/ml SVMS7213 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:24:14 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:24:03 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.850	152	181836	20.00	ug/mL	0.00
21) Naphthalened8	5.493	136	852789	20.00	ug/mL	0.00
39) Acenaphthened10	7.152	164	380124	20.00	ug/mL	0.00
63) Phenanthrd10	8.095	188	829993	20.00	ug/mL	0.00
75) Chrysene-d12	9.490	240	503545	20.00	ug/mL	0.00
86) Perylene-d12	10.366	264	552328	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.719	112	439215	104.84	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 104.84%			
7) SURRPhenol-d5	3.492	99	489039	104.35	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 104.35%			
22) SURRNitrbenzened5	4.512	82	492116	200.81	%REC	0.01
Spiked Amount 100.000	Range 40 - 110		Recovery = 200.81%#			
44) SURR2Flbiphenyl	6.658	172	1220335	198.96	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 198.96%#			
62) SURR246Tribrphenl	7.675	330	242141	99.57	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 99.57%			
78) SURRTerphenyl-d14	8.891	244	881101	210.38	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 210.38%#			
Target Compounds						Qvalue
2) Ntrsdimeth	1.995	74	257150	42.6552	ug/mL	98
3) Pyridine	2.003	79	465084	42.3858	ug/mL	96
5) Aniline	3.521	93	658238	42.4153	ug/mL	99
6) bis2Clethletr	3.589	93	410232	42.1179	ug/mL	96
8) Phenol	3.506	94	581133	42.8895	ug/mL	96
9) 2-Cl-phenol	3.631	128	464758	41.6674	ug/mL	98
10) 13Diclbenz	3.791	146	532341	41.5870	ug/mL	98
11) 14Diclbenz	3.873	146	533926	41.4604	ug/mL	98
12) 12Diclbenz	4.035	146	503127	40.7077	ug/mL	99
13) Benzyl alcoho	4.024	108	314073	42.7082	ug/mL	85
14) bis2clispreth	4.188	45	967224	41.5049	ug/mL	98
15) 2Methylphenol	4.163	107	361661	41.8088	ug/mL	98
16) Ntrspyrrol	4.319	100	229299	42.5862	ug/mL	100
17) Acetophenone	4.336	105	688437	41.4748	ug/mL	99
18) Hexaclethane	4.433	117	229959	42.1759	ug/mL	92
19) N-Ntrsdinprop	4.356	70	342866	41.7439	ug/mL	90
20) 3&4Methylphenol	4.367	107	475211	42.1448	ug/mL	96
23) Nitrobenzene	4.535	77	506340	41.4038	ug/mL	94
24) Isophorone	4.867	82	884397	39.5388	ug/mL	97
25) 2-Nitrophenol	4.953	139	249920	39.2520	ug/mL	89
26) 24Dimthpheno	5.066	122	376324	40.6153	ug/mL	96
27) bis2clethoxym	5.208	93	561752	39.5762	ug/mL	98
28) 24Diclphenol	5.319	162	482153	39.6393	ug/mL	95
29) 124Triclbenz	5.427	180	575133	40.0234	ug/mL	93
30) Benzoic acid	5.333	122	282212	42.0132	ug/mL	83
31) Naphthalene	5.524	128	1529386	39.9870	ug/mL	99
32) 4-Cl-aniline	5.632	127	597872	39.7270	ug/mL	95
33) 26Diclphenol	5.632	162	424714	37.9024	ug/mL	91
34) Hexaclprop	5.649	213	430139	38.1638	ug/mL	93
35) Hexaclbutdien	5.714	225	414409	39.2801	ug/mL	96
36) 4Cl3methylphe	6.217	107	488754	39.8969	ug/mL	99
37) 2Methylnaphth	6.314	142	1063013	39.1461	ug/mL	97
38) 1Methylnaphth	6.402	141	876546	39.0194	ug/mL	95
40) Hxclcycpentdi	6.467	237	327935	38.5420	ug/mL	93

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL6.D Vial: 14
Acq On : 9 Nov 2016 15:01 Operator: JJY
Sample : ICAL 40ug/ml SVMS7213 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:24:14 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:24:03 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

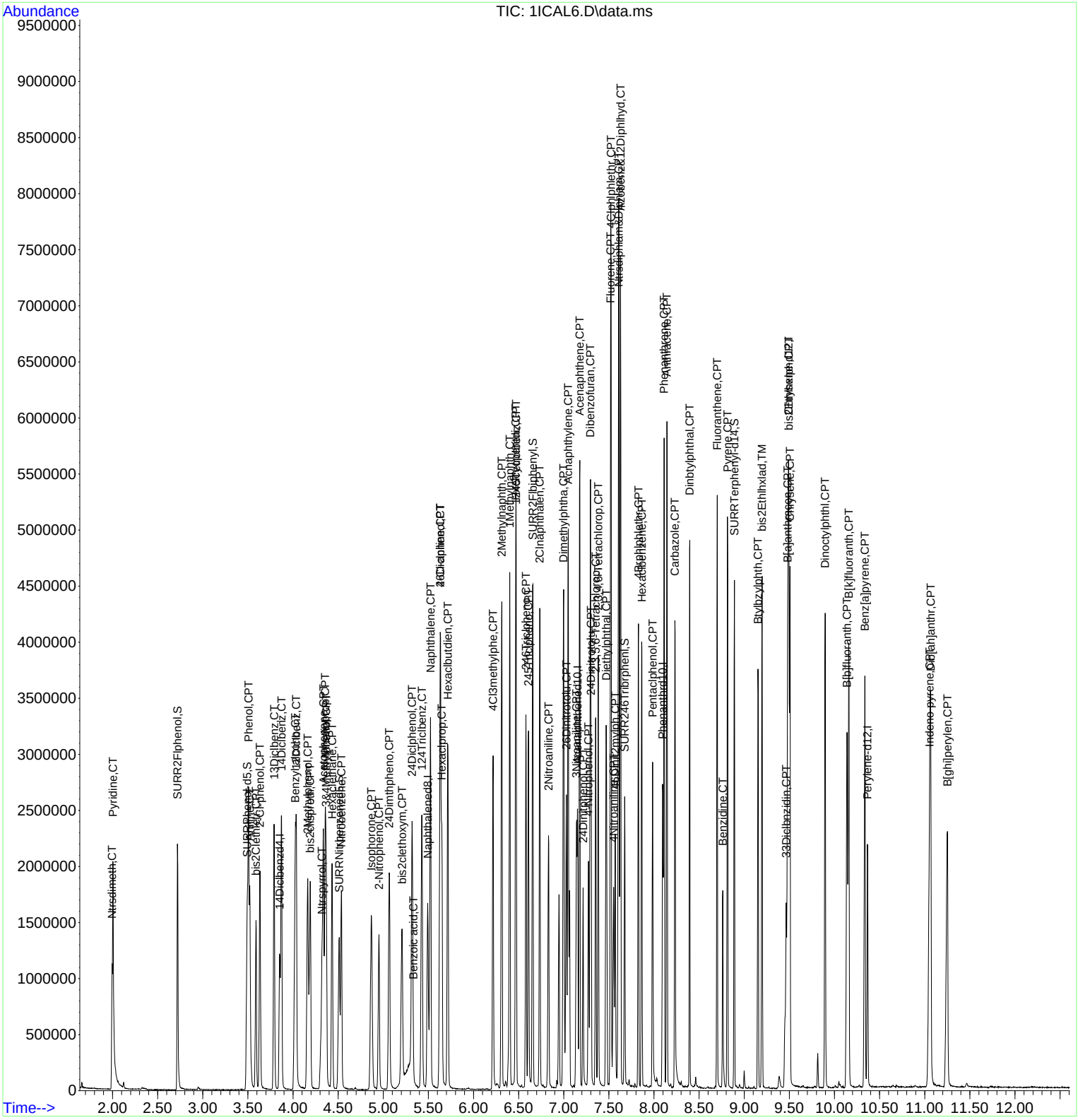
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.473	216	563167	38.8514	ug/mL	98
42) 246Triclpheno	6.581	196	381234	40.0404	ug/mL	96
43) 245Triclpheno	6.609	196	396191	38.6279	ug/mL	96
45) 2Clnaphthalen	6.734	162	1005953	39.5328	ug/mL	99
46) 2Nitroaniline	6.831	65	328106	40.9827	ug/mL	89
47) Acnaphthylene	7.050	152	1672281	39.7972	ug/mL	99
48) Dimethylphtha	6.996	163	1130980	39.4762	ug/mL	98
49) 26Dinitrotolu	7.030	165	256852	40.7482	ug/mL	98
50) Acenaphthene	7.178	154	959104	38.9684	ug/mL	91
51) 3Nitroaniline	7.141	138	259322	39.1295	ug/mL	91
52) 24Dinitphenol	7.214	184	165384	43.0178	ug/mL	81
53) Dibenzofuran	7.294	168	1426341	39.0143	ug/mL	99
54) 24Dinitrotolu	7.303	165	323859	39.2443	ug/mL	89
55) 4-Nitrophenol	7.274	65	256467	38.9109	ug/mL	98
56) 2,3,5,6-Tetrachlorop	7.354	232	344290	39.7892	ug/mL	92
57) 2,3,4,6-Tetrachlorop	7.382	232	363272	39.0995	ug/mL	97
58) Fluorene	7.519	166	1138355	38.6931	ug/mL	96
59) 4Clphlphlethr	7.524	204	550573	37.7184	ug/mL	99
60) Diethylphthal	7.470	149	1289779	39.2849	ug/mL	96
61) 4Nitroaniline	7.553	138	263500	40.1354	ug/mL	98
64) 46Dinit2mylph	7.570	198	207532	40.9501	ug/mL	93
65) Ntrsdiphlam&Diphlam	7.609	169	1567063	77.5537	ug/mL	99
66) Azobenz&12Diphlhyd	7.629	182	493092	77.3754	ug/mL#	88
67) 4Brphlphlethr	7.828	248	370525	38.9685	ug/mL	94
68) Hexaclbenzene	7.865	284	423179	38.9130	ug/mL	96
69) Pentaclphenol	7.984	266	263944	41.2371	ug/mL	94
70) Phenanthrene	8.112	178	1636534	39.7035	ug/mL	98
71) Anthracene	8.144	178	1667671	39.0108	ug/mL	99
72) Carbazole	8.232	167	1375297	39.2092	ug/mL	98
73) Dinbtylphthal	8.397	149	1444678	39.0547	ug/mL	99
74) Fluoranthene	8.701	202	1364635	39.4553	ug/mL	98
76) Benzidine	8.763	184	452793	43.3214	ug/mL	98
77) Pyrene	8.814	202	1408180	41.5681	ug/mL	98
79) Btylbzylphth	9.152	149	643222	42.0709	ug/mL	98
80) bis2Ethlhxlad	9.198	129	479984	42.5252	ug/mL	99
81) 33Diclbnzidin	9.465	252	257505	44.6179	ug/mL	99
82) B[a]anthracen	9.482	228	1225735	40.3260	ug/mL	99
83) Chrysene	9.508	228	1150662	41.1152	ug/mL	99
84) bis2Ethlhxlph	9.493	149	827634	40.4584	ug/mL	99
85) Dinoctylphthl	9.897	149	1598923	40.8220	ug/mL	97
87) B[b]fluoranth	10.138	252	1372372	42.0419	ug/mL	98
88) B[k]fluoranth	10.158	252	1089760	36.4679	ug/mL	97
89) Benz[a]pyrene	10.337	252	1239985	39.8385	ug/mL	100
90) Indeno-pyrene	11.053	276	1376496	39.6672	ug/mL	96
91) Dib[ah]anthr	11.067	278	1137684	40.1207	ug/mL	96
92) B[ghi]perylen	11.252	276	1204976	39.6401	ug/mL	98

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL6.D Vial: 14
Acq On : 9 Nov 2016 15:01 Operator: JJY
Sample : ICAL 40ug/ml SVMS7213 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:24:14 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:24:03 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL5.D Vial: 15
Acq On : 9 Nov 2016 15:45 Operator: JJY
Sample : ICAL 30ug/ml SVMS7212 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:22:33 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:20:56 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.847	152	194303	20.00	ug/mL	0.00
21) Naphthalened8	5.487	136	866188	20.00	ug/mL	0.00
39) Acenaphthened10	7.143	164	392997	20.00	ug/mL	0.00
63) Phenanthrd10	8.090	188	854451	20.00	ug/mL	0.00
75) Chrysene-d12	9.493	240	545254	20.00	ug/mL	0.00
86) Perylene-d12	10.371	264	579987	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.716	112	336393	75.28	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 75.28%			
7) SURRPhenol-d5	3.486	99	367540	71.85	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 71.85%			
22) SURRNitrbenzened5	4.507	82	371132	148.20	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 148.20%#			
44) SURR2Flbiphenyl	6.649	172	913004	138.42	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 138.42%#			
62) SURR246Tribrphenl	7.666	330	182921	70.65	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 70.65%			
78) SURRTerphenyl-d14	8.891	244	672006	146.40	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 146.40%#			
Target Compounds						Qvalue
2) Ntrsdimeth	1.995	74	188861	28.6655	ug/mL	98
3) Pyridine	2.006	79	352973	30.2097	ug/mL	91
5) Aniline	3.515	93	500134	30.3211	ug/mL	97
6) bis2Clethletr	3.586	93	312834	30.1150	ug/mL	96
8) Phenol	3.501	94	431894	29.6618	ug/mL	98
9) 2-Cl-phenol	3.629	128	355784	29.7031	ug/mL	98
10) 13Diclbenz	3.788	146	402826	28.9198	ug/mL	95
11) 14Diclbenz	3.867	146	409253	29.4850	ug/mL	95
12) 12Diclbenz	4.035	146	389514	29.0033	ug/mL	94
13) Benzyl alcoho	4.018	108	236567	30.2103	ug/mL	90
14) bis2clispreth	4.184	45	735884	29.1166	ug/mL	96
15) 2Methylphenol	4.157	107	273464	29.1807	ug/mL	95
16) Ntrspyrrol	4.308	100	172469	29.9526	ug/mL	94
17) Acetophenone	4.328	105	527411	29.4748	ug/mL	96
18) Hexaclethane	4.430	117	169266	28.1631	ug/mL	93
19) N-Ntrsdinprop	4.347	70	258032	28.8229	ug/mL	94
20) 3&4Methylphenol	4.356	107	357185	29.2982	ug/mL	97
23) Nitrobenzene	4.529	77	376228	30.5828	ug/mL	96
24) Isophorone	4.862	82	683500	30.1697	ug/mL	99
25) 2-Nitrophenol	4.947	139	192546	29.5497	ug/mL	89
26) 24Dimthpheno	5.061	122	280904	29.6976	ug/mL	96
27) bis2clethoxym	5.203	93	434843	30.3245	ug/mL	98
28) 24Diclphenol	5.311	162	366148	29.2818	ug/mL	99
29) 124Triclbenz	5.422	180	438050	30.0245	ug/mL	99
30) Benzoic acid	5.294	122	206777	30.6203	ug/mL	89
31) Naphthalene	5.518	128	1154391	29.4364	ug/mL	99
32) 4-Cl-aniline	5.623	127	452139	29.1691	ug/mL	96
33) 26Diclphenol	5.626	162	331318	28.2715	ug/mL	93
34) Hexaclprop	5.643	213	337349	28.9547	ug/mL	94
35) Hexaclbutdien	5.708	225	312111	28.3017	ug/mL	99
36) 4Cl3methylphe	6.209	107	369366	29.3762	ug/mL	97
37) 2Methylnaphth	6.305	142	806294	28.5042	ug/mL	98
38) 1Methylnaphth	6.393	141	672305	28.9481	ug/mL	95
40) Hxclcycpentdi	6.461	237	256450	28.3528	ug/mL	94

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL5.D Vial: 15
Acq On : 9 Nov 2016 15:45 Operator: JJY
Sample : ICAL 30ug/ml SVMS7212 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:22:33 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:20:56 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

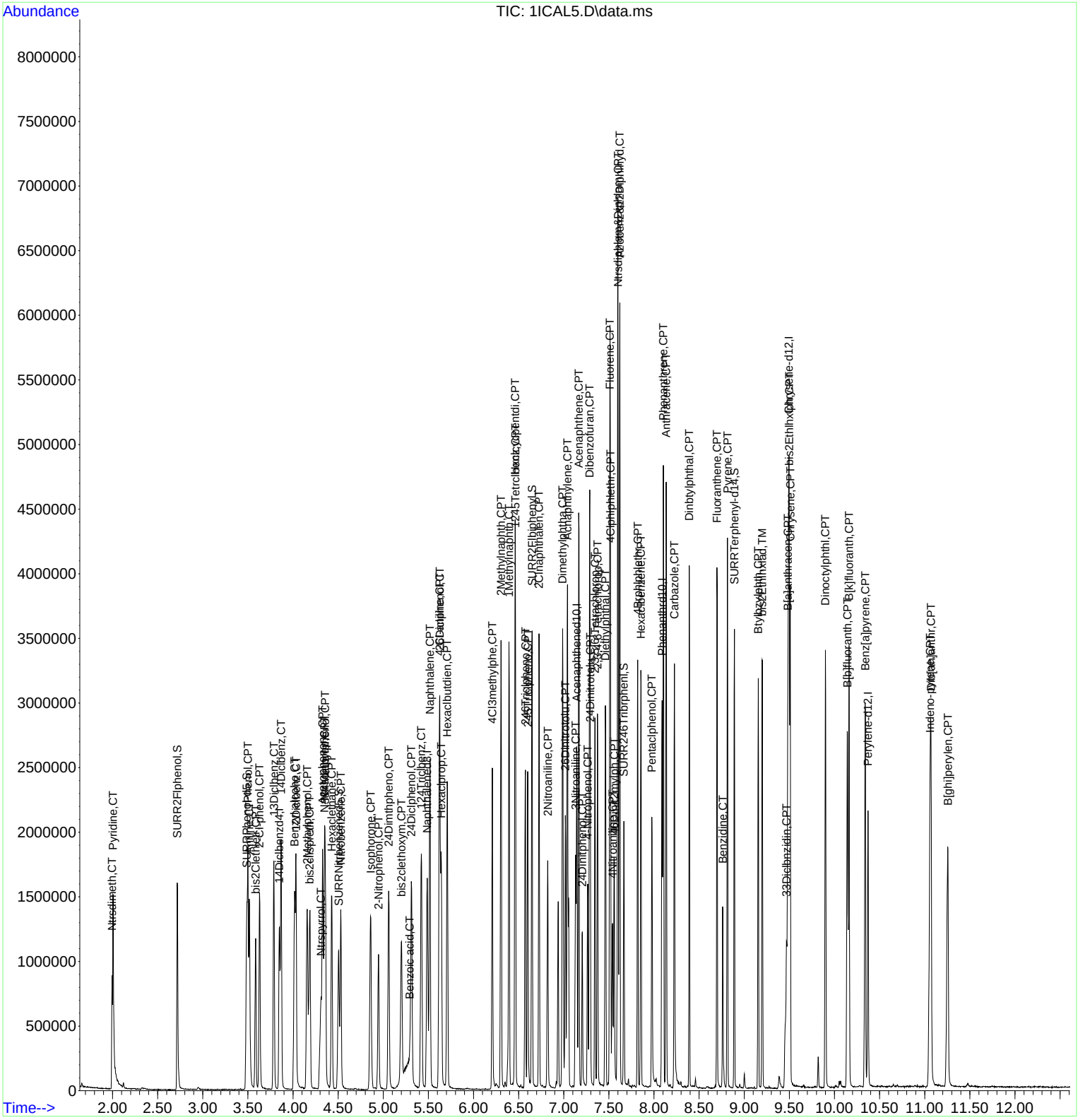
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.464	216	433176	27.8868	ug/mL	98
42) 246Triclpheno	6.575	196	287646	28.4822	ug/mL	95
43) 245Triclpheno	6.601	196	307431	28.0498	ug/mL	97
45) 2Clnaphthalen	6.726	162	769648	28.5472	ug/mL	98
46) 2Nitroaniline	6.822	65	251152	30.6941	ug/mL	90
47) Acnaphthylene	7.041	152	1264014	28.2446	ug/mL	98
48) Dimethylphtha	6.987	163	856011	27.8776	ug/mL	99
49) 26Dinitrotolu	7.018	165	191146	28.6912	ug/mL	92
50) Acenaphthene	7.166	154	745339	28.6150	ug/mL	96
51) 3Nitroaniline	7.132	138	205013	29.8433	ug/mL	89
52) 24Dinitphenol	7.206	184	117099	28.9406	ug/mL	83
53) Dibenzofuran	7.285	168	1103917	28.4530	ug/mL	98
54) 24Dinitrotolu	7.294	165	247320	28.0418	ug/mL	88
55) 4-Nitrophenol	7.266	65	206634	30.6538	ug/mL	94
56) 2,3,5,6-Tetrachlorop	7.345	232	259945	28.1725	ug/mL	88
57) 2,3,4,6-Tetrachlorop	7.374	232	280673	28.4790	ug/mL	98
58) Fluorene	7.510	166	881569	28.0334	ug/mL	97
59) 4Clphlphlethr	7.518	204	430125	27.1457	ug/mL	98
60) Diethylphthal	7.462	149	992056	28.4926	ug/mL	97
61) 4Nitroaniline	7.541	138	203422	29.9392	ug/mL	97
64) 46Dinit2mylph	7.561	198	157667	30.4437	ug/mL	94
65) Ntrsdiphlam&Diphlam	7.601	169	1217463	57.1254	ug/mL	98
66) Azobenz&12Diphlhyd	7.621	182	391800	59.4445	ug/mL	93
67) 4Brphlphlethr	7.820	248	286570	28.5864	ug/mL	97
68) Hexaclbenzene	7.857	284	329733	28.9244	ug/mL	97
69) Pentaclphenol	7.976	266	201762	31.2658	ug/mL	99
70) Phenanthrene	8.104	178	1257142	29.2616	ug/mL	99
71) Anthracene	8.135	178	1292422	28.7610	ug/mL	98
72) Carbazole	8.226	167	1089250	30.3323	ug/mL	99
73) Dinbtylphthal	8.391	149	1156812	30.7647	ug/mL	99
74) Fluoranthene	8.698	202	1067659	29.9707	ug/mL	99
76) Benzidine	8.763	184	362925	34.4400	ug/mL	98
77) Pyrene	8.814	202	1099143	29.9276	ug/mL	99
79) Btylbzylphth	9.155	149	498424	30.2136	ug/mL	98
80) bis2Ethlhxlad	9.201	129	362977	29.4035	ug/mL	100
81) 33Diclbnzidin	9.468	252	194680	32.3957	ug/mL	93
82) B[a]anthracen	9.485	228	982091	29.6792	ug/mL	98
83) Chrysene	9.510	228	899038	29.3411	ug/mL	97
84) bis2Ethlhxlph	9.499	149	653514	29.0220	ug/mL	96
85) Dinoctylphthl	9.900	149	1277033	30.2205	ug/mL	98
87) B[b]fluoranth	10.144	252	1033346	30.2942	ug/mL	99
88) B[k]fluoranth	10.161	252	886059	26.6700	ug/mL	96
89) Benz[a]pyrene	10.343	252	943597	27.8226	ug/mL	99
90) Indeno-pyrene	11.059	276	1063219	28.4001	ug/mL	96
91) Dib[ah]anthr	11.070	278	871388	28.5637	ug/mL	96
92) B[ghi]perylen	11.258	276	940583	28.9521	ug/mL	99

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL5.D Vial: 15
Acq On : 9 Nov 2016 15:45 Operator: JJY
Sample : ICAL 30ug/ml SVMS7212 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:22:33 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:20:56 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL4.D Vial: 16
Acq On : 9 Nov 2016 16:05 Operator: JJY
Sample : ICAL 20ug/ml SVMS7211 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:20:59 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:20:56 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.850	152	191851	20.00	ug/mL	0.00
21) Naphthalened8	5.490	136	867715	20.00	ug/mL	0.00
39) Acenaphthened10	7.146	164	386418	20.00	ug/mL	0.00
63) Phenanthrd10	8.093	188	874898	20.00	ug/mL	0.00
75) Chrysene-d12	9.488	240	554927	20.00	ug/mL	0.00
86) Perylene-d12	10.366	264	566082	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.717	112	220600	50.00	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 50.00%			
7) SURRPhenol-d5	3.484	99	252529	50.00	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 50.00%			
22) SURRNitrbenzened5	4.501	82	250860	100.00	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 100.00%			
44) SURR2Flbiphenyl	6.652	172	648563	100.00	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 100.00%			
62) SURR246Tribrphenl	7.669	330	127296	50.00	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 50.00%			
78) SURRTerphenyl-d14	8.888	244	467148	100.00	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 100.00%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.992	74	130106	20.0000	ug/mL	100
3) Pyridine	2.006	79	230733	20.0000	ug/mL	100
5) Aniline	3.515	93	325729	20.0000	ug/mL	100
6) bis2Clethletr	3.583	93	205138	20.0000	ug/mL	100
8) Phenol	3.495	94	287537	20.0000	ug/mL	100
9) 2-Cl-phenol	3.629	128	236537	20.0000	ug/mL	100
10) 13Diclbenz	3.788	146	275066	20.0000	ug/mL	100
11) 14Diclbenz	3.867	146	274098	20.0000	ug/mL	100
12) 12Diclbenz	4.032	146	265210	20.0000	ug/mL	100
13) Benzyl alcoho	4.015	108	154637	20.0000	ug/mL	100
14) bis2clispreth	4.183	45	499095	20.0000	ug/mL	100
15) 2Methylphenol	4.154	107	185063	20.0000	ug/mL	100
16) Ntrspyrrol	4.299	100	113708	20.0000	ug/mL	100
17) Acetophenone	4.325	105	353356	20.0000	ug/mL	100
18) Hexaclethane	4.427	117	118687	20.0000	ug/mL	100
19) N-Ntrsdinprop	4.342	70	176787	20.0000	ug/mL	100
20) 3&4Methylphenol	4.350	107	240750	20.0000	ug/mL	100
23) Nitrobenzene	4.527	77	246473	20.0000	ug/mL	100
24) Isophorone	4.856	82	453903	20.0000	ug/mL	100
25) 2-Nitrophenol	4.947	139	130550	20.0000	ug/mL	100
26) 24Dimthpheno	5.055	122	189510	20.0000	ug/mL	100
27) bis2clethoxym	5.200	93	287299	20.0000	ug/mL	100
28) 24Diclphenol	5.308	162	250527	20.0000	ug/mL	100
29) 124Triclbenz	5.422	180	292309	20.0000	ug/mL	100
30) Benzoic acid	5.257	122	135297	20.0000	ug/mL	100
31) Naphthalene	5.515	128	785711	20.0000	ug/mL	100
32) 4-Cl-aniline	5.623	127	310559	20.0000	ug/mL	100
33) 26Diclphenol	5.623	162	234796	20.0000	ug/mL	100
34) Hexaclprop	5.643	213	233429	20.0000	ug/mL	100
35) Hexaclbutdien	5.711	225	220949	20.0000	ug/mL	100
36) 4Cl3methylphe	6.209	107	251916	20.0000	ug/mL	100
37) 2Methylnaphth	6.308	142	566734	20.0000	ug/mL	100
38) 1Methylnaphth	6.396	141	465309	20.0000	ug/mL	100
40) Hxclcycpentdi	6.464	237	177871	20.0000	ug/mL	100

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL4.D Vial: 16
Acq On : 9 Nov 2016 16:05 Operator: JJY
Sample : ICAL 20ug/ml SVMS7211 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:20:59 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:20:56 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

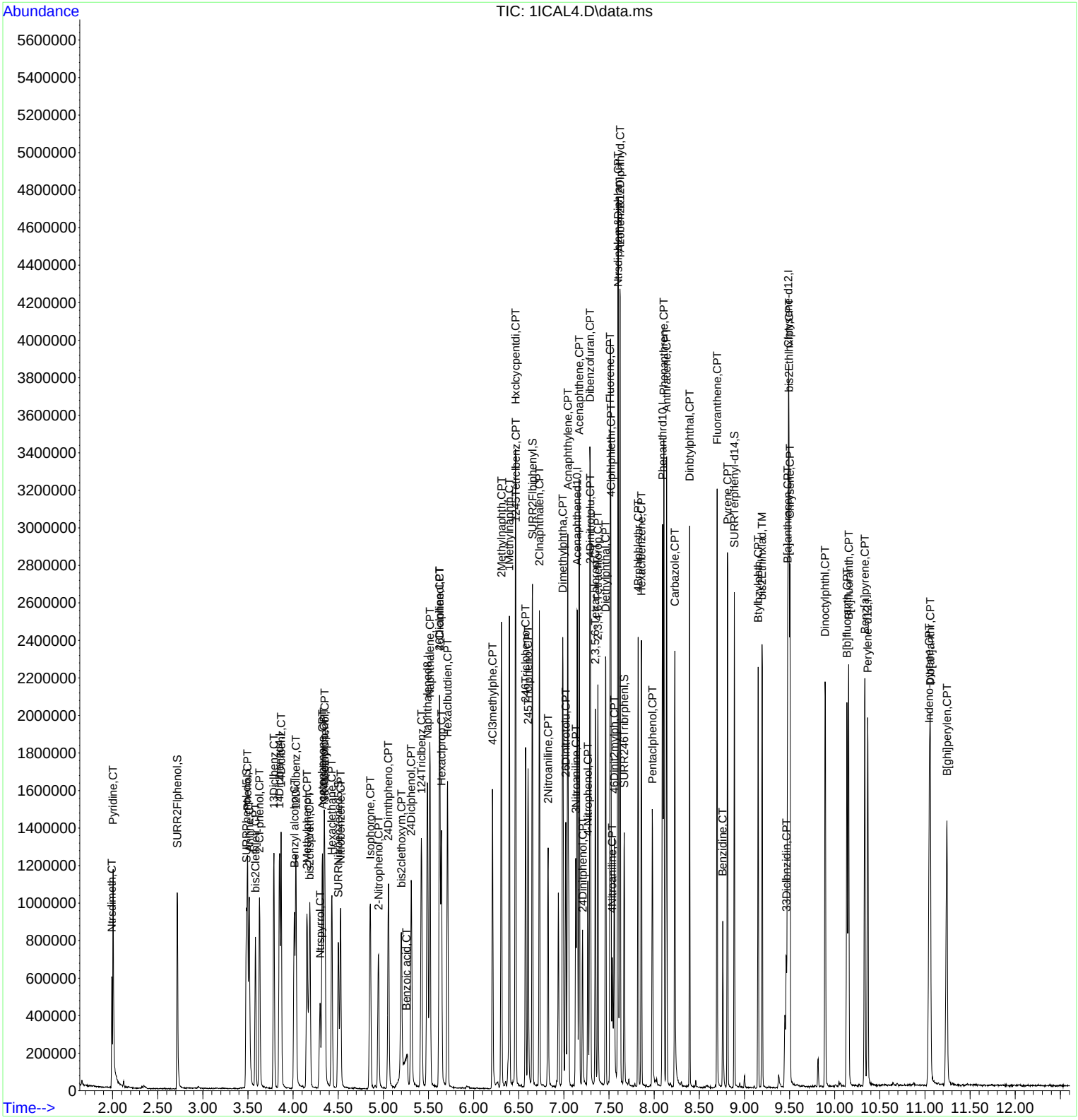
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.467	216	305467	20.0000	ug/mL	100
42) 246Triclpheno	6.575	196	198602	20.0000	ug/mL	100
43) 245Triclpheno	6.604	196	215534	20.0000	ug/mL	100
45) 2Clnaphthalen	6.729	162	530185	20.0000	ug/mL	100
46) 2Nitroaniline	6.825	65	160909	20.0000	ug/mL	100
47) Acnaphthylene	7.044	152	880065	20.0000	ug/mL	100
48) Dimethylphtha	6.987	163	603841	20.0000	ug/mL	100
49) 26Dinitrotolu	7.021	165	131013	20.0000	ug/mL	100
50) Acenaphthene	7.169	154	512222	20.0000	ug/mL	100
51) 3Nitroaniline	7.132	138	135093	20.0000	ug/mL	100
52) 24Dinitphenol	7.209	184	79569	20.0000	ug/mL	100
53) Dibenzofuran	7.288	168	762967	20.0000	ug/mL	100
54) 24Dinitrotolu	7.294	165	173441	20.0000	ug/mL	100
55) 4-Nitrophenol	7.266	65	132561	20.0000	ug/mL	100
56) 2,3,5,6-Tetrachlorop	7.348	232	181449	20.0000	ug/mL	100
57) 2,3,4,6-Tetrachlorop	7.377	232	193809	20.0000	ug/mL	100
58) Fluorene	7.513	166	618414	20.0000	ug/mL	100
59) 4Clphlphlethr	7.521	204	311596	20.0000	ug/mL	100
60) Diethylphthal	7.462	149	684704	20.0000	ug/mL	100
61) 4Nitroaniline	7.536	138	133615	20.0000	ug/mL	100
64) 46Dinit2mylph	7.558	198	106058	20.0000	ug/mL	100
65) Ntrsdiphlam&Diphlam	7.601	169	872885	40.0000	ug/mL	100
66) Azobenz&12Diphlhyd	7.624	182	269950	40.0000	ug/mL	100
67) 4Brphlphlethr	7.823	248	205292	20.0000	ug/mL	100
68) Hexaclbenzene	7.860	284	233452	20.0000	ug/mL	100
69) Pentaclphenol	7.982	266	132151	20.0000	ug/mL	100
70) Phenanthrene	8.107	178	879806	20.0000	ug/mL	100
71) Anthracene	8.138	178	920239	20.0000	ug/mL	100
72) Carbazole	8.229	167	735399	20.0000	ug/mL	100
73) Dinbtylphthal	8.394	149	770034	20.0000	ug/mL	100
74) Fluoranthene	8.698	202	729518	20.0000	ug/mL	100
76) Benzidine	8.760	184	214497	20.0000	ug/mL	100
77) Pyrene	8.814	202	747566	20.0000	ug/mL	100
79) Btylbzylphth	9.152	149	335787	20.0000	ug/mL	100
80) bis2Ethlhxlad	9.195	129	251274	20.0000	ug/mL	100
81) 33Diclbnzidin	9.465	252	122321	20.0000	ug/mL	100
82) B[a]anthracen	9.479	228	673546	20.0000	ug/mL	100
83) Chrysene	9.505	228	623689	20.0000	ug/mL	100
84) bis2Ethlhxlph	9.493	149	458347	20.0000	ug/mL	100
85) Dinoctylphthl	9.894	149	860138	20.0000	ug/mL	100
87) B[b]fluoranth	10.136	252	665851	20.0000	ug/mL	100
88) B[k]fluoranth	10.155	252	648530	20.0000	ug/mL	100
89) Benz[a]pyrene	10.334	252	662033	20.0000	ug/mL	100
90) Indeno-pyrene	11.048	276	730791	20.0000	ug/mL	100
91) Dib[ah]anthr	11.059	278	595509	20.0000	ug/mL	100
92) B[ghi]perylen	11.244	276	634174	20.0000	ug/mL	100

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL4.D Vial: 16
Acq On : 9 Nov 2016 16:05 Operator: JJY
Sample : ICAL 20ug/ml SVMS7211 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:20:59 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:20:56 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL3.D Vial: 17
Acq On : 9 Nov 2016 16:24 Operator: JJY
Sample : ICAL 10ug/ml SVMS7210 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:37:34 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:28:47 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.850	152	184084	20.00	ug/mL	0.00
21) Naphthalened8	5.487	136	841342	20.00	ug/mL	0.00
39) Acenaphthened10	7.149	164	387360	20.00	ug/mL	0.00
63) Phenanthrd10	8.092	188	849655	20.00	ug/mL	0.00
75) Chrysene-d12	9.485	240	579199	20.00	ug/mL	0.00
86) Perylene-d12	10.366	264	562031	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.716	112	100929	23.44	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 23.44%			
7) SURRPhenol-d5	3.478	99	117240	24.35	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 24.35%			
22) SURRNitrbenzened5	4.498	82	114577	47.77	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 47.77%			
44) SURR2Flbiphenyl	6.652	172	313130	50.62	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 50.62%			
62) SURR246Tribrphenl	7.666	330	61612	25.27	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 25.27%#			
78) SURRTerphenyl-d14	8.888	244	231321	47.34	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 47.34%#			
Target Compounds						Qvalue
2) Ntrsdimeth	1.995	74	63181	10.0922	ug/mL	96
3) Pyridine	2.009	79	108754	9.5547	ug/mL	95
5) Aniline	3.512	93	152329	9.4904	ug/mL#	42
6) bis2Clethletr	3.583	93	92764	9.2250	ug/mL	95
8) Phenol	3.492	94	134429	9.5918	ug/mL	95
9) 2-Cl-phenol	3.626	128	109947	9.6256	ug/mL	95
10) 13Diclbenz	3.788	146	129345	9.8701	ug/mL	95
11) 14Diclbenz	3.867	146	131804	10.0385	ug/mL	97
12) 12Diclbenz	4.032	146	125433	10.0655	ug/mL	96
13) Benzyl alcoho	4.009	108	69287	9.1516	ug/mL	80
14) bis2clispreth	4.182	45	238422	10.0864	ug/mL	98
15) 2Methylphenol	4.151	107	89779	10.2059	ug/mL	94
16) Ntrspyrrol	4.291	100	56040	10.1058	ug/mL	77
17) Acetophenone	4.319	105	163720	9.6913	ug/mL	94
18) Hexaclethane	4.427	117	56222	10.0536	ug/mL	96
19) N-Ntrsdinprop	4.333	70	78875	9.3908	ug/mL	96
20) 3&4Methylphenol	4.345	107	112236	9.7220	ug/mL	97
23) Nitrobenzene	4.524	77	115462	9.5647	ug/mL	97
24) Isophorone	4.850	82	214525	9.8893	ug/mL	96
25) 2-Nitrophenol	4.941	139	60156	9.7804	ug/mL	87
26) 24Dimthpheno	5.052	122	88143	9.7234	ug/mL	89
27) bis2clethoxym	5.197	93	133639	9.6760	ug/mL	98
28) 24Diclphenol	5.305	162	122075	10.3951	ug/mL	94
29) 124Triclbenz	5.419	180	141871	10.1557	ug/mL	95
30) Benzoic acid	5.214	122	51314	7.6581	ug/mL	85
31) Naphthalene	5.515	128	387959	10.3962	ug/mL	98
32) 4-Cl-aniline	5.620	127	143628	9.8460	ug/mL	95
33) 26Diclphenol	5.623	162	112827	10.6426	ug/mL	92
34) Hexaclprop	5.643	213	106219	9.9203	ug/mL	93
35) Hexaclbutdien	5.711	225	103353	10.2315	ug/mL	93
36) 4Cl3methylphe	6.209	107	116486	9.7278	ug/mL	98
37) 2Methylnaphth	6.308	142	271583	10.3348	ug/mL	96
38) 1Methylnaphth	6.396	141	224696	10.3601	ug/mL	98
40) Hxclcycpentdi	6.464	237	78574	9.3084	ug/mL	98

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL3.D Vial: 17
Acq On : 9 Nov 2016 16:24 Operator: JJY
Sample : ICAL 10ug/ml SVMS7210 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:37:34 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:28:47 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

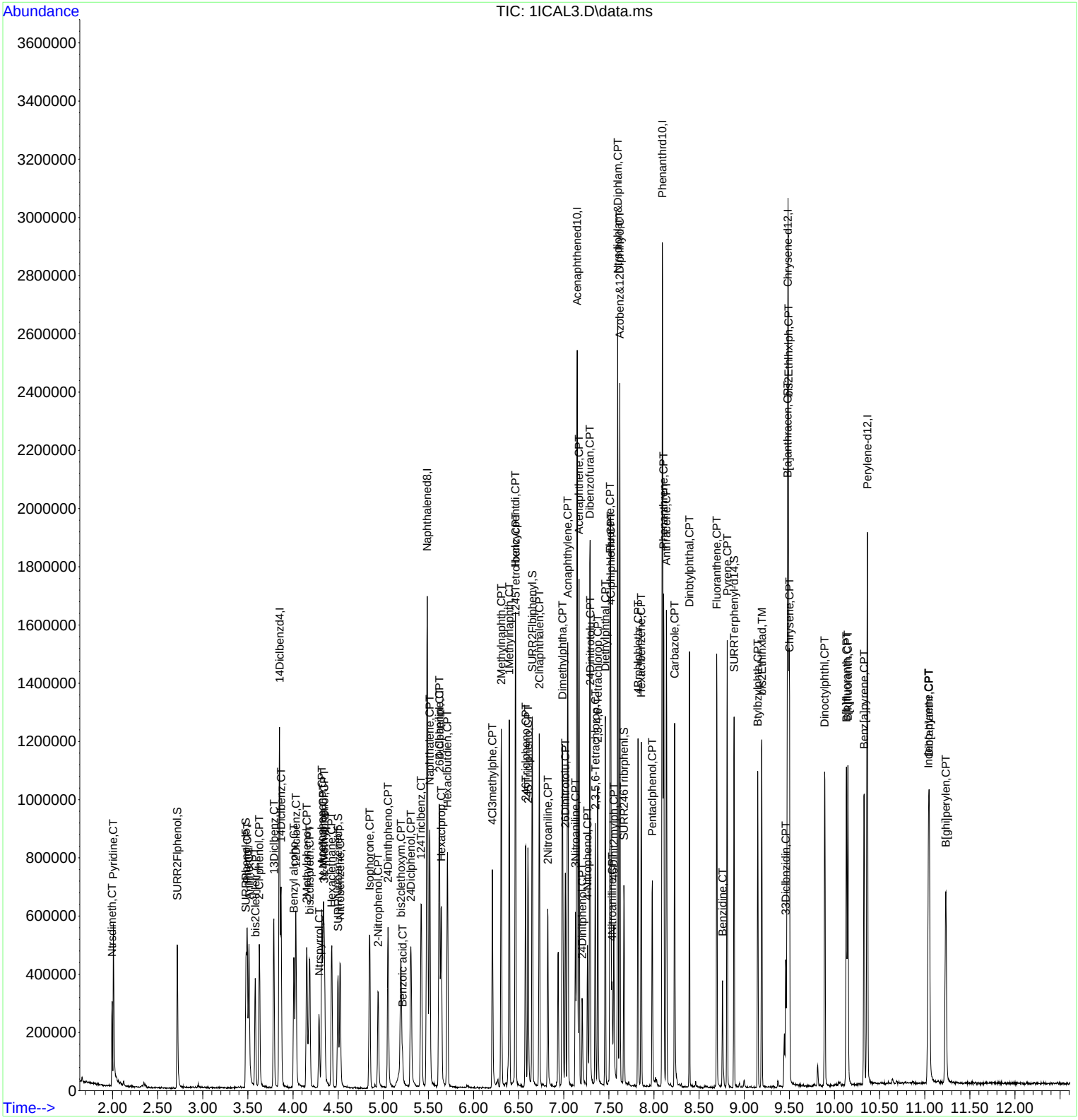
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 1245Tetrclbenz	6.467	216	154409	10.7450	ug/mL	99
42) 246Triclpheno	6.578	196	93509	9.7082	ug/mL	92
43) 245Triclpheno	6.604	196	104799	10.2646	ug/mL	99
45) 2Clnaphthalen	6.729	162	258099	10.0856	ug/mL	97
46) 2Nitroaniline	6.822	65	75111	9.1611	ug/mL	93
47) Acnaphthylene	7.044	152	422440	9.9869	ug/mL	99
48) Dimethylphtha	6.984	163	294126	10.2324	ug/mL	98
49) 26Dinitrotolu	7.018	165	64135	10.0399	ug/mL	96
50) Acenaphthene	7.169	154	255723	10.3622	ug/mL	97
51) 3Nitroaniline	7.129	138	66125	9.9748	ug/mL	90
52) 24Dinitphenol	7.206	184	26630	6.6503	ug/mL	75
53) Dibenzofuran	7.288	168	382756	10.4374	ug/mL	98
54) 24Dinitrotolu	7.294	165	83126	10.0935	ug/mL	82
55) 4-Nitrophenol	7.263	65	59122	8.9106	ug/mL	95
56) 2,3,5,6-Tetrachlorop	7.351	232	86440	9.8956	ug/mL	97
57) 2,3,4,6-Tetrachlorop	7.376	232	92932	9.9924	ug/mL	97
58) Fluorene	7.513	166	305813	10.5382	ug/mL	98
59) 4Clphlphlethr	7.521	204	157627	11.0573	ug/mL	98
60) Diethylphthal	7.462	149	322099	9.7488	ug/mL	95
61) 4Nitroaniline	7.536	138	62603	9.3557	ug/mL	85
64) 46Dinit2mylph	7.555	198	43950	8.4590	ug/mL	94
65) Ntrsdiphlam&Diphlam	7.598	169	432317	21.5993	ug/mL	97
66) Azobenz&12Diphlhyd	7.621	182	132730	20.9015	ug/mL	98
67) 4Brphlphlethr	7.823	248	102372	10.7468	ug/mL	96
68) Hexaclbenzene	7.859	284	113528	10.3889	ug/mL	97
69) Pentaclphenol	7.982	266	58712	8.8933	ug/mL	95
70) Phenanthrene	8.107	178	436613	10.4554	ug/mL	99
71) Anthracene	8.138	178	444103	10.3519	ug/mL	99
72) Carbazole	8.229	167	358329	10.1744	ug/mL	98
73) Dinbtylphthal	8.394	149	384077	10.3702	ug/mL	99
74) Fluoranthene	8.695	202	355932	10.2412	ug/mL	98
76) Benzidine	8.760	184	96992	7.8014	ug/mL	97
77) Pyrene	8.811	202	365905	9.2791	ug/mL	98
79) Btylbzylphth	9.149	149	159619	8.9335	ug/mL	99
80) bis2Ethlhxlad	9.195	129	118756	8.9471	ug/mL	99
81) 33Diclbnzidin	9.459	252	66872	9.3792	ug/mL	97
82) B[a]anthracen	9.479	228	326902	9.3061	ug/mL	98
83) Chrysene	9.502	228	302470	9.3176	ug/mL	98
84) bis2Ethlhxlph	9.490	149	228055	9.8008	ug/mL	99
85) Dinoctylphthl	9.891	149	406719	8.9391	ug/mL	99
87) B[b]fluoranth	10.133	252	338254	10.1554	ug/mL	99
88) B[k]fluoranth	10.150	252	282984	9.5130	ug/mL	97
89) Benz[a]pyrene	10.329	252	313967	10.0358	ug/mL	98
90) Indeno-pyrene	11.042	276	356624	10.2422	ug/mL	98
91) Dib[ah]anthr	11.050	278	293430	10.3394	ug/mL	93
92) B[ghi]perylen	11.235	276	303973	9.9622	ug/mL	99

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL3.D Vial: 17
Acq On : 9 Nov 2016 16:24 Operator: JJY
Sample : ICAL 10ug/ml SVMS7210 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 16:37:34 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:28:47 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL2.D Vial: 18
Acq On : 9 Nov 2016 16:44 Operator: JJY
Sample : ICAL 5ug/ml SVMS7209 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:08:53 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:40:55 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.850	152	177126	20.00	ug/mL	0.00
21) Naphthalened8	5.487	136	810913	20.00	ug/mL	0.00
39) Acenaphthened10	7.146	164	369861	20.00	ug/mL	0.00
63) Phenanthrd10	8.092	188	810464	20.00	ug/mL	0.00
75) Chrysene-d12	9.485	240	559367	20.00	ug/mL	0.00
86) Perylene-d12	10.363	264	535355	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.719	112	50914	12.45	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 12.45%#			
7) SURRPhenol-d5	3.478	99	57653	12.51	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 12.51%			
22) SURRNitrbenzened5	4.498	82	58502	25.54	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 25.54%#			
44) SURR2Flbiphenyl	6.652	172	164063	27.71	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 27.71%#			
62) SURR246Tribrphenl	7.666	330	29792	12.77	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 12.77%#			
78) SURRTerphenyl-d14	8.888	244	114699	24.57	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 24.57%#			
Target Compounds						Qvalue
2) Ntrsdimeth	1.995	74	31677	5.2490	ug/mL	96
3) Pyridine	2.012	79	43386	3.9971	ug/mL	90
5) Aniline	3.512	93	58877	3.8515	ug/mL	87
6) bis2Clethletr	3.580	93	46698	4.9023	ug/mL	91
8) Phenol	3.492	94	67515	5.0478	ug/mL	94
9) 2-Cl-phenol	3.626	128	55699	5.1061	ug/mL	87
10) 13Diclbenz	3.785	146	63346	5.0368	ug/mL	93
11) 14Diclbenz	3.867	146	69137	5.4683	ug/mL	98
12) 12Diclbenz	4.032	146	62248	5.1846	ug/mL	87
13) Benzyl alcoho	4.006	108	35516	4.9595	ug/mL	85
14) bis2clispreth	4.182	45	124410	5.4605	ug/mL	96
15) 2Methylphenol	4.151	107	45402	5.3420	ug/mL	96
16) Ntrspyrrol	4.285	100	28347	5.3014	ug/mL	89
17) Acetophenone	4.316	105	87758	5.4324	ug/mL	96
18) Hexaclethane	4.427	117	29519	5.4800	ug/mL	94
19) N-Ntrsdinprop	4.330	70	42543	5.3290	ug/mL	96
20) 3&4Methylphenol	4.342	107	55622	5.0353	ug/mL	90
23) Nitrobenzene	4.521	77	56661	4.9126	ug/mL	99
24) Isophorone	4.845	82	108833	5.2168	ug/mL	98
25) 2-Nitrophenol	4.944	139	29825	5.0532	ug/mL	96
26) 24Dimthpheno	5.052	122	45296	5.2131	ug/mL	95
27) bis2clethoxym	5.191	93	73683	5.5712	ug/mL	95
28) 24Diclphenol	5.302	162	59884	5.2492	ug/mL	97
29) 124Triclbenz	5.422	180	75012	5.5539	ug/mL	91
30) Benzoic acid	5.183	122	24143	3.9220	ug/mL	94
31) Naphthalene	5.512	128	200947	5.5429	ug/mL	98
32) 4-Cl-aniline	5.618	127	61191	4.3656	ug/mL	97
33) 26Diclphenol	5.620	162	56083	5.4190	ug/mL	84
34) Hexaclprop	5.643	213	56585	5.4918	ug/mL	96
35) Hexaclbutdien	5.711	225	53428	5.4623	ug/mL	97
36) 4Cl3methylphe	6.209	107	58021	5.0547	ug/mL	93
37) 2Methylnaphth	6.308	142	140474	5.5093	ug/mL	90
38) 1Methylnaphth	6.396	141	118210	5.6144	ug/mL	98
40) Hxclcycpentdi	6.464	237	36675	4.6142	ug/mL	96

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL2.D Vial: 18
Acq On : 9 Nov 2016 16:44 Operator: JJY
Sample : ICAL 5ug/ml SVMS7209 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:08:53 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:40:55 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

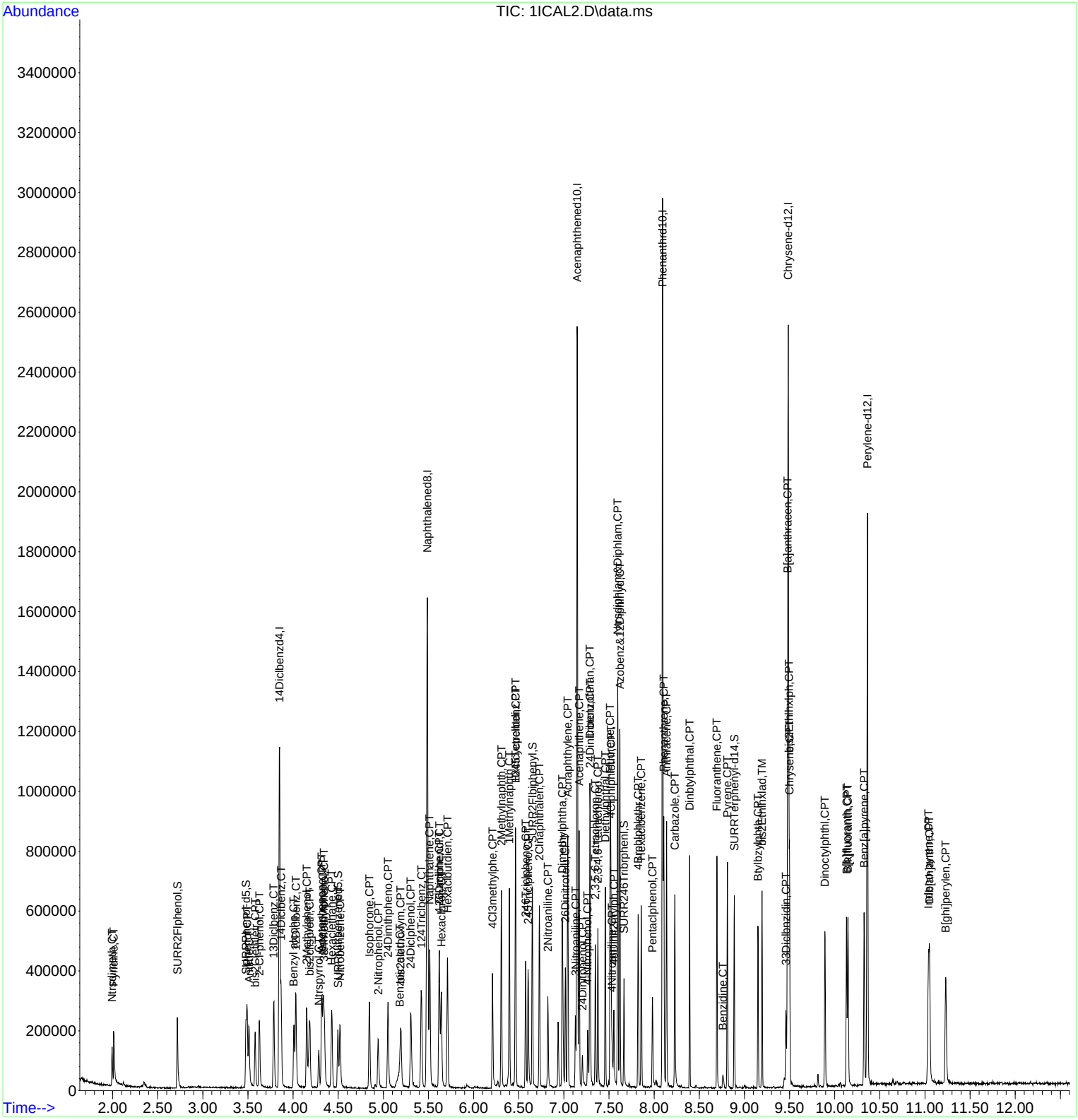
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.464	216	80436	5.7761 ug/mL	92
42) 246Triclpheno	6.578	196	46476	5.0832 ug/mL	88
43) 245Triclpheno	6.604	196	51836	5.2893 ug/mL	98
45) 2Clnaphthalen	6.729	162	136109	5.5608 ug/mL	98
46) 2Nitroaniline	6.822	65	37510	4.8732 ug/mL	100
47) Acnaphthylene	7.041	152	222863	5.5194 ug/mL	98
48) Dimethylphtha	6.981	163	154440	5.6010 ug/mL	94
49) 26Dinitrotolu	7.016	165	34853	5.7096 ug/mL	90
50) Acenaphthene	7.169	154	130694	5.5065 ug/mL	98
51) 3Nitroaniline	7.129	138	27712	4.3803 ug/mL	97
52) 24Dinitphenol	7.206	184	9676	2.7124 ug/mL	87
53) Dibenzofuran	7.288	168	202117	5.7223 ug/mL	96
54) 24Dinitrotolu	7.291	165	43366	5.5045 ug/mL	97
55) 4-Nitrophenol	7.263	65	28192	4.5491 ug/mL	80
56) 2,3,5,6-Tetrachlorop	7.348	232	40583	4.8759 ug/mL	77
57) 2,3,4,6-Tetrachlorop	7.376	232	48602	5.4739 ug/mL	97
58) Fluorene	7.513	166	161745	5.7752 ug/mL	97
59) 4Clphlphlethr	7.521	204	81294	5.8488 ug/mL	94
60) Diethylphthal	7.459	149	175655	5.5961 ug/mL	96
61) 4Nitroaniline	7.533	138	27893	4.4227 ug/mL	94
64) 46Dinit2mylph	7.553	198	19558	4.0718 ug/mL	91
65) Ntrsdiphlam&Diphlam	7.595	169	230710	11.8938 ug/mL	95
66) Azobenz&12Diphlhyd	7.621	182	71278	11.6620 ug/mL#	80
67) 4Brphlphlethr	7.823	248	51348	5.5679 ug/mL	97
68) Hexaclbenzene	7.857	284	58552	5.5738 ug/mL	95
69) Pentaclphenol	7.982	266	26487	4.3013 ug/mL	78
70) Phenanthrene	8.107	178	214844	5.3449 ug/mL	97
71) Anthracene	8.138	178	234691	5.6950 ug/mL	98
72) Carbazole	8.229	167	183670	5.4483 ug/mL	98
73) Dinbtylphthal	8.394	149	195316	5.4880 ug/mL	99
74) Fluoranthene	8.695	202	186055	5.5853 ug/mL	99
76) Benzidine	8.763	184	15268	1.3301 ug/mL	94
77) Pyrene	8.811	202	188155	5.0129 ug/mL	97
79) Btylbzylphth	9.149	149	83401	4.9386 ug/mL	96
80) bis2Ethlhxlad	9.195	129	62927	5.0146 ug/mL	99
81) 33Diclbnzidin	9.459	252	40513	5.9576 ug/mL	96
82) B[a]anthracen	9.479	228	170027	5.0824 ug/mL	92
83) Chrysene	9.499	228	155567	5.0308 ug/mL	95
84) bis2Ethlhxlph	9.493	149	114775	5.1278 ug/mL	99
85) Dinoctylphthl	9.891	149	192847	4.4839 ug/mL	98
87) B[b]fluoranth	10.133	252	161226	5.0659 ug/mL	98
88) B[k]fluoranth	10.147	252	169365	6.0360 ug/mL	98
89) Benz[a]pyrene	10.326	252	164777	5.5255 ug/mL	98
90) Indeno-pyrene	11.039	276	180323	5.4107 ug/mL	97
91) Dib[ah]anthr	11.050	278	148245	5.4469 ug/mL	91
92) B[ghi]perylen	11.229	276	149792	5.1577 ug/mL	98

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL2.D Vial: 18
Acq On : 9 Nov 2016 16:44 Operator: JJY
Sample : ICAL 5ug/ml SVMS7209 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:08:53 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 16:40:55 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL1.D Vial: 19
Acq On : 9 Nov 2016 17:03 Operator: JJY
Sample : ICAL 1ug/ml SVMS7208 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:16:34 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:11:40 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.847	152	178823	20.00	ug/mL	0.00
21) Naphthalened8	5.484	136	815700	20.00	ug/mL	0.00
39) Acenaphthened10	7.146	164	377511	20.00	ug/mL	0.00
63) Phenanthrd10	8.093	188	827417	20.00	ug/mL	0.00
75) Chrysene-d12	9.485	240	570513	20.00	ug/mL	0.00
86) Perylene-d12	10.363	264	567070	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.719	112	8784	2.13	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 2.13%#			
7) SURRPhenol-d5	3.475	99	11376	2.44	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 2.44%#			
22) SURRNitrbenzened5	4.495	82	11178	4.83	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 4.83%#			
44) SURR2Flbiphenyl	6.652	172	32531	5.29	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 5.29%#			
62) SURR246Tribrphenl	7.666	330	5717	2.39	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 2.39%#			
78) SURRTerphenyl-d14	8.888	244	23265	4.90	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 4.90%#			
Target Compounds						Qvalue
2) Ntrsdimeth	1.998	74	5406	0.8800	ug/mL	85
3) Pyridine	2.023	79	7859	0.7420	ug/mL	79
5) Aniline	3.509	93	13811	0.9305	ug/mL#	50
6) bis2Clethletr	3.578	93	10131	1.0569	ug/mL	95
8) Phenol	3.492	94	12042	0.8904	ug/mL	80
9) 2-Cl-phenol	3.629	128	10529	0.9527	ug/mL	88
10) 13Diclbenz	3.788	146	12567	0.9885	ug/mL	84
11) 14Diclbenz	3.867	146	13397	1.0334	ug/mL	90
12) 12Diclbenz	4.032	146	13548	1.1109	ug/mL	94
13) Benzyl alcoho	4.007	108	5893	0.8162	ug/mL#	73
14) bis2clispreth	4.181	45	24722	1.0585	ug/mL	95
15) 2Methylphenol	4.149	107	7650	0.8815	ug/mL#	85
16) Ntrspyrrol	4.282	100	4865	0.8923	ug/mL#	66
17) Acetophenone	4.316	105	15249	0.9217	ug/mL	93
18) Hexaclethane	4.427	117	5742	1.0392	ug/mL	89
19) N-Ntrsdinprop	4.330	70	7528	0.9239	ug/mL	79
20) 3&4Methylphenol	4.345	107	9962	0.8922	ug/mL	86
23) Nitrobenzene	4.521	77	12308	1.0640	ug/mL	90
24) Isophorone	4.845	82	20831	0.9855	ug/mL	99
25) 2-Nitrophenol	4.941	139	4955	0.8331	ug/mL	80
26) 24Dimthpheno	5.052	122	7947	0.9028	ug/mL	95
27) bis2clethoxym	5.194	93	14117	1.0413	ug/mL	99
28) 24Diclphenol	5.308	162	11427	0.9876	ug/mL	91
29) 124Triclbenz	5.422	180	14631	1.0574	ug/mL	80
30) Benzoic acid	5.137	122	2065	0.3459	ug/mL#	57
31) Naphthalene	5.513	128	40584	1.0931	ug/mL	93
32) 4-Cl-aniline	5.615	127	14379	1.0419	ug/mL	92
33) 26Diclphenol	5.621	162	10958	1.0381	ug/mL	95
34) Hexaclprop	5.638	213	10204	0.9687	ug/mL	85
35) Hexaclbutdien	5.709	225	11334	1.1345	ug/mL	85
36) 4Cl3methylphe	6.212	107	9269	0.8013	ug/mL	88
37) 2Methylnaphth	6.305	142	28151	1.0793	ug/mL	98
38) 1Methylnaphth	6.393	141	23964	1.1088	ug/mL	98
40) Hxclcycpentdi	6.464	237	5454	0.6810	ug/mL	75

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL1.D Vial: 19
Acq On : 9 Nov 2016 17:03 Operator: JJY
Sample : ICAL 1ug/ml SVMS7208 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:16:34 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:11:40 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

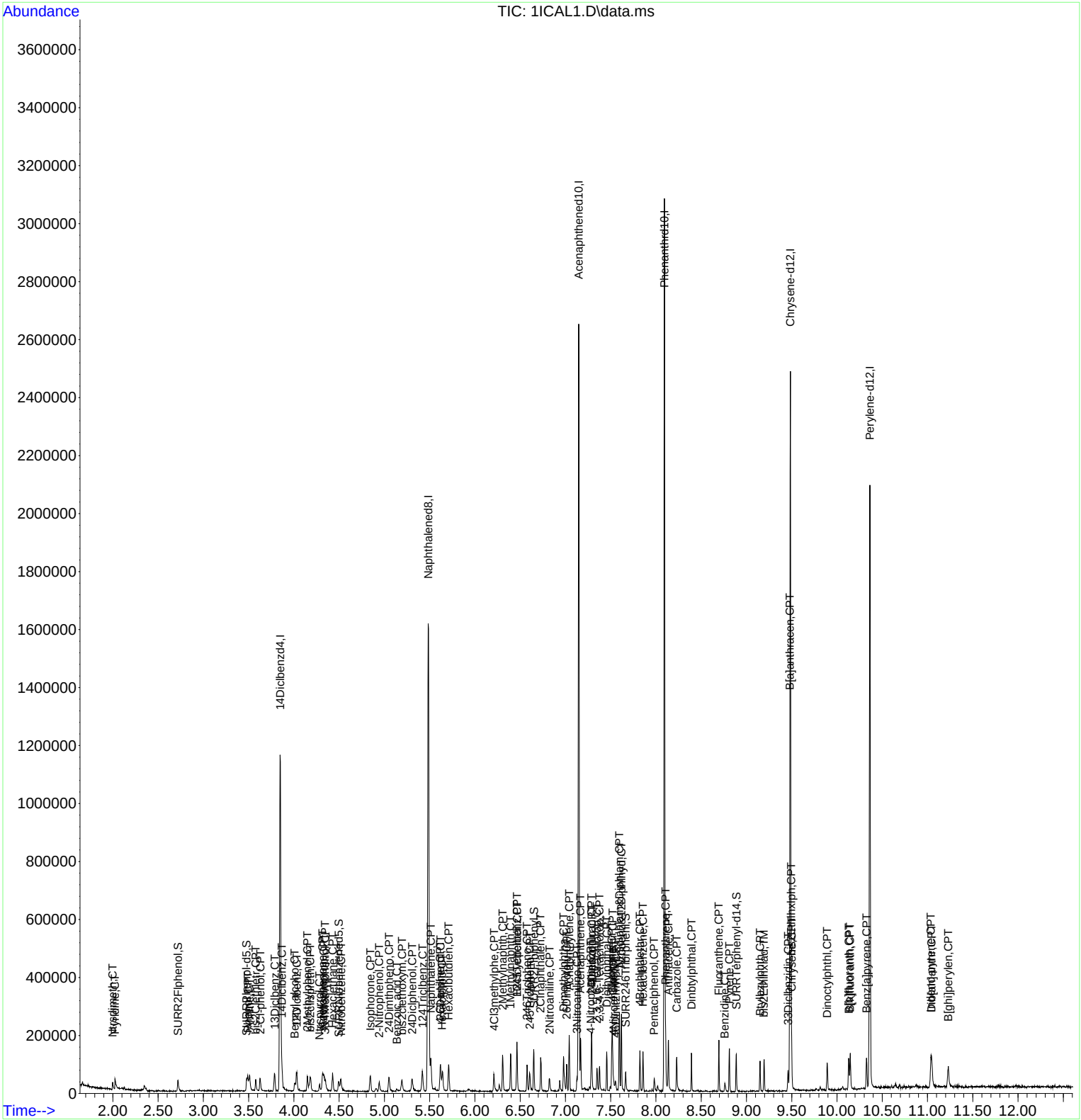
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.464	216	16978	1.1644 ug/mL	95
42) 246Triclpheno	6.575	196	9651	1.0313 ug/mL	84
43) 245Triclpheno	6.606	196	10158	1.0058 ug/mL	91
45) 2Clnaphthalen	6.726	162	27304	1.0729 ug/mL	89
46) 2Nitroaniline	6.825	65	6411	0.8195 ug/mL	80
47) Acnaphthylene	7.041	152	45716	1.0904 ug/mL	95
48) Dimethylphtha	6.979	163	31851	1.1095 ug/mL	97
49) 26Dinitrotolu	7.013	165	6587	1.0328 ug/mL	91
50) Acenaphthene	7.166	154	27305	1.1084 ug/mL	93
51) 3Nitroaniline	7.126	138	6217	0.9831 ug/mL	94
52) 24Dinitphenol	0.000		0	N.D.	
53) Dibenzofuran	7.288	168	41650	1.1281 ug/mL	100
54) 24Dinitrotolu	7.291	165	8218	1.0051 ug/mL	96
55) 4-Nitrophenol	7.280	65	2315	0.3716 ug/mL#	1
56) 2,3,5,6-Tetrachlorop	7.348	232	7596	0.8979 ug/mL	82
57) 2,3,4,6-Tetrachlorop	7.377	232	9552	1.0376 ug/mL	88
58) Fluorene	7.513	166	33205	1.1323 ug/mL	94
59) 4Clphlphlethr	7.521	204	17898	1.2269 ug/mL	90
60) Diethylphthal	7.456	149	33645	1.0297 ug/mL	94
61) 4Nitroaniline	7.533	138	6116	0.9687 ug/mL#	62
64) 46Dinit2mylph	7.556	198	2841	0.5979 ug/mL#	74
65) Ntrsdiphlam&Diphlam	7.595	169	49326	2.4146 ug/mL	98
66) Azobenz&12Diphlhyd	7.618	182	15546	2.4243 ug/mL#	82
67) 4Brphlphlethr	7.823	248	10731	1.1186 ug/mL	82
68) Hexaclbenzene	7.857	284	13086	1.1973 ug/mL	90
69) Pentaclphenol	7.979	266	3753	0.6112 ug/mL	68
70) Phenanthrene	8.107	178	48591	1.1706 ug/mL	96
71) Anthracene	8.138	178	47070	1.0935 ug/mL	95
72) Carbazole	8.229	167	36583	1.0473 ug/mL	93
73) Dinbtylphthal	8.394	149	36665	0.9930 ug/mL	98
74) Fluoranthene	8.695	202	38293	1.1044 ug/mL	94
76) Benzidine	8.760	184	10954	1.0660 ug/mL	93
77) Pyrene	8.811	202	38215	0.9978 ug/mL	97
79) Btylbzylphth	9.150	149	14674	0.8537 ug/mL	83
80) bis2Ethlhxlad	9.192	129	11296	0.8822 ug/mL	95
81) 33Diclbnzidin	9.459	252	11754	1.6423 ug/mL	82
82) B[a]anthracen	9.479	228	35093	1.0257 ug/mL	90
83) Chrysene	9.499	228	31653	1.0026 ug/mL	96
84) bis2Ethlhxlph	9.493	149	21621	0.9431 ug/mL	95
85) Dinoctylphthl	9.891	149	34563	0.8017 ug/mL	100
87) B[b]fluoranth	10.130	252	32589	0.9646 ug/mL	91
88) B[k]fluoranth	10.144	252	34098	1.1090 ug/mL	88
89) Benz[a]pyrene	10.326	252	34167	1.0630 ug/mL	86
90) Indeno-pyrene	11.036	276	36858	1.0300 ug/mL	87
91) Dib[ah]anthr	11.045	278	29180	0.9973 ug/mL	92
92) B[ghi]perylen	11.230	276	30030	0.9711 ug/mL	89

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICAL1.D Vial: 19
Acq On : 9 Nov 2016 17:03 Operator: JJY
Sample : ICAL 1ug/ml SVMS7208 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:16:34 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:11:40 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	96	0.08
2	CT	Ntrsdimeth	20.000	20.981	-4.9	101	0.07
3	CT	Pyridine	20.000	21.503	-7.5	105	0.06
4	S	SURR2Flphenol	50.000	51.569	-3.1	98	0.06
5	CT	Aniline	20.000	21.633	-8.2	103	0.08
6	CPT	bis2Clethletr	20.000	20.959	-4.8	102	0.07
7	S	SURRPhenol-d5	50.000	49.912	0.2	95	0.07
8	CPT	Phenol	20.000	21.583	-7.9	103	0.07
9	CPT	2-Cl-phenol	20.000	21.224	-6.1	102	0.07
10	CT	13Diclbenz	20.000	20.709	-3.5	99	0.08
11	CT	14Diclbenz	20.000	20.352	-1.8	100	0.08
12	CT	12Diclbenz	20.000	20.771	-3.9	100	0.08
13	CT	Benzyl alcoho	20.000	21.607	-8.0	102	0.08
14	CPT	bis2clispreth	20.000	20.291	-1.5	99	0.08
15	CPT	2Methylphenol	20.000	21.422	-7.1	102	0.07
16	CT	Ntrspyrrol	20.000	20.614	-3.1	101	0.08
17	CPT	Acetophenone	20.000	20.099	-0.5	96	0.09
18	CPT	Hexaclethane	20.000	19.954	0.2	97	0.09
19	CPT	N-Ntrsdinprop	20.000	21.237	-6.2	100	0.08
20	CPT	3&4Methylphenol	20.000	21.183	-5.9	100	0.08
21	I	Naphthalened8	20.000	20.000	0.0	96	0.09
22	S	SURRNitrbenzened5	100.000	100.313	-0.3	94	0.09
23	CPT	Nitrobenzene	20.000	21.454	-7.3	104	0.09
24	CPT	Isophorone	20.000	20.899	-4.5	99	0.09
25	CPT	2-Nitrophenol	20.000	21.247	-6.2	97	0.09
26	CPT	24Dimthpheno	20.000	21.382	-6.9	100	0.09
27	CPT	bis2clethoxym	20.000	20.594	-3.0	100	0.10
28	CPT	24Diclphenol	20.000	21.377	-6.9	101	0.09
29	CT	124Triclbenz	20.000	21.188	-5.9	103	0.10
30	CT	Benzoic acid	20.000	20.065	-0.3	95	0.29
31	CPT	Naphthalene	20.000	20.688	-3.4	101	0.09
32	CPT	4-Cl-aniline	20.000	22.151	-10.8	101	0.08
33	CT	26Diclphenol	20.000	20.188	-0.9	93	0.08
34	CT	Hexaclprop	20.000	21.291	-6.5	98	0.09
35	CPT	Hexaclbutdien	20.000	20.909	-4.5	99	0.08
36	CPT	4Cl3methylphe	20.000	21.423	-7.1	98	0.06
37	CPT	2Methylnaphth	20.000	20.656	-3.3	98	0.07
38	CT	1Methylnaphth	20.000	20.657	-3.3	100	0.07
39	I	Acenaphthened10	20.000	20.000	0.0	95	0.05
40	CPT	Hxclcycpentdi	20.000	22.008	-10.0	99	0.07
41	CPT	1245Tetrclbenz	20.000	20.919	-4.6	98	0.07
42	CPT	246Triclpheno	20.000	21.172	-5.9	98	0.06
43	CPT	245Triclpheno	20.000	20.874	-4.4	95	0.06
44	S	SURR2Flbiphenyl	100.000	101.044	-1.0	94	0.06
45	CPT	2Clnaphthalen	20.000	21.386	-6.9	101	0.06
46	CPT	2Nitroaniline	20.000	21.748	-8.7	104	0.06
47	CPT	Acnaphthylene	20.000	21.206	-6.0	100	0.06
48	CPT	Dimethylphtha	20.000	21.218	-6.1	100	0.05
49	CPT	26Dinitrotolu	20.000	21.443	-7.2	102	0.05
50	CPT	Acenaphthene	20.000	21.024	-5.1	100	0.05
51	CPT	3Nitroaniline	20.000	21.619	-8.1	98	0.05

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	20.000	20.997	-5.0	95	0.03
53	CPT	Dibenzofuran	20.000	20.890	-4.5	100	0.05
54	CPT	24Dinitrotolu	20.000	20.567	-2.8	94	0.05
55	CPT	4-Nitrophenol	20.000	21.208	-6.0	97	0.04
56	CT	2,3,5,6-Tetrachlorop	20.000	22.770	-13.8	102	0.05
57	CPT	2,3,4,6-Tetrachlorop	20.000	21.442	-7.2	100	0.05
58	CPT	Fluorene	20.000	21.227	-6.1	100	0.05
59	CPT	4Clphlphlethr	20.000	21.695	-8.5	100	0.05
60	CPT	Diethylphthal	20.000	21.176	-5.9	99	0.05
61	CPT	4Nitroaniline	20.000	22.000	-10.0	101	0.05
62	S	SURR246Tribrphenl	50.000	51.755	-3.5	94	0.05
63	I	Phenanthrd10	20.000	20.000	0.0	93	0.05
64	CPT	46Dinit2mylph	20.000	20.453	-2.3	95	0.05
65	CPT	Ntrsdiphlam&Diphlam	40.000	42.076	-5.2	98	0.05
66	CT	Azobenz&12Diphlhyd	40.000	42.209	-5.5	99	0.05
67	CPT	4Brphlphlethr	20.000	20.672	-3.4	97	0.05
68	CPT	Hexaclbenzene	20.000	20.118	-0.6	95	0.05
69	CPT	Pentaclphenol	20.000	21.651	-8.3	102	0.05
70	CPT	Phenanthrene	20.000	20.629	-3.1	98	0.05
71	CPT	Anthracene	20.000	20.843	-4.2	97	0.05
72	CPT	Carbazole	20.000	20.745	-3.7	98	0.05
73	CPT	Dinbtylphthal	20.000	21.602	-8.0	102	0.04
74	CPT	Fluoranthene	20.000	20.982	-4.9	99	0.04
75	I	Chrysene-d12	20.000	20.000	0.0	97	0.05
76	CT	Benzidine	20.000	18.599	7.0	94	0.04
77	CPT	Pyrene	20.000	20.643	-3.2	100	0.04
78	S	SURRTerphenyl-d14	100.000	97.623	2.4	93	0.04
79	CPT	Btylbzylphth	20.000	21.188	-5.9	100	0.05
80	TM	bis2Ethlhxlad	20.000	20.991	-5.0	99	0.04
81	CPT	33Diclbnzidin	20.000	20.670	-3.4	105	0.05
82	CPT	B[a]anthracen	20.000	21.350	-6.8	102	0.05
83	CPT	Chrysene	20.000	20.271	-1.4	97	0.05
84	CPT	bis2Ethlhxlph	20.000	20.975	-4.9	98	0.05
85	CPT	Dinoctylphthl	20.000	21.538	-7.7	99	0.05
86	I	Perylene-d12	20.000	20.000	0.0	98	0.06
87	CPT	B[b]fluoranth	20.000	20.533	-2.7	101	0.06
88	CPT	B[k]fluoranth	20.000	21.432	-7.2	101	0.05
89	CPT	Benz[a]pyrene	20.000	21.217	-6.1	101	0.06
90	CPT	Indeno-pyrene	20.000	21.498	-7.5	103	0.07
91	CPT	Dib[ah]anthr	20.000	21.502	-7.5	103	0.07
92	CPT	B[ghi]perylen	20.000	21.829	-9.1	103	0.08

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

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	1.000	1.000	0.0	96	0.08
2	CT	Ntrsdimeth	0.675	0.708	-4.9	101	0.07
3	CT	Pyridine	1.141	1.304	-14.3	105	0.06
4	S	SURR2Flphenol	0.452	0.466	-3.1	98	0.06
5	CT	Aniline	1.644	1.819	-10.6	103	0.08
6	CPT	bis2Clethletr	1.081	1.133	-4.8	102	0.07
7	S	SURRPhenol-d5	0.519	0.518	0.2	95	0.07
8	CPT	Phenol	1.489	1.607	-7.9	103	0.07
9	CPT	2-Cl-phenol	1.228	1.303	-6.1	102	0.07
10	CT	13Diclbenz	1.419	1.470	-3.6	99	0.08
11	CT	14Diclbenz	1.457	1.482	-1.7	100	0.08
12	CT	12Diclbenz	1.386	1.439	-3.8	100	0.08
13	CT	Benzyl alcoho	0.786	0.850	-8.1	102	0.08
14	CPT	bis2clispreth	2.634	2.672	-1.4	99	0.08
15	CPT	2Methylphenol	0.954	1.022	-7.1	102	0.07
16	CT	Ntrspyrrol	0.600	0.619	-3.2	101	0.08
17	CPT	Acetophenone	1.830	1.839	-0.5	96	0.09
18	CPT	Hexaclethane	0.621	0.620	0.2	97	0.09
19	CPT	N-Ntrsdinprop	0.901	0.957	-6.2	100	0.08
20	CPT	3&4Methylphenol	1.230	1.302	-5.9	100	0.08
21	I	Naphthalened8	1.000	1.000	0.0	96	0.09
22	S	SURRNitrbenzened5	0.056	0.057	-1.8	94	0.09
23	CPT	Nitrobenzene	0.286	0.307	-7.3	104	0.09
24	CPT	Isophorone	0.517	0.540	-4.4	99	0.09
25	CPT	2-Nitrophenol	0.142	0.151	-6.3	97	0.09
26	CPT	24Dimthpheno	0.213	0.228	-7.0	100	0.09
27	CPT	bis2clethoxym	0.334	0.344	-3.0	100	0.10
28	CPT	24Diclphenol	0.283	0.303	-7.1	101	0.09
29	CT	124Triclbenz	0.342	0.362	-5.8	103	0.10
30	CT	Benzoic acid	0.146	0.154	-5.5	95	0.29
31	CPT	Naphthalene	0.922	0.954	-3.5	101	0.09
32	CPT	4-Cl-aniline	0.340	0.377	-10.9	101	0.08
33	CT	26Diclphenol	0.260	0.263	-1.2	93	0.08
34	CT	Hexaclprop	0.257	0.274	-6.6	98	0.09
35	CPT	Hexaclbutdien	0.250	0.261	-4.4	99	0.08
36	CPT	4Cl3methylphe	0.276	0.295	-6.9	98	0.06
37	CPT	2Methylnaphth	0.647	0.668	-3.2	98	0.07
38	CT	1Methylnaphth	0.538	0.556	-3.3	100	0.07
39	I	Acenaphthened10	1.000	1.000	0.0	95	0.05
40	CPT	Hxclcycpentdi	0.405	0.481	-18.8	99	0.07
41	CPT	1245Tetrclbenz	0.791	0.815	-3.0	98	0.07
42	CPT	246Triclpheno	0.498	0.527	-5.8	98	0.06
43	CPT	245Triclpheno	0.535	0.559	-4.5	95	0.06
44	S	SURR2Flbiphenyl	0.329	0.332	-0.9	94	0.06
45	CPT	2Clnaphthalen	1.362	1.457	-7.0	101	0.06
46	CPT	2Nitroaniline	0.404	0.453	-12.1	104	0.06
47	CPT	Acnaphthylene	2.250	2.386	-6.0	100	0.06
48	CPT	Dimethylphtha	1.545	1.639	-6.1	100	0.05
49	CPT	26Dinitrotolu	0.339	0.364	-7.4	102	0.05
50	CPT	Acenaphthene	1.325	1.393	-5.1	100	0.05
51	CPT	3Nitroaniline	0.334	0.361	-8.1	98	0.05

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	0.178	0.207	-16.3	95	0.03
53	CPT	Dibenzofuran	1.992	2.080	-4.4	100	0.05
54	CPT	24Dinitrotolu	0.433	0.446	-3.0	94	0.05
55	CPT	4-Nitrophenol	0.330	0.350	-6.1	97	0.04
56	CT	2,3,5,6-Tetrachlorop	0.442	0.503	-13.8	102	0.05
57	CPT	2,3,4,6-Tetrachlorop	0.490	0.526	-7.3	100	0.05
58	CPT	Fluorene	1.583	1.680	-6.1	100	0.05
59	CPT	4Clphlphlethr	0.798	0.848	-6.3	100	0.05
60	CPT	Diethylphthal	1.738	1.841	-5.9	99	0.05
61	CPT	4Nitroaniline	0.333	0.366	-9.9	101	0.05
62	S	SURR246Tribrphenl	0.126	0.130	-3.2	94	0.05
63	I	Phenanthrd10	1.000	1.000	0.0	93	0.05
64	CPT	46Dinit2mylph	0.115	0.123	-7.0	95	0.05
65	CPT	Ntrsdiphlam&Diphlam	0.508	0.524	-3.1	98	0.05
66	CT	Azobenz&12Diphlhyd	0.160	0.164	-2.5	99	0.05
67	CPT	4Brphlphlethr	0.236	0.244	-3.4	97	0.05
68	CPT	Hexaclbenzene	0.272	0.273	-0.4	95	0.05
69	CPT	Pentaclphenol	0.148	0.166	-12.2	102	0.05
70	CPT	Phenanthrene	1.028	1.060	-3.1	98	0.05
71	CPT	Anthracene	1.054	1.099	-4.3	97	0.05
72	CPT	Carbazole	0.850	0.882	-3.8	98	0.05
73	CPT	Dinbtylphthal	0.892	0.963	-8.0	102	0.04
74	CPT	Fluoranthene	0.851	0.892	-4.8	99	0.04
75	I	Chrysene-d12	1.000	1.000	0.0	97	0.05
76	CT	Benzidine	0.360	0.376	-4.4	94	0.04
77	CPT	Pyrene	1.342	1.385	-3.2	100	0.04
78	S	SURRTerphenyl-d14	0.166	0.162	2.4	93	0.04
79	CPT	Btylbzylphth	0.590	0.625	-5.9	100	0.05
80	TM	bis2Ethlhxlad	0.441	0.463	-5.0	99	0.04
81	CPT	33Diclbnzidin	0.274	0.240	12.4	105	0.05
82	CPT	B[a]anthracen	1.204	1.285	-6.7	102	0.05
83	CPT	Chrysene	1.107	1.122	-1.4	97	0.05
84	CPT	bis2Ethlhxlph	0.797	0.836	-4.9	98	0.05
85	CPT	Dinoctylphthl	1.469	1.581	-7.6	99	0.05
86	I	Perylene-d12	1.000	1.000	0.0	98	0.06
87	CPT	B[b]fluoranth	1.186	1.217	-2.6	101	0.06
88	CPT	B[k]fluoranth	1.101	1.180	-7.2	101	0.05
89	CPT	Benz[a]pyrene	1.144	1.213	-6.0	101	0.06
90	CPT	Indeno-pyrene	1.267	1.362	-7.5	103	0.07
91	CPT	Dib[ah]anthr	1.032	1.109	-7.5	103	0.07
92	CPT	B[ghi]perylen	1.086	1.186	-9.2	103	0.08

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

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	96	0.00
2	CT	Ntrsdimeth	20.000	20.981	-4.9	101	0.00
3	CT	Pyridine	20.000	21.503	-7.5	105	0.00
4	S	SURR2Flphenol	50.000	51.569	-3.1	98	0.00
5	CT	Aniline	20.000	21.633	-8.2	103	0.00
6	CPT	bis2Clethletr	20.000	20.959	-4.8	102	0.00
7	S	SURRPhenol-d5	50.000	49.912	0.2	95	0.00
8	CPT	Phenol	20.000	21.583	-7.9	103	0.00
9	CPT	2-Cl-phenol	20.000	21.224	-6.1	102	0.00
10	CT	13Diclbenz	20.000	20.709	-3.5	99	0.00
11	CT	14Diclbenz	20.000	20.352	-1.8	100	0.00
12	CT	12Diclbenz	20.000	20.771	-3.9	100	0.00
13	CT	Benzyl alcoho	20.000	21.607	-8.0	102	0.00
14	CPT	bis2clispreth	20.000	20.291	-1.5	99	0.00
15	CPT	2Methylphenol	20.000	21.422	-7.1	102	0.00
16	CT	Ntrspyrrol	20.000	20.614	-3.1	101	0.00
17	CPT	Acetophenone	20.000	20.099	-0.5	96	0.00
18	CPT	Hexaclethane	20.000	19.954	0.2	97	0.00
19	CPT	N-Ntrsdinprop	20.000	21.237	-6.2	100	0.00
20	CPT	3&4Methylphenol	20.000	21.183	-5.9	100	0.00
21	I	Naphthalened8	20.000	20.000	0.0	96	0.00
22	S	SURRNitrbenzened5	100.000	100.313	-0.3	94	0.00
23	CPT	Nitrobenzene	20.000	21.454	-7.3	104	0.00
24	CPT	Isophorone	20.000	20.899	-4.5	99	0.00
25	CPT	2-Nitrophenol	20.000	21.247	-6.2	97	0.00
26	CPT	24Dimthpheno	20.000	21.382	-6.9	100	0.00
27	CPT	bis2clethoxym	20.000	20.594	-3.0	100	0.00
28	CPT	24Diclphenol	20.000	21.377	-6.9	101	0.00
29	CT	124Triclbenz	20.000	21.188	-5.9	103	0.00
30	CT	Benzoic acid	20.000	20.065	-0.3	95	0.00
31	CPT	Naphthalene	20.000	20.688	-3.4	101	0.00
32	CPT	4-Cl-aniline	20.000	22.151	-10.8	101	0.00
33	CT	26Diclphenol	20.000	20.188	-0.9	93	0.00
34	CT	Hexaclprop	20.000	21.291	-6.5	98	0.00
35	CPT	Hexaclbutdien	20.000	20.909	-4.5	99	0.00
36	CPT	4Cl3methylphe	20.000	21.423	-7.1	98	0.00
37	CPT	2Methylnaphth	20.000	20.656	-3.3	98	0.00
38	CT	1Methylnaphth	20.000	20.657	-3.3	100	0.00
39	I	Acenaphthened10	20.000	20.000	0.0	95	0.00
40	CPT	Hxclcycpentdi	20.000	22.008	-10.0	99	0.00
41	CPT	1245Tetrclbenz	20.000	20.919	-4.6	98	0.00
42	CPT	246Triclpheno	20.000	21.172	-5.9	98	0.00
43	CPT	245Triclpheno	20.000	20.874	-4.4	95	0.00
44	S	SURR2Flbiphenyl	100.000	101.044	-1.0	94	0.00
45	CPT	2Clnaphthalen	20.000	21.386	-6.9	101	0.00
46	CPT	2Nitroaniline	20.000	21.748	-8.7	104	0.00
47	CPT	Acnaphthylene	20.000	21.206	-6.0	100	0.00
48	CPT	Dimethylphtha	20.000	21.218	-6.1	100	0.00
49	CPT	26Dinitrotolu	20.000	21.443	-7.2	102	0.00
50	CPT	Acenaphthene	20.000	21.024	-5.1	100	0.00
51	CPT	3Nitroaniline	20.000	21.619	-8.1	98	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	20.000	20.997	-5.0	95	0.00
53	CPT	Dibenzofuran	20.000	20.890	-4.5	100	0.00
54	CPT	24Dinitrotolu	20.000	20.567	-2.8	94	0.00
55	CPT	4-Nitrophenol	20.000	21.208	-6.0	97	0.00
56	CT	2,3,5,6-Tetrachlorop	20.000	22.770	-13.8	102	0.00
57	CPT	2,3,4,6-Tetrachlorop	20.000	21.442	-7.2	100	0.00
58	CPT	Fluorene	20.000	21.227	-6.1	100	0.00
59	CPT	4Clphlphlethr	20.000	21.695	-8.5	100	0.00
60	CPT	Diethylphthal	20.000	21.176	-5.9	99	0.00
61	CPT	4Nitroaniline	20.000	22.000	-10.0	101	0.00
62	S	SURR246Tribrphenl	50.000	51.755	-3.5	94	0.00
63	I	Phenanthrd10	20.000	20.000	0.0	93	0.00
64	CPT	46Dinit2mylph	20.000	20.453	-2.3	95	0.00
65	CPT	Ntrsdiphlam&Diphlam	40.000	42.076	-5.2	98	0.00
66	CT	Azobenz&12Diphlhyd	40.000	42.209	-5.5	99	0.00
67	CPT	4Brphlphlethr	20.000	20.672	-3.4	97	0.00
68	CPT	Hexaclbenzene	20.000	20.118	-0.6	95	0.00
69	CPT	Pentaclphenol	20.000	21.651	-8.3	102	0.00
70	CPT	Phenanthrene	20.000	20.629	-3.1	98	0.00
71	CPT	Anthracene	20.000	20.843	-4.2	97	0.00
72	CPT	Carbazole	20.000	20.745	-3.7	98	0.00
73	CPT	Dinbtylphthal	20.000	21.602	-8.0	102	0.00
74	CPT	Fluoranthene	20.000	20.982	-4.9	99	0.00
75	I	Chrysene-d12	20.000	20.000	0.0	97	0.00
76	CT	Benzidine	20.000	18.599	7.0	94	0.00
77	CPT	Pyrene	20.000	20.643	-3.2	100	0.00
78	S	SURRTerphenyl-d14	100.000	97.623	2.4	93	0.00
79	CPT	Btylbzylphth	20.000	21.188	-5.9	100	0.00
80	TM	bis2Ethlhxlad	20.000	20.991	-5.0	99	0.00
81	CPT	33Diclbnzidin	20.000	20.670	-3.4	105	0.00
82	CPT	B[a]anthracen	20.000	21.350	-6.8	102	0.00
83	CPT	Chrysene	20.000	20.271	-1.4	97	0.00
84	CPT	bis2Ethlhxlph	20.000	20.975	-4.9	98	0.00
85	CPT	Dinoctylphthl	20.000	21.538	-7.7	99	0.00
86	I	Perylene-d12	20.000	20.000	0.0	98	0.00
87	CPT	B[b]fluoranth	20.000	20.533	-2.7	101	0.00
88	CPT	B[k]fluoranth	20.000	21.432	-7.2	101	0.00
89	CPT	Benz[a]pyrene	20.000	21.217	-6.1	101	0.00
90	CPT	Indeno-pyrene	20.000	21.498	-7.5	103	0.00
91	CPT	Dib[ah]anthr	20.000	21.502	-7.5	103	0.00
92	CPT	B[ghi]perylen	20.000	21.829	-9.1	103	0.00

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

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	1.000	1.000	0.0	96	0.00
2	CT	Ntrsdimeth	0.675	0.708	-4.9	101	0.00
3	CT	Pyridine	1.141	1.304	-14.3	105	0.00
4	S	SURR2Flphenol	0.452	0.466	-3.1	98	0.00
5	CT	Aniline	1.644	1.819	-10.6	103	0.00
6	CPT	bis2Clethletr	1.081	1.133	-4.8	102	0.00
7	S	SURRPhenol-d5	0.519	0.518	0.2	95	0.00
8	CPT	Phenol	1.489	1.607	-7.9	103	0.00
9	CPT	2-Cl-phenol	1.228	1.303	-6.1	102	0.00
10	CT	13Diclbenz	1.419	1.470	-3.6	99	0.00
11	CT	14Diclbenz	1.457	1.482	-1.7	100	0.00
12	CT	12Diclbenz	1.386	1.439	-3.8	100	0.00
13	CT	Benzyl alcoho	0.786	0.850	-8.1	102	0.00
14	CPT	bis2clispreth	2.634	2.672	-1.4	99	0.00
15	CPT	2Methylphenol	0.954	1.022	-7.1	102	0.00
16	CT	Ntrspyrrol	0.600	0.619	-3.2	101	0.00
17	CPT	Acetophenone	1.830	1.839	-0.5	96	0.00
18	CPT	Hexaclethane	0.621	0.620	0.2	97	0.00
19	CPT	N-Ntrsdinprop	0.901	0.957	-6.2	100	0.00
20	CPT	3&4Methylphenol	1.230	1.302	-5.9	100	0.00
21	I	Naphthalened8	1.000	1.000	0.0	96	0.00
22	S	SURRNitrbenzened5	0.056	0.057	-1.8	94	0.00
23	CPT	Nitrobenzene	0.286	0.307	-7.3	104	0.00
24	CPT	Isophorone	0.517	0.540	-4.4	99	0.00
25	CPT	2-Nitrophenol	0.142	0.151	-6.3	97	0.00
26	CPT	24Dimthpheno	0.213	0.228	-7.0	100	0.00
27	CPT	bis2clethoxym	0.334	0.344	-3.0	100	0.00
28	CPT	24Diclphenol	0.283	0.303	-7.1	101	0.00
29	CT	124Triclbenz	0.342	0.362	-5.8	103	0.00
30	CT	Benzoic acid	0.146	0.154	-5.5	95	0.00
31	CPT	Naphthalene	0.922	0.954	-3.5	101	0.00
32	CPT	4-Cl-aniline	0.340	0.377	-10.9	101	0.00
33	CT	26Diclphenol	0.260	0.263	-1.2	93	0.00
34	CT	Hexaclprop	0.257	0.274	-6.6	98	0.00
35	CPT	Hexaclbutdien	0.250	0.261	-4.4	99	0.00
36	CPT	4Cl3methylphe	0.276	0.295	-6.9	98	0.00
37	CPT	2Methylnaphth	0.647	0.668	-3.2	98	0.00
38	CT	1Methylnaphth	0.538	0.556	-3.3	100	0.00
39	I	Acenaphthened10	1.000	1.000	0.0	95	0.00
40	CPT	Hxclcycpentdi	0.405	0.481	-18.8	99	0.00
41	CPT	1245Tetrclbenz	0.791	0.815	-3.0	98	0.00
42	CPT	246Triclpheno	0.498	0.527	-5.8	98	0.00
43	CPT	245Triclpheno	0.535	0.559	-4.5	95	0.00
44	S	SURR2Flbiphenyl	0.329	0.332	-0.9	94	0.00
45	CPT	2Clnaphthalen	1.362	1.457	-7.0	101	0.00
46	CPT	2Nitroaniline	0.404	0.453	-12.1	104	0.00
47	CPT	Acnaphthylene	2.250	2.386	-6.0	100	0.00
48	CPT	Dimethylphtha	1.545	1.639	-6.1	100	0.00
49	CPT	26Dinitrotolu	0.339	0.364	-7.4	102	0.00
50	CPT	Acenaphthene	1.325	1.393	-5.1	100	0.00
51	CPT	3Nitroaniline	0.334	0.361	-8.1	98	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	0.178	0.207	-16.3	95	0.00
53	CPT	Dibenzofuran	1.992	2.080	-4.4	100	0.00
54	CPT	24Dinitrotolu	0.433	0.446	-3.0	94	0.00
55	CPT	4-Nitrophenol	0.330	0.350	-6.1	97	0.00
56	CT	2,3,5,6-Tetrachlorop	0.442	0.503	-13.8	102	0.00
57	CPT	2,3,4,6-Tetrachlorop	0.490	0.526	-7.3	100	0.00
58	CPT	Fluorene	1.583	1.680	-6.1	100	0.00
59	CPT	4Clphlphlethr	0.798	0.848	-6.3	100	0.00
60	CPT	Diethylphthal	1.738	1.841	-5.9	99	0.00
61	CPT	4Nitroaniline	0.333	0.366	-9.9	101	0.00
62	S	SURR246Tribrphenl	0.126	0.130	-3.2	94	0.00
63	I	Phenanthrd10	1.000	1.000	0.0	93	0.00
64	CPT	46Dinit2mylph	0.115	0.123	-7.0	95	0.00
65	CPT	Ntrsdiphlam&Diphlam	0.508	0.524	-3.1	98	0.00
66	CT	Azobenz&12Diphlhyd	0.160	0.164	-2.5	99	0.00
67	CPT	4Brphlphlethr	0.236	0.244	-3.4	97	0.00
68	CPT	Hexaclbenzene	0.272	0.273	-0.4	95	0.00
69	CPT	Pentaclphenol	0.148	0.166	-12.2	102	0.00
70	CPT	Phenanthrene	1.028	1.060	-3.1	98	0.00
71	CPT	Anthracene	1.054	1.099	-4.3	97	0.00
72	CPT	Carbazole	0.850	0.882	-3.8	98	0.00
73	CPT	Dinbtylphthal	0.892	0.963	-8.0	102	0.00
74	CPT	Fluoranthene	0.851	0.892	-4.8	99	0.00
75	I	Chrysene-d12	1.000	1.000	0.0	97	0.00
76	CT	Benzidine	0.360	0.376	-4.4	94	0.00
77	CPT	Pyrene	1.342	1.385	-3.2	100	0.00
78	S	SURRTerphenyl-d14	0.166	0.162	2.4	93	0.00
79	CPT	Btylbzylphth	0.590	0.625	-5.9	100	0.00
80	TM	bis2Ethlhxlad	0.441	0.463	-5.0	99	0.00
81	CPT	33Diclbnzidin	0.274	0.240	12.4	105	0.00
82	CPT	B[a]anthracen	1.204	1.285	-6.7	102	0.00
83	CPT	Chrysene	1.107	1.122	-1.4	97	0.00
84	CPT	bis2Ethlhxlph	0.797	0.836	-4.9	98	0.00
85	CPT	Dinoctylphthl	1.469	1.581	-7.6	99	0.00
86	I	Perylene-d12	1.000	1.000	0.0	98	0.00
87	CPT	B[b]fluoranth	1.186	1.217	-2.6	101	0.00
88	CPT	B[k]fluoranth	1.101	1.180	-7.2	101	0.00
89	CPT	Benz[a]pyrene	1.144	1.213	-6.0	101	0.00
90	CPT	Indeno-pyrene	1.267	1.362	-7.5	103	0.00
91	CPT	Dib[ah]anthr	1.032	1.109	-7.5	103	0.00
92	CPT	B[ghi]perylen	1.086	1.186	-9.2	103	0.00

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.850	152	185066	20.00	ug/mL	0.00
21) Naphthalened8	5.490	136	834575	20.00	ug/mL	0.00
39) Acenaphthened10	7.146	164	367531	20.00	ug/mL	0.00
63) Phenanthrd10	8.092	188	813274	20.00	ug/mL	0.00
75) Chrysene-d12	9.488	240	537144	20.00	ug/mL	0.00
86) Perylene-d12	10.368	264	552504	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.716	112	215592	51.57	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 51.57%			
7) SURRPhenol-d5	3.481	99	239601	49.91	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 49.91%			
22) SURRNitrbenzened5	4.501	82	236235	100.31	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 100.31%			
44) SURR2Flbiphenyl	6.652	172	610227	101.04	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 101.04%			
62) SURR246Tribrphenl	7.669	330	119675	51.75	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 51.75%			
78) SURRTerphenyl-d14	8.888	244	435178	97.62	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 97.62%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.995	74	131101	20.9805	ug/mL	99
3) Pyridine	2.006	79	241399	21.5025	ug/mL	97
5) Aniline	3.515	93	336720	21.6333	ug/mL	99
6) bis2Clethletr	3.583	93	209607	20.9589	ug/mL	96
8) Phenol	3.498	94	297371	21.5834	ug/mL	97
9) 2-Cl-phenol	3.629	128	241107	21.2237	ug/mL	97
10) 13Diclbenz	3.788	146	272009	20.7088	ug/mL	94
11) 14Diclbenz	3.867	146	274352	20.3521	ug/mL	98
12) 12Diclbenz	4.032	146	266321	20.7712	ug/mL	97
13) Benzyl alcoho	4.015	108	157215	21.6075	ug/mL	94
14) bis2clispreth	4.184	45	494548	20.2912	ug/mL	99
15) 2Methylphenol	4.154	107	189144	21.4223	ug/mL	94
16) Ntrspyrrol	4.299	100	114533	20.6143	ug/mL	96
17) Acetophenone	4.325	105	340283	20.0988	ug/mL	96
18) Hexaclethane	4.430	117	114741	19.9543	ug/mL	95
19) N-Ntrsdinprop	4.342	70	177136	21.2370	ug/mL	92
20) 3&4Methylphenol	4.353	107	241006	21.1831	ug/mL	98
23) Nitrobenzene	4.527	77	256250	21.4545	ug/mL	96
24) Isophorone	4.856	82	451028	20.8992	ug/mL	99
25) 2-Nitrophenol	4.947	139	126212	21.2474	ug/mL	88
26) 24Dimthpheno	5.058	122	189891	21.3819	ug/mL	97
27) bis2clethoxym	5.200	93	287343	20.5943	ug/mL	90
28) 24Diclphenol	5.311	162	252621	21.3767	ug/mL	99
29) 124Triclbenz	5.424	180	302424	21.1884	ug/mL	91
30) Benzoic acid	5.265	122	128894	20.0655	ug/mL#	70
31) Naphthalene	5.518	128	796290	20.6876	ug/mL	98
32) 4-Cl-aniline	5.623	127	314652	22.1509	ug/mL	95
33) 26Diclphenol	5.626	162	219221	20.1882	ug/mL	87
34) Hexaclprop	5.643	213	228447	21.2910	ug/mL	90
35) Hexaclbutdien	5.711	225	217829	20.9087	ug/mL	97
36) 4Cl3methylphe	6.211	107	246348	21.4231	ug/mL	97
37) 2Methylnaphth	6.308	142	557495	20.6561	ug/mL	100
38) 1Methylnaphth	6.396	141	463888	20.6572	ug/mL	99
40) Hxclcycpentdi	6.464	237	176911	22.0077	ug/mL	98

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

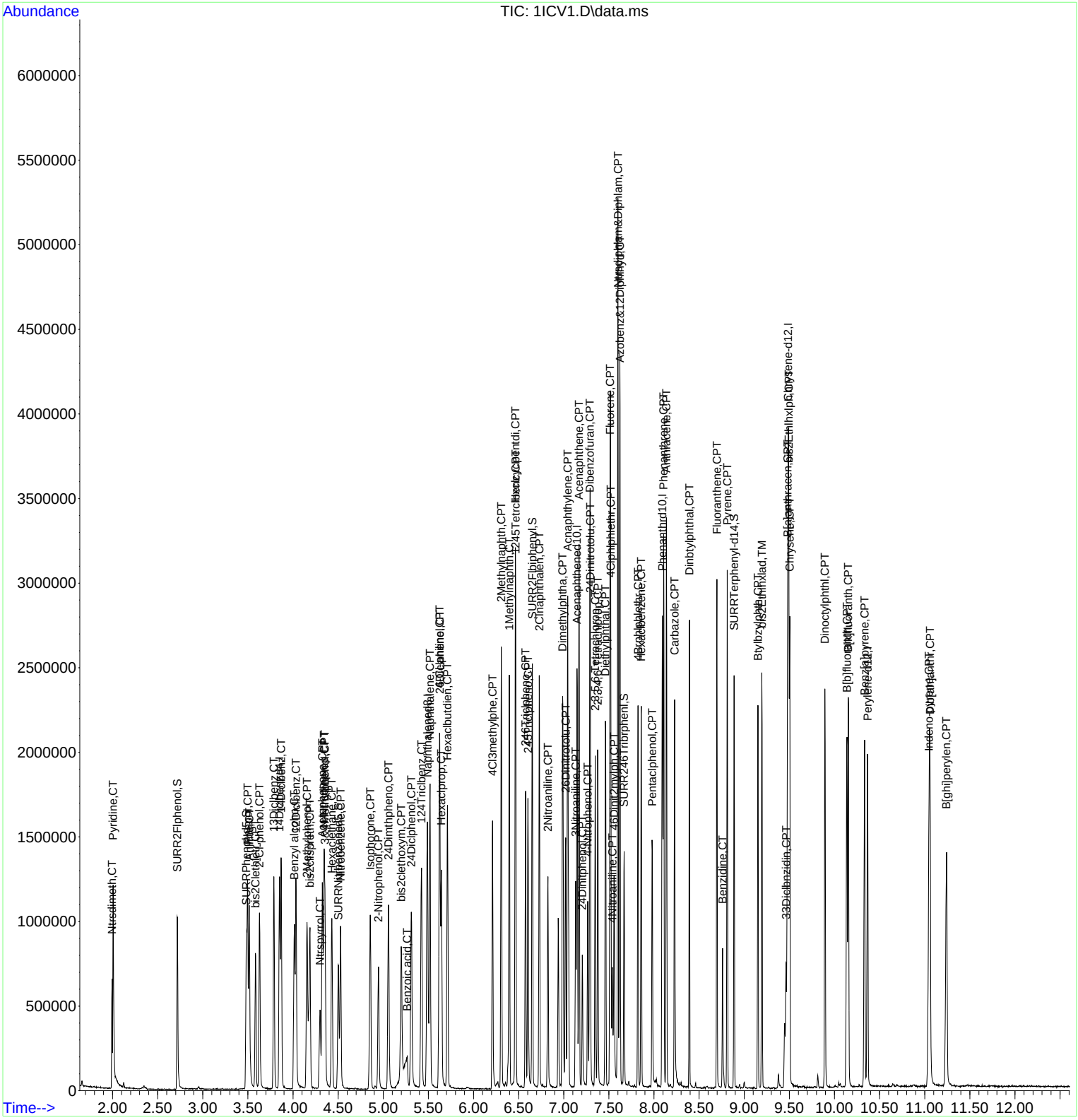
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.467	216	299357	20.9189 ug/mL	94
42) 246Triclpheno	6.578	196	193751	21.1716 ug/mL	94
43) 245Triclpheno	6.604	196	205405	20.8735 ug/mL	99
45) 2Clnaphthalen	6.729	162	535384	21.3855 ug/mL	98
46) 2Nitroaniline	6.825	65	166666	21.7483 ug/mL	96
47) Acnaphthylene	7.044	152	876776	21.2062 ug/mL	99
48) Dimethylphtha	6.987	163	602283	21.2176 ug/mL	97
49) 26Dinitrotolu	7.021	165	133772	21.4433 ug/mL	98
50) Acenaphthene	7.169	154	512036	21.0243 ug/mL	96
51) 3Nitroaniline	7.132	138	132781	21.6188 ug/mL	92
52) 24Dinitphenol	7.206	184	75963	20.9972 ug/mL	77
53) Dibenzofuran	7.288	168	764613	20.8902 ug/mL	98
54) 24Dinitrotolu	7.294	165	163841	20.5674 ug/mL	96
55) 4-Nitrophenol	7.266	65	128639	21.2078 ug/mL	94
56) 2,3,5,6-Tetrachlorop	7.348	232	184806	22.7697 ug/mL	95
57) 2,3,4,6-Tetrachlorop	7.376	232	193199	21.4417 ug/mL	97
58) Fluorene	7.513	166	617491	21.2275 ug/mL	99
59) 4Clphlphlethr	7.521	204	311516	21.6949 ug/mL	98
60) Diethylphthal	7.462	149	676500	21.1765 ug/mL	98
61) 4Nitroaniline	7.538	138	134617	21.9998 ug/mL	91
64) 46Dinit2mylph	7.558	198	100334	20.4531 ug/mL	94
65) Ntrsdiphlam&Diphlam	7.601	169	852688	42.0756 ug/mL	98
66) Azobenz&12Diphlhyd	7.624	182	266943	42.2091 ug/mL	90
67) 4Brphlphlethr	7.823	248	198224	20.6719 ug/mL	97
68) Hexaclbenzene	7.859	284	222212	20.1176 ug/mL	98
69) Pentaclphenol	7.982	266	135182	21.6509 ug/mL	97
70) Phenanthrene	8.107	178	862155	20.6288 ug/mL	98
71) Anthracene	8.138	178	893666	20.8432 ug/mL	99
72) Carbazole	8.229	167	717074	20.7452 ug/mL	98
73) Dinbtylphthal	8.394	149	783221	21.6016 ug/mL	100
74) Fluoranthene	8.698	202	725711	20.9817 ug/mL	96
76) Benzidine	8.760	184	201797	18.5990 ug/mL	96
77) Pyrene	8.811	202	744117	20.6430 ug/mL	98
79) Btylbzylphth	9.152	149	335733	21.1882 ug/mL	93
80) bis2Ethlhxlad	9.195	129	248813	20.9914 ug/mL	100
81) 33Diclbnzidin	9.465	252	128793	20.6704 ug/mL	98
82) B[a]anthracen	9.482	228	690266	21.3497 ug/mL	97
83) Chrysene	9.505	228	602786	20.2714 ug/mL	98
84) bis2Ethlhxlph	9.493	149	449067	20.9751 ug/mL	95
85) Dinoctylphthl	9.894	149	849465	21.5382 ug/mL	98
87) B[b]fluoranth	10.138	252	672473	20.5331 ug/mL	99
88) B[k]fluoranth	10.153	252	652043	21.4317 ug/mL	97
89) Benz[a]pyrene	10.334	252	670390	21.2166 ug/mL	98
90) Indeno-pyrene	11.048	276	752755	21.4982 ug/mL	99
91) Dib[ah]anthr	11.059	278	612723	21.5023 ug/mL	97
92) B[ghi]perylen	11.241	276	655006	21.8294 ug/mL	99

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICV1.D Vial: 20
Acq On : 9 Nov 2016 17:22 Operator: JJY
Sample : ICV 20ug/ml SVMS7215 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:36:31 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV2.D Vial: 21
Acq On : 9 Nov 2016 17:42 Operator: JJY
Sample : ICV 40ug/ml SVMS7216 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:55:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	102	0.08
2	CT	Ntrsdimeth	40.000	41.262	-3.2	101	0.07
3	CT	Pyridine	40.000	40.518	-1.3	101	0.06
4	S	SURR2Flphenol	100.000	100.396	-0.4	96	0.06
5	CT	Aniline	40.000	39.836	0.4	98	0.08
6	CPT	bis2Clethletr	40.000	41.113	-2.8	101	0.08
7	S	SURRPhenol-d5	100.000	97.208	2.8	96	0.08
8	CPT	Phenol	40.000	41.817	-4.5	99	0.08
9	CPT	2-Cl-phenol	40.000	40.374	-0.9	99	0.08
10	CT	13Diclbenz	40.000	39.552	1.1	98	0.08
11	CT	14Diclbenz	40.000	38.907	2.7	99	0.08
12	CT	12Diclbenz	40.000	39.831	0.4	102	0.09
13	CT	Benzyl alcoho	40.000	43.057	-7.6	100	0.09
14	CPT	bis2clispreth	40.000	39.082	2.3	99	0.08
15	CPT	2Methylphenol	40.000	41.148	-2.9	101	0.08
16	CT	Ntrspyrrol	40.000	40.692	-1.7	99	0.10
17	CPT	Acetophenone	40.000	38.986	2.5	96	0.09
18	CPT	Hexaclethane	40.000	39.592	1.0	99	0.09
19	CPT	N-Ntrsdinprop	40.000	40.707	-1.8	99	0.09
20	CPT	3&4Methylphenol	40.000	40.483	-1.2	97	0.09
21	I	Naphthalened8	20.000	20.000	0.0	96	0.09
22	S	SURRNitrbenzened5	200.000	203.022	-1.5	95	0.09
23	CPT	Nitrobenzene	40.000	42.615	-6.5	98	0.09
24	CPT	Isophorone	40.000	41.888	-4.7	100	0.10
25	CPT	2-Nitrophenol	40.000	43.785	-9.5	102	0.09
26	CPT	24Dimthpheno	40.000	42.157	-5.4	97	0.09
27	CPT	bis2clethoxym	40.000	41.103	-2.8	100	0.10
28	CPT	24Diclphenol	40.000	40.916	-2.3	98	0.10
29	CT	124Triclbenz	40.000	40.429	-1.1	98	0.10
30	CT	Benzoic acid	40.000	42.023	-5.1	97	0.35
31	CPT	Naphthalene	40.000	39.518	1.2	97	0.10
32	CPT	4-Cl-aniline	40.000	41.985	-5.0	98	0.09
33	CT	26Diclphenol	40.000	38.379	4.1	96	0.09
34	CT	Hexaclprop	40.000	40.048	-0.1	98	0.09
35	CPT	Hexaclbutdien	40.000	38.903	2.7	96	0.08
36	CPT	4Cl3methylphe	40.000	41.313	-3.3	95	0.07
37	CPT	2Methylnaphth	40.000	39.788	0.5	99	0.07
38	CT	1Methylnaphth	40.000	38.783	3.0	97	0.07
39	I	Acenaphthened10	20.000	20.000	0.0	97	0.05
40	CPT	Hxclcycpentdi	40.000	42.735	-6.8	103	0.07
41	CPT	1245Tetrclbenz	40.000	40.213	-0.5	96	0.07
42	CPT	246Triclpheno	40.000	39.043	2.4	94	0.06
43	CPT	245Triclpheno	40.000	39.693	0.8	99	0.06
44	S	SURR2Flbiphenyl	200.000	187.296	6.4	93	0.06
45	CPT	2Clnaphthalen	40.000	38.833	2.9	97	0.06
46	CPT	2Nitroaniline	40.000	41.094	-2.7	98	0.06
47	CPT	Acnaphthylene	40.000	39.710	0.7	99	0.06
48	CPT	Dimethylphtha	40.000	38.040	4.9	96	0.06
49	CPT	26Dinitrotolu	40.000	39.264	1.8	96	0.06
50	CPT	Acenaphthene	40.000	39.349	1.6	100	0.06
51	CPT	3Nitroaniline	40.000	42.112	-5.3	100	0.06

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV2.D Vial: 21
Acq On : 9 Nov 2016 17:42 Operator: JJY
Sample : ICV 40ug/ml SVMS7216 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:55:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	40.000	40.338	-0.8	94	0.04
53	CPT	Dibenzofuran	40.000	38.375	4.1	99	0.05
54	CPT	24Dinitrotolu	40.000	39.296	1.8	97	0.06
55	CPT	4-Nitrophenol	40.000	41.740	-4.4	99	0.05
56	CT	2,3,5,6-Tetrachlorop	40.000	41.548	-3.9	98	0.05
57	CPT	2,3,4,6-Tetrachlorop	40.000	39.374	1.6	98	0.05
58	CPT	Fluorene	40.000	36.706	8.2	94	0.06
59	CPT	4Clphlphlethr	40.000	40.676	-1.7	98	0.05
60	CPT	Diethylphthal	40.000	39.104	2.2	97	0.05
61	CPT	4Nitroaniline	40.000	42.053	-5.1	98	0.06
62	S	SURR246Tribrphenl	100.000	96.100	3.9	92	0.05
63	I	Phenanthrd10	20.000	20.000	0.0	98	0.05
64	CPT	46Dinit2mylph	40.000	40.165	-0.4	96	0.05
65	CPT	Ntrsdiphlam&Diphlam	80.000	83.185	-4.0	99	0.05
66	CT	Azobenz&12Diphlhyd	80.000	79.820	0.2	97	0.05
67	CPT	4Brphlphlethr	40.000	37.841	5.4	98	0.05
68	CPT	Hexaclbenzene	40.000	37.165	7.1	97	0.05
69	CPT	Pentaclphenol	40.000	41.512	-3.8	100	0.05
70	CPT	Phenanthrene	40.000	38.698	3.3	99	0.05
71	CPT	Anthracene	40.000	38.055	4.9	98	0.05
72	CPT	Carbazole	40.000	38.938	2.7	98	0.05
73	CPT	Dinbtylphthal	40.000	39.283	1.8	98	0.04
74	CPT	Fluoranthene	40.000	38.523	3.7	97	0.05
75	I	Chrysene-d12	20.000	20.000	0.0	98	0.05
76	CT	Benzidine	40.000	39.249	1.9	95	0.05
77	CPT	Pyrene	40.000	42.211	-5.5	99	0.05
78	S	SURRTerphenyl-d14	200.000	198.926	0.5	93	0.05
79	CPT	Btylbzylphth	40.000	43.439	-8.6	98	0.05
80	TM	bis2Ethlhxlad	40.000	42.867	-7.2	97	0.05
81	CPT	33Diclbnzidin	40.000	43.614	-9.0	109	0.05
82	CPT	B[a]anthracen	40.000	43.075	-7.7	104	0.05
83	CPT	Chrysene	40.000	40.313	-0.8	96	0.06
84	CPT	bis2Ethlhxlph	40.000	41.211	-3.0	98	0.05
85	CPT	Dinoctylphthl	40.000	44.144	-10.4	100	0.05
86	I	Perylene-d12	20.000	20.000	0.0	99	0.06
87	CPT	B[b]fluoranth	40.000	41.756	-4.4	99	0.06
88	CPT	B[k]fluoranth	40.000	36.561	8.6	101	0.07
89	CPT	Benz[a]pyrene	40.000	39.616	1.0	100	0.07
90	CPT	Indeno-pyrene	40.000	39.486	1.3	99	0.09
91	CPT	Dib[ah]anthr	40.000	40.216	-0.5	100	0.09
92	CPT	B[ghi]perylen	40.000	40.509	-1.3	100	0.09

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

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV2.D Vial: 21
Acq On : 9 Nov 2016 17:42 Operator: JJY
Sample : ICV 40ug/ml SVMS7216 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:55:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	102	0.00
2	CT	Ntrsdimeth	40.000	41.262	-3.2	101	0.00
3	CT	Pyridine	40.000	40.518	-1.3	101	0.00
4	S	SURR2Flphenol	100.000	100.396	-0.4	96	0.00
5	CT	Aniline	40.000	39.836	0.4	98	0.00
6	CPT	bis2Clethletr	40.000	41.113	-2.8	101	0.00
7	S	SURRPhenol-d5	100.000	97.208	2.8	96	0.00
8	CPT	Phenol	40.000	41.817	-4.5	99	0.01
9	CPT	2-Cl-phenol	40.000	40.374	-0.9	99	0.00
10	CT	13Diclbenz	40.000	39.552	1.1	98	0.00
11	CT	14Diclbenz	40.000	38.907	2.7	99	0.00
12	CT	12Diclbenz	40.000	39.831	0.4	102	0.00
13	CT	Benzyl alcoho	40.000	43.057	-7.6	100	0.00
14	CPT	bis2clispreth	40.000	39.082	2.3	99	0.00
15	CPT	2Methylphenol	40.000	41.148	-2.9	101	0.00
16	CT	Ntrspyrrol	40.000	40.692	-1.7	99	0.02
17	CPT	Acetophenone	40.000	38.986	2.5	96	0.00
18	CPT	Hexaclethane	40.000	39.592	1.0	99	0.00
19	CPT	N-Ntrsdinprop	40.000	40.707	-1.8	99	0.01
20	CPT	3&4Methylphenol	40.000	40.483	-1.2	97	0.01
21	I	Naphthalened8	20.000	20.000	0.0	96	0.00
22	S	SURRNitrbenzened5	200.000	203.022	-1.5	95	0.00
23	CPT	Nitrobenzene	40.000	42.615	-6.5	98	0.00
24	CPT	Isophorone	40.000	41.888	-4.7	100	0.01
25	CPT	2-Nitrophenol	40.000	43.785	-9.5	102	0.00
26	CPT	24Dimthpheno	40.000	42.157	-5.4	97	0.01
27	CPT	bis2clethoxym	40.000	41.103	-2.8	100	0.00
28	CPT	24Diclphenol	40.000	40.916	-2.3	98	0.01
29	CT	124Triclbenz	40.000	40.429	-1.1	98	0.00
30	CT	Benzoic acid	40.000	42.023	-5.1	97	0.07
31	CPT	Naphthalene	40.000	39.518	1.2	97	0.00
32	CPT	4-Cl-aniline	40.000	41.985	-5.0	98	0.00
33	CT	26Diclphenol	40.000	38.379	4.1	96	0.00
34	CT	Hexaclprop	40.000	40.048	-0.1	98	0.00
35	CPT	Hexaclbutdien	40.000	38.903	2.7	96	0.00
36	CPT	4Cl3methylphe	40.000	41.313	-3.3	95	0.00
37	CPT	2Methylnaphth	40.000	39.788	0.5	99	0.00
38	CT	1Methylnaphth	40.000	38.783	3.0	97	0.00
39	I	Acenaphthened10	20.000	20.000	0.0	97	0.00
40	CPT	Hxclcycpentdi	40.000	42.735	-6.8	103	0.00
41	CPT	1245Tetrclbenz	40.000	40.213	-0.5	96	0.00
42	CPT	246Triclpheno	40.000	39.043	2.4	94	0.00
43	CPT	245Triclpheno	40.000	39.693	0.8	99	0.00
44	S	SURR2Flbiphenyl	200.000	187.296	6.4	93	0.00
45	CPT	2Clnaphthalen	40.000	38.833	2.9	97	0.00
46	CPT	2Nitroaniline	40.000	41.094	-2.7	98	0.00
47	CPT	Acnaphthylene	40.000	39.710	0.7	99	0.00
48	CPT	Dimethylphtha	40.000	38.040	4.9	96	0.00
49	CPT	26Dinitrotolu	40.000	39.264	1.8	96	0.00
50	CPT	Acenaphthene	40.000	39.349	1.6	100	0.00
51	CPT	3Nitroaniline	40.000	42.112	-5.3	100	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S110916\1ICV2.D Vial: 21
Acq On : 9 Nov 2016 17:42 Operator: JJY
Sample : ICV 40ug/ml SVMS7216 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:55:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	40.000	40.338	-0.8	94	0.00
53	CPT	Dibenzofuran	40.000	38.375	4.1	99	0.00
54	CPT	24Dinitrotolu	40.000	39.296	1.8	97	0.00
55	CPT	4-Nitrophenol	40.000	41.740	-4.4	99	0.00
56	CT	2,3,5,6-Tetrachlorop	40.000	41.548	-3.9	98	0.00
57	CPT	2,3,4,6-Tetrachlorop	40.000	39.374	1.6	98	0.00
58	CPT	Fluorene	40.000	36.706	8.2	94	0.00
59	CPT	4Clphlphlethr	40.000	40.676	-1.7	98	0.00
60	CPT	Diethylphthal	40.000	39.104	2.2	97	0.00
61	CPT	4Nitroaniline	40.000	42.053	-5.1	98	0.01
62	S	SURR246Tribrphenl	100.000	96.100	3.9	92	0.00
63	I	Phenanthrd10	20.000	20.000	0.0	98	0.00
64	CPT	46Dinit2mylph	40.000	40.165	-0.4	96	0.00
65	CPT	Ntrsdiphlam&Diphlam	80.000	83.185	-4.0	99	0.00
66	CT	Azobenz&12Diphlhyd	80.000	79.820	0.2	97	0.00
67	CPT	4Brphlphlethr	40.000	37.841	5.4	98	0.00
68	CPT	Hexaclbenzene	40.000	37.165	7.1	97	0.00
69	CPT	Pentaclphenol	40.000	41.512	-3.8	100	0.00
70	CPT	Phenanthrene	40.000	38.698	3.3	99	0.00
71	CPT	Anthracene	40.000	38.055	4.9	98	0.00
72	CPT	Carbazole	40.000	38.938	2.7	98	0.00
73	CPT	Dinbtylphthal	40.000	39.283	1.8	98	0.00
74	CPT	Fluoranthene	40.000	38.523	3.7	97	0.00
75	I	Chrysene-d12	20.000	20.000	0.0	98	0.00
76	CT	Benzidine	40.000	39.249	1.9	95	0.00
77	CPT	Pyrene	40.000	42.211	-5.5	99	0.00
78	S	SURRTerphenyl-d14	200.000	198.926	0.5	93	0.00
79	CPT	Btylbzylphth	40.000	43.439	-8.6	98	0.00
80	TM	bis2Ethlhxlad	40.000	42.867	-7.2	97	0.00
81	CPT	33Diclbnzidin	40.000	43.614	-9.0	109	0.00
82	CPT	B[a]anthracen	40.000	43.075	-7.7	104	0.00
83	CPT	Chrysene	40.000	40.313	-0.8	96	0.00
84	CPT	bis2Ethlhxlph	40.000	41.211	-3.0	98	0.00
85	CPT	Dinoctylphthl	40.000	44.144	-10.4	100	0.00
86	I	Perylene-d12	20.000	20.000	0.0	99	0.00
87	CPT	B[b]fluoranth	40.000	41.756	-4.4	99	0.00
88	CPT	B[k]fluoranth	40.000	36.561	8.6	101	0.00
89	CPT	Benz[a]pyrene	40.000	39.616	1.0	100	0.00
90	CPT	Indeno-pyrene	40.000	39.486	1.3	99	0.01
91	CPT	Dib[ah]anthr	40.000	40.216	-0.5	100	0.01
92	CPT	B[ghi]perylen	40.000	40.509	-1.3	100	0.01

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICV2.D Vial: 21
Acq On : 9 Nov 2016 17:42 Operator: JJY
Sample : ICV 40ug/ml SVMS7216 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:55:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.853	152	185578	20.00	ug/mL	0.00
21) Naphthalened8	5.490	136	817438	20.00	ug/mL	0.00
39) Acenaphthened10	7.146	164	369371	20.00	ug/mL	0.00
63) Phenanthrd10	8.090	188	810760	20.00	ug/mL	0.00
75) Chrysene-d12	9.493	240	493707	20.00	ug/mL	0.00
86) Perylene-d12	10.371	264	546492	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.719	112	420876	100.40	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 100.40%			
7) SURRPhenol-d5	3.492	99	467936	97.21	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 97.21%			
22) SURRNitrbenzened5	4.509	82	468297	203.02	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 203.02%#			
44) SURR2Flbiphenyl	6.652	172	1136787	187.30	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 187.30%#			
62) SURR246Tribrphenl	7.669	330	223329	96.10	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 96.10%			
78) SURRTerphenyl-d14	8.891	244	815054	198.93	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 198.93%#			
Target Compounds						Qvalue
2) Ntrsdimeth	1.998	74	258547	41.2619	ug/mL	94
3) Pyridine	2.003	79	470037	40.5178	ug/mL	92
5) Aniline	3.521	93	647868	39.8362	ug/mL	99
6) bis2Clethletr	3.589	93	412302	41.1128	ug/mL	94
8) Phenol	3.506	94	577740	41.8171	ug/mL	98
9) 2-Cl-phenol	3.631	128	459932	40.3742	ug/mL	95
10) 13Diclbenz	3.790	146	520951	39.5520	ug/mL	95
11) 14Diclbenz	3.870	146	525925	38.9067	ug/mL	96
12) 12Diclbenz	4.035	146	512111	39.8309	ug/mL	97
13) Benzyl alcoho	4.023	108	314149	43.0572	ug/mL	93
14) bis2clispreth	4.188	45	955163	39.0820	ug/mL	97
15) 2Methylphenol	4.163	107	364316	41.1484	ug/mL	99
16) Ntrspyrrol	4.316	100	226709	40.6918	ug/mL	87
17) Acetophenone	4.333	105	661885	38.9864	ug/mL	98
18) Hexaclethane	4.433	117	228292	39.5920	ug/mL	97
19) N-Ntrsdinprop	4.353	70	340470	40.7067	ug/mL	93
20) 3&4Methylphenol	4.364	107	461855	40.4826	ug/mL	96
23) Nitrobenzene	4.535	77	498538	42.6150	ug/mL	96
24) Isophorone	4.867	82	885426	41.8880	ug/mL	99
25) 2-Nitrophenol	4.953	139	254746	43.7848	ug/mL	91
26) 24Dimthpheno	5.066	122	366705	42.1570	ug/mL	97
27) bis2clethoxym	5.208	93	561711	41.1026	ug/mL	98
28) 24Diclphenol	5.319	162	473604	40.9164	ug/mL	99
29) 124Triclbenz	5.427	180	565198	40.4290	ug/mL	88
30) Benzoic acid	5.328	122	274761	42.0226	ug/mL	80
31) Naphthalene	5.521	128	1489841	39.5175	ug/mL	99
32) 4-Cl-aniline	5.629	127	584147	41.9849	ug/mL	94
33) 26Diclphenol	5.629	162	408201	38.3795	ug/mL	94
34) Hexaclprop	5.646	213	420876	40.0475	ug/mL	95
35) Hexaclbutdien	5.711	225	396975	38.9031	ug/mL	99
36) 4Cl3methylphe	6.214	107	465304	41.3125	ug/mL	96
37) 2Methylnaphth	6.311	142	1051816	39.7885	ug/mL	92
38) 1Methylnaphth	6.399	141	853044	38.7828	ug/mL	98
40) Hxclcycpentdi	6.464	237	336386	42.7348	ug/mL	97

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICV2.D Vial: 21
Acq On : 9 Nov 2016 17:42 Operator: JJY
Sample : ICV 40ug/ml SVMS7216 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:55:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

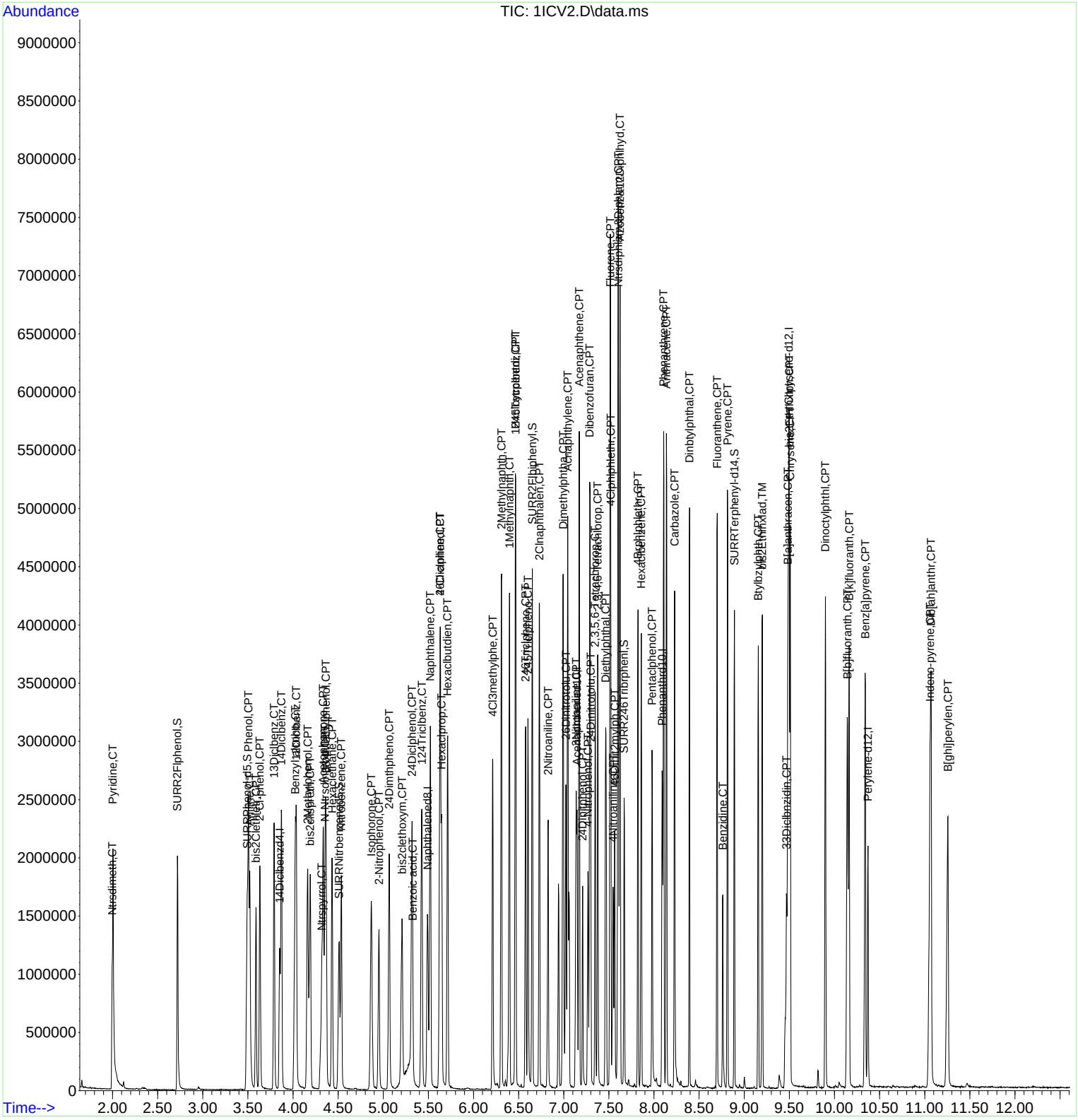
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.467	216	540944	40.2131 ug/mL	98
42) 246Triclpheno	6.578	196	359088	39.0428 ug/mL	95
43) 245Triclpheno	6.604	196	392553	39.6930 ug/mL	96
45) 2Clnaphthalen	6.731	162	977053	38.8333 ug/mL	97
46) 2Nitroaniline	6.828	65	321407	41.0940 ug/mL	94
47) Acnaphthylene	7.044	152	1650054	39.7103 ug/mL	99
48) Dimethylphtha	6.993	163	1085198	38.0396 ug/mL	96
49) 26Dinitrotolu	7.024	165	246170	39.2639 ug/mL	98
50) Acenaphthene	7.172	154	963116	39.3488 ug/mL	95
51) 3Nitroaniline	7.138	138	259943	42.1119 ug/mL	94
52) 24Dinitphenol	7.209	184	155284	40.3375 ug/mL	79
53) Dibenzofuran	7.288	168	1411626	38.3753 ug/mL	98
54) 24Dinitrotolu	7.300	165	314603	39.2962 ug/mL	84
55) 4-Nitrophenol	7.268	65	254446	41.7397 ug/mL	99
56) 2,3,5,6-Tetrachlorop	7.348	232	338902	41.5477 ug/mL	96
57) 2,3,4,6-Tetrachlorop	7.376	232	356554	39.3742 ug/mL	98
58) Fluorene	7.516	166	1073097	36.7061 ug/mL	98
59) 4Clphlphlethr	7.521	204	537089	40.6756 ug/mL	99
60) Diethylphthal	7.464	149	1255455	39.1037 ug/mL	98
61) 4Nitroaniline	7.547	138	258613	42.0533 ug/mL	98
64) 46Dinit2mylph	7.564	198	199265	40.1652 ug/mL	94
65) Ntrsdiphlam&Diphlam	7.604	169	1546514	83.1855 ug/mL	99
66) Azobenz&12Diphlhyd	7.624	182	476699	79.8198 ug/mL#	88
67) 4Brphlphlethr	7.822	248	361736	37.8408 ug/mL	96
68) Hexaclbenzene	7.859	284	409249	37.1655 ug/mL	96
69) Pentaclphenol	7.979	266	262775	41.5124 ug/mL	97
70) Phenanthrene	8.107	178	1612336	38.6980 ug/mL	98
71) Anthracene	8.138	178	1626596	38.0552 ug/mL	100
72) Carbazole	8.229	167	1341755	38.9378 ug/mL	99
73) Dinbtylphthal	8.394	149	1419895	39.2828 ug/mL	99
74) Fluoranthene	8.700	202	1328316	38.5232 ug/mL	99
76) Benzidine	8.763	184	428005	39.2487 ug/mL	98
77) Pyrene	8.814	202	1398545	42.2113 ug/mL	99
79) Btylbzylphth	9.155	149	632646	43.4393 ug/mL	96
80) bis2Ethlhxlad	9.201	129	467014	42.8666 ug/mL	99
81) 33Diclbnzidin	9.468	252	279592	43.6144 ug/mL	92
82) B[a]anthracen	9.485	228	1280041	43.0745 ug/mL	99
83) Chrysene	9.510	228	1101813	40.3135 ug/mL	99
84) bis2Ethlhxlph	9.499	149	810962	41.2111 ug/mL	97
85) Dinoctylphthl	9.900	149	1600248	44.1442 ug/mL	99
87) B[b]fluoranth	10.144	252	1352648	41.7557 ug/mL	99
88) B[k]fluoranth	10.164	252	1100236	36.5610 ug/mL	99
89) Benz[a]pyrene	10.343	252	1238158	39.6165 ug/mL	98
90) Indeno-pyrene	11.059	276	1367546	39.4858 ug/mL	97
91) Dib[ah]anthr	11.070	278	1133515	40.2161 ug/mL	98
92) B[ghi]perylen	11.258	276	1202286	40.5094 ug/mL	96

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S110916\1ICV2.D Vial: 21
Acq On : 9 Nov 2016 17:42 Operator: JJY
Sample : ICV 40ug/ml SVMS7216 Inst : SVMS1
Misc : 500uL+5ul IS S3553C Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 09 17:55:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Wed Nov 09 17:33:09 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

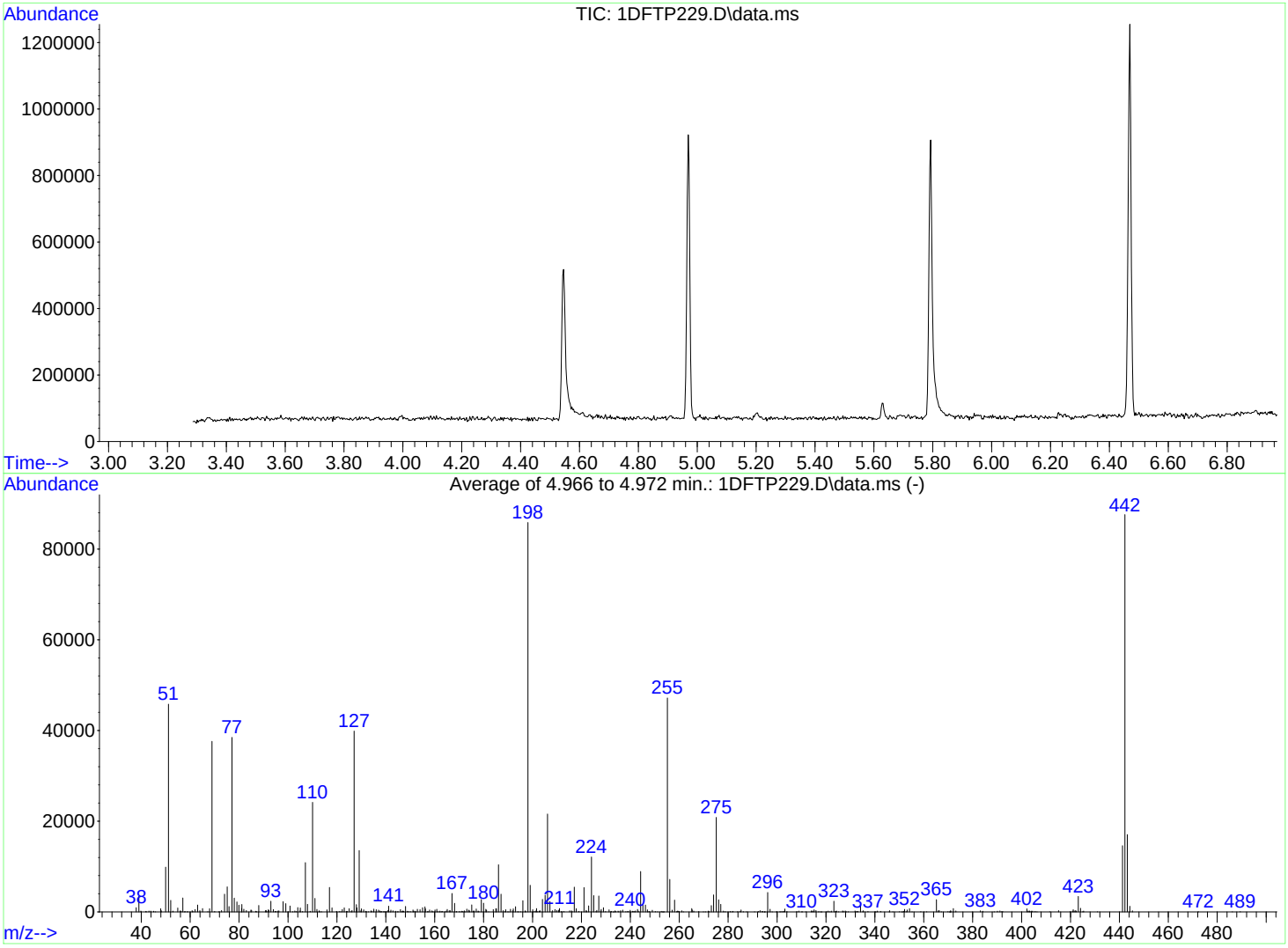


SEMI - VOLATILE ORGANIC ANALYSIS
CONTINUING CALIBRATION
DOCUMENTS

DFTPP

Data File : C:\INSTARCH\Data\1S112816\1DFTP229.D Vial: 1
Acq On : 28 Nov 2016 11:31 Operator: RPN
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE

Method : C:\INSTARCH\Methods\1DFTPP.M
Title : DFTPP TUNE Method
Last Update : Mon Nov 28 11:42:17 2016



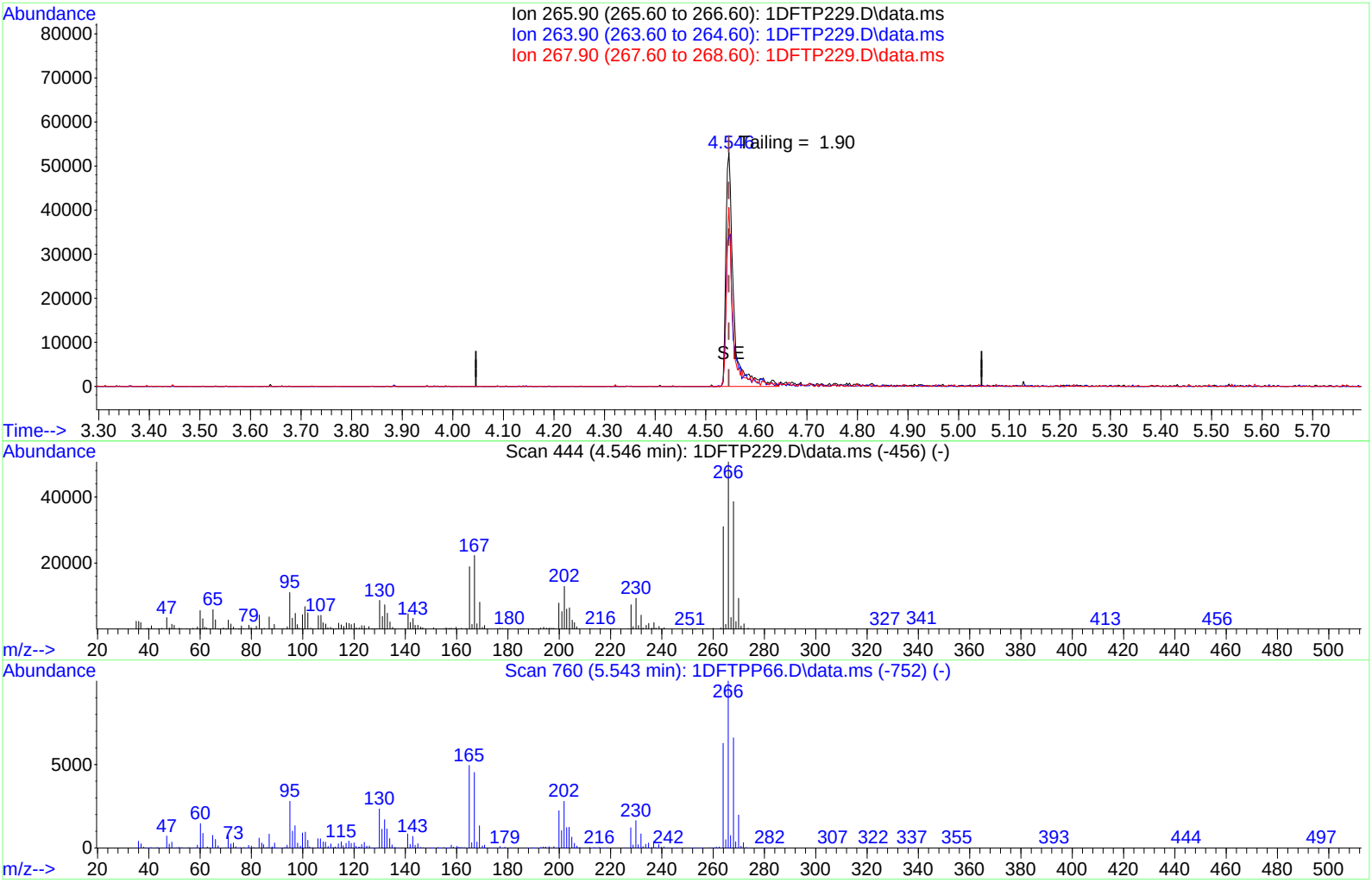
AutoFind: Scans 592, 593, 594; Background Corrected with Scan 585

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	442	10	80	52.3	45800	PASS
68	69	0.00	2	1.9	702	PASS
70	69	0.00	2	0.4	141	PASS
127	442	10	80	45.5	39870	PASS
197	198	0.00	2	0.3	250	PASS
198	442	50	100	98.0	85869	PASS
199	198	5	9	6.8	5882	PASS
275	442	10	60	23.8	20829	PASS
365	198	1	100	3.2	2714	PASS
441	442	0.01	24	16.7	14594	PASS
442	442	50	100	100.0	87594	PASS
443	442	15	24	19.5	17059	PASS

Quantitation Report (Qedit)

Data File : C:\INSTARCH\Data\1S112816\1DFTP229.D Vial: 1
Acq On : 28 Nov 2016 11:31 Operator: RPN
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 11:42:29 2016

Quant Method : C:\INSTARCH\Methods\1DFTPP.M
Quant Title : DFTPP TUNE Method
QLast Update : Mon Nov 28 11:42:17 2016
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M



TIC: 1DFTP229.D\data.ms

(1) Pentachlorophenol

4.546min (0.000) 3.42 ng

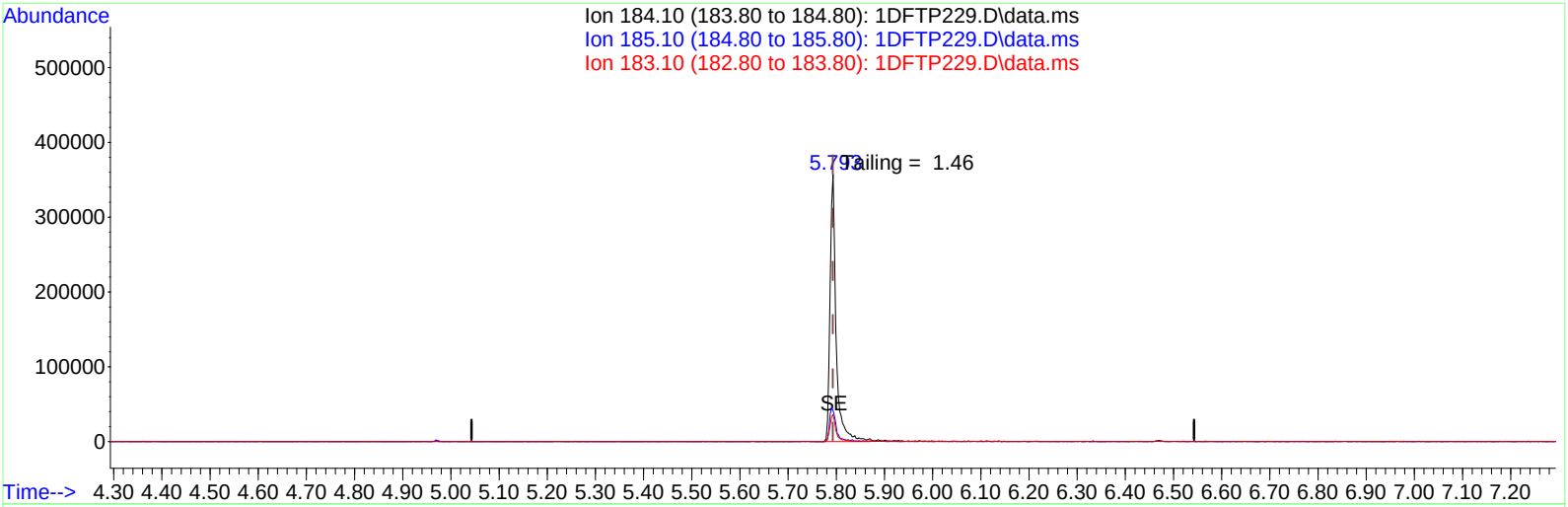
response 50866

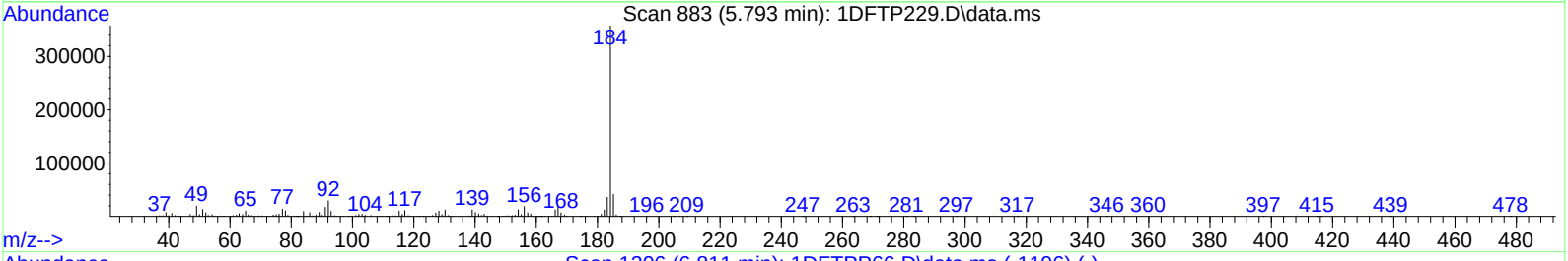
Ion	Exp%	Act%
265.90	100	100
263.90	66.20	63.40
267.90	60.90	76.44
0.00	0.00	0.00

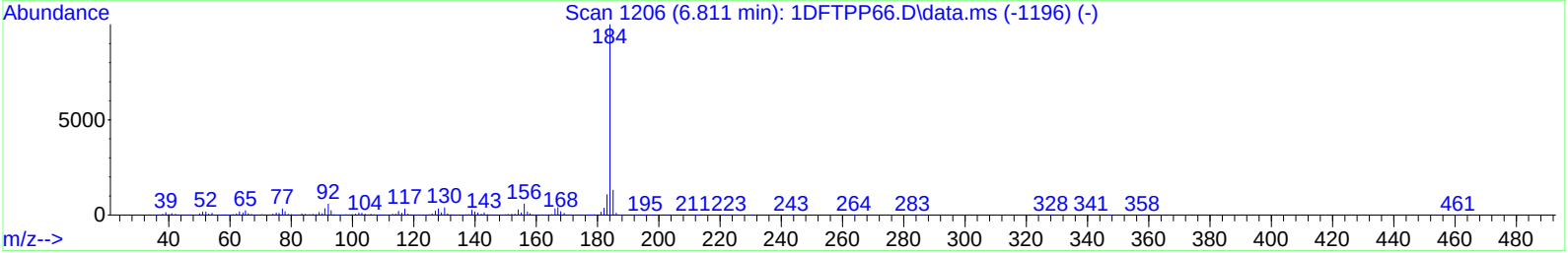
Quantitation Report (Qedit)

Data File : C:\INSTARCH\Data\1S112816\1DFTP229.D Vial: 1
Acq On : 28 Nov 2016 11:31 Operator: RPN
Sample : DFTPP TUNE SVMS7269 Inst : SVMS1
Misc : SVMS1,25 ug DFTPP Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 11:42:29 2016

Quant Method : C:\INSTARCH\Methods\1DFTPP.M
Quant Title : DFTPP TUNE Method
QLast Update : Mon Nov 28 11:42:17 2016
Response via : Initial Calibration
DataAcq Meth:1DFTPP.M







TIC: 1DFTP229.D\data.ms

(3) Benzidine

5.793min (0.000) 3.51 ng

response 307474

Ion	Exp%	Act%
184.10	100	100
185.10	13.80	14.61
183.10	12.20	10.77
0.00	0.00	0.00

Data File	: 1DFTP229.D	Vial Number	: 1
Data File Path	: C:\INSTARCH\Data\1S112816\	Operator	: RPN
Date Acquired	: 11/28/2016 11:31	Instrument Name:	SVMS1
Sample Name	: DFTPP TUNE SVMS7269	Sample Multiplier:	1
Misc Info	: SVMS1,25 ug DFTPP		

Quant Method	: C:\INSTARCH\Methods\1DFTPP.M
Calibration Title	: DFTPP TUNE Method
Last Update	: Mon Nov 28 11:42:17 2016

Compound	R.T.	QIon	Response
1) Pentachlorophenol	4.55	266	50866
2) DFTPP	4.97	198	67027
3) Benzidine	5.79	184	307474
4) DDE	5.95	246	632
5) DDD	6.23	235	2906
6) DDT	6.47	235	172243

DDT %Degradation

$$\frac{\text{DDD + DDE}}{\text{DDD + DDE + DDT}} \times 100\% = 2.01\ \%$$

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S112816\1CCV277.D Vial: 2
Acq On : 28 Nov 2016 11:46 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 12:09:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	20.000	20.000	0.0	126	0.00
2	CT	Ntrsdimeth	20.000	23.740	-18.7	149	0.00
3	CT	Pyridine	20.000	23.601	-18.0	151	0.00
4	S	SURR2Flphenol	50.000	57.791	-15.6	143	0.00
5	CT	Aniline	20.000	21.925	-9.6	137	0.00
6	CPT	bis2Clethletr	20.000	23.346	-16.7	149	0.00
7	S	SURRPhenol-d5	50.000	56.454	-12.9	140	0.00
8	CPT	Phenol	20.000	22.856	-14.3	143	0.00
9	CPT	2-Cl-phenol	20.000	21.307	-6.5	134	0.00
10	CT	13Diclbenz	20.000	20.806	-4.0	130	0.00
11	CT	14Diclbenz	20.000	20.252	-1.3	130	0.00
12	CT	12Diclbenz	20.000	20.515	-2.6	130	0.00
13	CT	Benzyl alcoho	20.000	20.786	-3.9	128	0.00
14	CPT	bis2clispreth	20.000	23.968	-19.8	153	0.00
15	CPT	2Methylphenol	20.000	21.165	-5.8	132	0.00
16	CT	Ntrspyrrol	20.000	21.790	-8.9	139	0.00
17	CPT	Acetophenone	20.000	21.382	-6.9	134	0.00
18	CPT	Hexaclethane	20.000	20.490	-2.4	130	0.00
19	CPT	N-Ntrsdinprop	20.000	22.753	-13.8	140	0.00
20	CPT	3&4Methylphenol	20.000	21.663	-8.3	134	0.00
21	I	Naphthalened8	20.000	20.000	0.0	149	0.00
22	S	SURRNitrbenzened5	100.000	95.549	4.5	139	0.00
23	CPT	Nitrobenzene	20.000	18.512	7.4	139	0.00
24	CPT	Isophorone	20.000	19.760	1.2	146	0.00
25	CPT	2-Nitrophenol	20.000	18.461	7.7	130	0.00
26	CPT	24Dimthpheno	20.000	16.152	19.2	117	0.00
27	CPT	bis2clethoxym	20.000	18.631	6.8	140	0.00
28	CPT	24Diclphenol	20.000	18.188	9.1	133	0.00
29	CT	124Triclbenz	20.000	18.816	5.9	142	0.00
30	CT	Benzoic acid	20.000	19.081	4.6	140	0.00
31	CPT	Naphthalene	20.000	20.706	-3.5	157	0.00
32	CPT	4-Cl-aniline	20.000	19.112	4.4	135	0.00
33	CT	26Diclphenol	20.000	19.090	4.6	137	0.00
34	CT	Hexaclprop	20.000	16.788	16.1	120	0.00
35	CPT	Hexaclbutdien	20.000	16.813	15.9	123	0.00
36	CPT	4Cl3methylphe	20.000	20.027	-0.1	142	0.00
37	CPT	2Methylnaphth	20.000	19.397	3.0	143	0.00
38	CT	1Methylnaphth	20.000	19.142	4.3	143	0.00
39	I	Acenaphthened10	20.000	20.000	0.0	137	0.00
40	CPT	Hxclcycpentdi	20.000	16.583	17.1	109	0.00
41	CPT	1245Tetrclbenz	20.000	19.006	5.0	130	0.00
42	CPT	246Triclpheno	20.000	19.966	0.2	133	0.00
43	CPT	245Triclpheno	20.000	20.299	-1.5	134	0.00
44	S	SURR2Flbiphenyl	100.000	101.081	-1.1	136	0.00
45	CPT	2Clnaphthalen	20.000	20.547	-2.7	140	0.00
46	CPT	2Nitroaniline	20.000	23.623	-18.1	163	0.00
47	CPT	Acnaphthylene	20.000	20.198	-1.0	137	0.00
48	CPT	Dimethylphtha	20.000	20.225	-1.1	137	0.00
49	CPT	26Dinitrotolu	20.000	21.477	-7.4	148	0.00
50	CPT	Acenaphthene	20.000	19.619	1.9	135	0.00
51	CPT	3Nitroaniline	20.000	16.452	17.7	108	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S112816\1CCV277.D Vial: 2
Acq On : 28 Nov 2016 11:46 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 12:09:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	20.000	21.559	-7.8	142	0.00
53	CPT	Dibenzofuran	20.000	19.575	2.1	136	0.00
54	CPT	24Dinitrotolu	20.000	20.823	-4.1	138	0.00
55	CPT	4-Nitrophenol	20.000	21.387	-6.9	141	0.00
56	CT	2,3,5,6-Tetrachlorop	20.000	19.210	3.9	124	0.00
57	CPT	2,3,4,6-Tetrachlorop	20.000	19.218	3.9	129	0.00
58	CPT	Fluorene	20.000	19.713	1.4	134	0.00
59	CPT	4Clphlphlethr	20.000	19.102	4.5	129	0.00
60	CPT	Diethylphthal	20.000	19.769	1.2	133	0.00
61	CPT	4Nitroaniline	20.000	18.622	6.9	123	0.00
62	S	SURR246Tribrphenl	50.000	43.937	12.1	115	0.00
63	I	Phenanthrd10	20.000	20.000	0.0	124	0.00
64	CPT	46Dinit2mylph	20.000	22.328	-11.6	138	0.00
65	CPT	Ntrsdiphlam&Diphlam	40.000	37.125	7.2	116	0.00
66	CT	Azobenz&12Diphlhyd	40.000	39.461	1.3	124	0.00
67	CPT	4Brphlphlethr	20.000	19.779	1.1	123	0.00
68	CPT	Hexaclbenzene	20.000	18.591	7.0	117	0.00
69	CPT	Pentaclphenol	20.000	19.721	1.4	124	0.00
70	CPT	Phenanthrene	20.000	19.901	0.5	126	0.00
71	CPT	Anthracene	20.000	20.906	-4.5	130	0.00
72	CPT	Carbazole	20.000	23.757	-18.8	149	0.00
73	CPT	Dinbtylphthal	20.000	19.510	2.4	122	0.00
74	CPT	Fluoranthene	20.000	17.205	14.0	109	0.00
75	I	Chrysene-d12	20.000	20.000	0.0	114	0.00
76	CT	Benzidine	20.000	5.708	71.5#	14	0.00
77	CPT	Pyrene	20.000	19.714	1.4	112	0.00
78	S	SURRTerphenyl-d14	100.000	95.638	4.4	108	0.00
79	CPT	Btylbzylphth	20.000	20.792	-4.0	116	0.00
80	TM	bis2Ethlhxlad	20.000	21.022	-5.1	117	0.00
81	CPT	33Diclbnzidin	20.000	16.528	17.4	98	0.00
82	CPT	B[a]anthracen	20.000	19.805	1.0	112	0.00
83	CPT	Chrysene	20.000	18.235	8.8	103	0.00
84	CPT	bis2Ethlhxlph	20.000	19.531	2.3	108	0.00
85	CPT	Dinoctylphthl	20.000	21.407	-7.0	116	0.00
86	I	Perylene-d12	20.000	20.000	0.0	113	0.00
87	CPT	B[b]fluoranth	20.000	20.808	-4.0	118	0.00
88	CPT	B[k]fluoranth	20.000	19.708	1.5	107	0.00
89	CPT	Benz[a]pyrene	20.000	20.420	-2.1	113	0.00
90	CPT	Indeno-pyrene	20.000	19.497	2.5	108	0.00
91	CPT	Dib[ah]anthr	20.000	19.496	2.5	108	0.00
92	CPT	B[ghi]perylen	20.000	19.858	0.7	109	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S112816\1CCV277.D Vial: 2
Acq On : 28 Nov 2016 11:46 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 12:09:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	14Diclbenzd4	1.000	1.000	0.0	126	0.00
2	CT	Ntrsdimeth	0.675	0.802	-18.8	149	0.00
3	CT	Pyridine	1.141	1.438	-26.0#	151	0.00
4	S	SURR2Flphenol	0.452	0.522	-15.5	143	0.00
5	CT	Aniline	1.644	1.845	-12.2	137	0.00
6	CPT	bis2Clethletr	1.081	1.262	-16.7	149	0.00
7	S	SURRPhenol-d5	0.519	0.586	-12.9	140	0.00
8	CPT	Phenol	1.489	1.702	-14.3	143	0.00
9	CPT	2-Cl-phenol	1.228	1.308	-6.5	134	0.00
10	CT	13Diclbenz	1.419	1.477	-4.1	130	0.00
11	CT	14Diclbenz	1.457	1.475	-1.2	130	0.00
12	CT	12Diclbenz	1.386	1.421	-2.5	130	0.00
13	CT	Benzyl alcoho	0.786	0.817	-3.9	128	0.00
14	CPT	bis2clispreth	2.634	3.156	-19.8	153	0.00
15	CPT	2Methylphenol	0.954	1.010	-5.9	132	0.00
16	CT	Ntrspyrrol	0.600	0.654	-9.0	139	0.00
17	CPT	Acetophenone	1.830	1.956	-6.9	134	0.00
18	CPT	Hexaclethane	0.621	0.637	-2.6	130	0.00
19	CPT	N-Ntrsdinprop	0.901	1.025	-13.8	140	0.00
20	CPT	3&4Methylphenol	1.230	1.332	-8.3	134	0.00
21	I	Naphthalened8	1.000	1.000	0.0	149	0.00
22	S	SURRNitrbenzened5	0.056	0.054	3.6	139	0.00
23	CPT	Nitrobenzene	0.286	0.265	7.3	139	0.00
24	CPT	Isophorone	0.517	0.511	1.2	146	0.00
25	CPT	2-Nitrophenol	0.142	0.131	7.7	130	0.00
26	CPT	24Dimthpheno	0.213	0.172#	19.2	117	0.00
27	CPT	bis2clethoxym	0.334	0.311	6.9	140	0.00
28	CPT	24Diclphenol	0.283	0.258	8.8	133	0.00
29	CT	124Triclbenz	0.342	0.322	5.8	142	0.00
30	CT	Benzoic acid	0.146	0.146	0.0	140	0.00
31	CPT	Naphthalene	0.922	0.955	-3.6	157	0.00
32	CPT	4-Cl-aniline	0.340	0.325	4.4	135	0.00
33	CT	26Diclphenol	0.260	0.248	4.6	137	0.00
34	CT	Hexaclprop	0.257	0.216	16.0	120	0.00
35	CPT	Hexaclbutdien	0.250	0.210	16.0	123	0.00
36	CPT	4Cl3methylphe	0.276	0.276	0.0	142	0.00
37	CPT	2Methylnaphth	0.647	0.627	3.1	143	0.00
38	CT	1Methylnaphth	0.538	0.515	4.3	143	0.00
39	I	Acenaphthened10	1.000	1.000	0.0	137	0.00
40	CPT	Hxclcycpentdi	0.405	0.364	10.1	109	0.00
41	CPT	1245Tetrclbenz	0.791	0.745	5.8	130	0.00
42	CPT	246Triclpheno	0.498	0.497	0.2	133	0.00
43	CPT	245Triclpheno	0.535	0.544	-1.7	134	0.00
44	S	SURR2Flbiphenyl	0.329	0.332	-0.9	136	0.00
45	CPT	2Clnaphthalen	1.362	1.400	-2.8	140	0.00
46	CPT	2Nitroaniline	0.404	0.493	-22.0#	163	0.00
47	CPT	Acnaphthylene	2.250	2.272	-1.0	137	0.00
48	CPT	Dimethylphtha	1.545	1.562	-1.1	137	0.00
49	CPT	26Dinitrotolu	0.339	0.365	-7.7	148	0.00
50	CPT	Acenaphthene	1.325	1.300	1.9	135	0.00
51	CPT	3Nitroaniline	0.334	0.275	17.7	108	0.00

Evaluate Continuing Calibration Report

Data File : C:\INSTARCH\Data\1S112816\1CCV277.D Vial: 2
Acq On : 28 Nov 2016 11:46 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 12:09:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
52	CPT	24Dinitphenol	0.178	0.213	-19.7	142	0.00
53	CPT	Dibenzofuran	1.992	1.949	2.2	136	0.00
54	CPT	24Dinitrotolu	0.433	0.451	-4.2	138	0.00
55	CPT	4-Nitrophenol	0.330	0.353	-7.0	141	0.00
56	CT	2,3,5,6-Tetrachlorop	0.442	0.424	4.1	124	0.00
57	CPT	2,3,4,6-Tetrachlorop	0.490	0.471	3.9	129	0.00
58	CPT	Fluorene	1.583	1.560	1.5	134	0.00
59	CPT	4Clphlphlethr	0.798	0.755	5.4	129	0.00
60	CPT	Diethylphthal	1.738	1.718	1.2	133	0.00
61	CPT	4Nitroaniline	0.333	0.310	6.9	123	0.00
62	S	SURR246Tribrphenl	0.126	0.111	11.9	115	0.00
63	I	Phenanthrd10	1.000	1.000	0.0	124	0.00
64	CPT	46Dinit2mylph	0.115	0.135	-17.4	138	0.00
65	CPT	Ntrsdiphlam&Diphlam	0.508	0.467	8.1	116	0.00
66	CT	Azobenz&12Diphlhyd	0.160	0.154	3.8	124	0.00
67	CPT	4Brphlphlethr	0.236	0.233	1.3	123	0.00
68	CPT	Hexaclbenzene	0.272	0.252	7.4	117	0.00
69	CPT	Pentaclphenol	0.148	0.151	-2.0	124	0.00
70	CPT	Phenanthrene	1.028	1.023	0.5	126	0.00
71	CPT	Anthracene	1.054	1.102	-4.6	130	0.00
72	CPT	Carbazole	0.850	1.010	-18.8	149	0.00
73	CPT	Dinbtylphthal	0.892	0.870	2.5	122	0.00
74	CPT	Fluoranthene	0.851	0.732	14.0	109	0.00
75	I	Chrysene-d12	1.000	1.000	0.0	114	0.00
76	CT	Benzidine	0.360	0.047	86.9#	14#	0.00
77	CPT	Pyrene	1.342	1.323	1.4	112	0.00
78	S	SURRTerphenyl-d14	0.166	0.159	4.2	108	0.00
79	CPT	Btylbzylphth	0.590	0.613	-3.9	116	0.00
80	TM	bis2Ethlhxlad	0.441	0.464	-5.2	117	0.00
81	CPT	33Diclbnzidin	0.274	0.189	31.0#	98	0.00
82	CPT	B[a]anthracen	1.204	1.192	1.0	112	0.00
83	CPT	Chrysene	1.107	1.009	8.9	103	0.00
84	CPT	bis2Ethlhxlph	0.797	0.778	2.4	108	0.00
85	CPT	Dinoctylphthl	1.469	1.572	-7.0	116	0.00
86	I	Perylene-d12	1.000	1.000	0.0	113	0.00
87	CPT	B[b]fluoranth	1.186	1.233	-4.0	118	0.00
88	CPT	B[k]fluoranth	1.101	1.085	1.5	107	0.00
89	CPT	Benz[a]pyrene	1.144	1.168	-2.1	113	0.00
90	CPT	Indeno-pyrene	1.267	1.236	2.4	108	0.00
91	CPT	Dib[ah]anthr	1.032	1.006	2.5	108	0.00
92	CPT	B[ghi]perylen	1.086	1.078	0.7	109	0.00

(#) = Out of Range SPCC's out = 1 CCC's out = 4

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1CCV277.D Vial: 2
Acq On : 28 Nov 2016 11:46 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 12:09:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.748	152	241912	20.00	ug/mL	0.00
21) Naphthalened8	5.368	136	1292507	20.00	ug/mL	0.00
39) Acenaphthened10	7.070	164	530991	20.00	ug/mL	0.00
63) Phenanthrd10	8.019	188	1083447	20.00	ug/mL	0.00
75) Chrysene-d12	9.419	240	633480	20.00	ug/mL	0.00
86) Perylene-d12	10.292	264	639373	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.640	112	315815	57.79	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 57.79%			
7) SURRPhenol-d5	3.390	99	354247	56.45	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 56.45%			
22) SURRNitrbenzened5	4.390	82	348485	95.55	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 95.55%			
44) SURR2Flbiphenyl	6.570	172	881951	101.08	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 101.08%			
62) SURR246Tribrphenl	7.592	330	146784	43.94	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 43.94%			
78) SURRTerphenyl-d14	8.828	244	502794	95.64	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 95.64%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.938	74	193912	23.7402	ug/mL	85
3) Pyridine	1.946	79	347868	23.6006	ug/mL	91
5) Aniline	3.421	93	446398	21.9248	ug/mL#	57
6) bis2Clethletr	3.489	93	305195	23.3458	ug/mL	95
8) Phenol	3.404	94	411640	22.8564	ug/mL	90
9) 2-Cl-phenol	3.532	128	316408	21.3072	ug/mL	95
10) 13Diclbenz	3.685	146	357233	20.8062	ug/mL	98
11) 14Diclbenz	3.765	146	356859	20.2519	ug/mL	96
12) 12Diclbenz	3.927	146	343830	20.5149	ug/mL	99
13) Benzyl alcoho	3.913	108	197691	20.7858	ug/mL	88
14) bis2clispreth	4.079	45	763591	23.9678	ug/mL	99
15) 2Methylphenol	4.052	107	244271	21.1649	ug/mL	96
16) Ntrspyrrol	4.191	100	158252	21.7900	ug/mL	95
17) Acetophenone	4.217	105	473202	21.3819	ug/mL	99
18) Hexaclethane	4.319	117	154009	20.4895	ug/mL	97
19) N-Ntrsdinprop	4.234	70	248078	22.7533	ug/mL	93
20) 3&4Methylphenol	4.248	107	322170	21.6629	ug/mL	98
23) Nitrobenzene	4.416	77	342433	18.5124	ug/mL	94
24) Isophorone	4.740	82	660448	19.7605	ug/mL	99
25) 2-Nitrophenol	4.831	139	169835	18.4614	ug/mL	97
26) 24Dimthpheno	4.941	122	222150	16.1518	ug/mL	98
27) bis2clethoxym	5.075	93	402587	18.6311	ug/mL	99
28) 24Diclphenol	5.183	162	332867	18.1876	ug/mL	96
29) 124Triclbenz	5.297	180	415915	18.8156	ug/mL	94
30) Benzoic acid	5.152	122	188936	19.0813	ug/mL	85
31) Naphthalene	5.396	128	1234339	20.7065	ug/mL	100
32) 4-Cl-aniline	5.513	127	420457	19.1124	ug/mL	94
33) 26Diclphenol	5.513	162	321037	19.0898	ug/mL	91
34) Hexaclprop	5.530	213	278969	16.7880	ug/mL	95
35) Hexaclbutdien	5.601	225	271270	16.8130	ug/mL	96
36) 4Cl3methylphe	6.123	107	356661	20.0273	ug/mL	96
37) 2Methylnaphth	6.217	142	810783	19.3974	ug/mL	95
38) 1Methylnaphth	6.308	141	665740	19.1423	ug/mL	96
40) Hxclcycpentdi	6.376	237	193074	16.5833	ug/mL	94

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1CCV277.D Vial: 2
Acq On : 28 Nov 2016 11:46 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 12:09:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

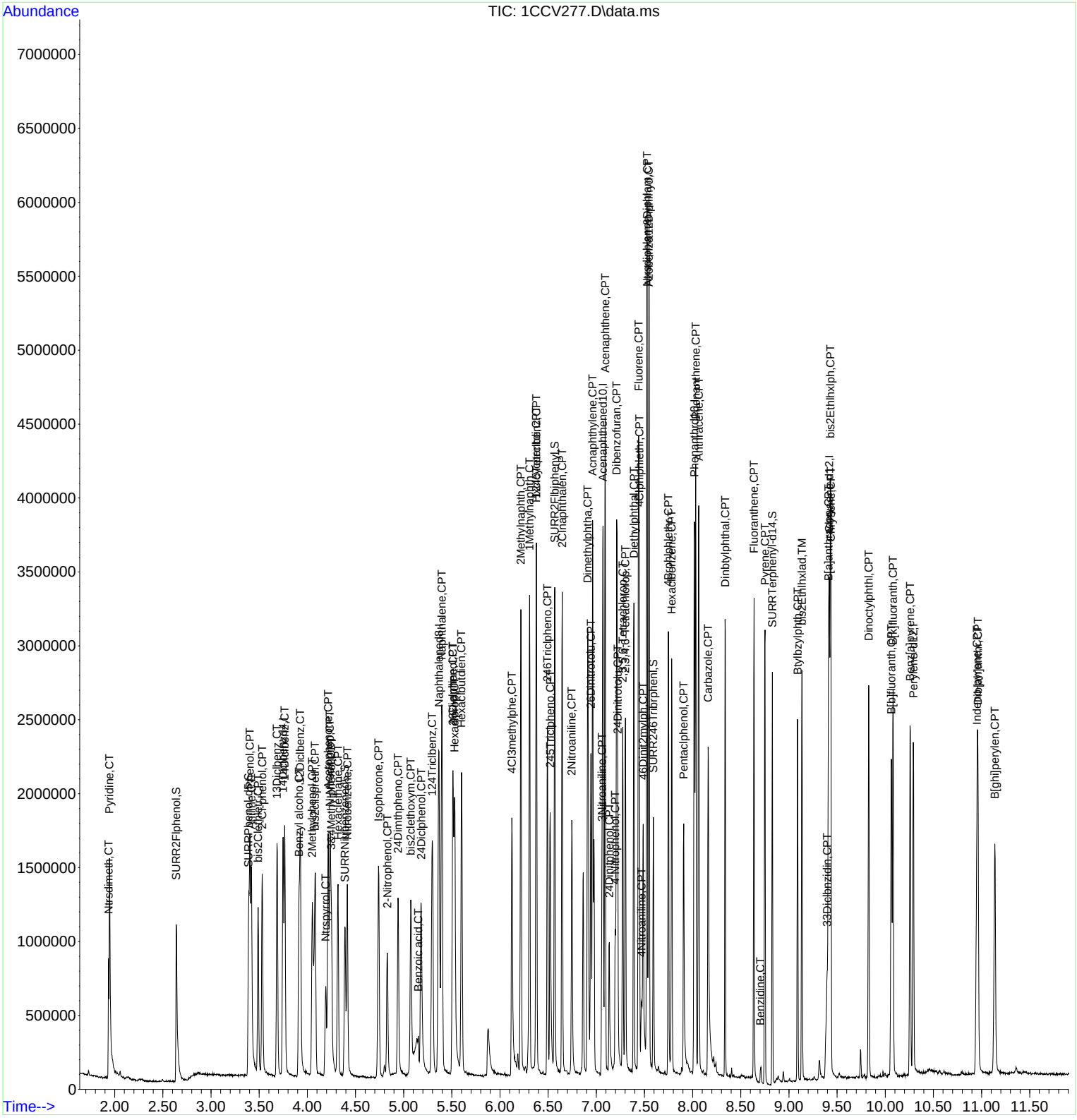
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.379	216	395590	19.0059 ug/mL	98
42) 246Triclpheno	6.493	196	263982	19.9660 ug/mL	98
43) 245Triclpheno	6.521	196	288596	20.2993 ug/mL	98
45) 2Clnaphthalen	6.646	162	743183	20.5474 ug/mL	97
46) 2Nitroaniline	6.746	65	262024	23.6232 ug/mL	93
47) Acnaphthylene	6.962	152	1206487	20.1977 ug/mL	99
48) Dimethylphtha	6.910	163	829451	20.2252 ug/mL	98
49) 26Dinitrotolu	6.945	165	193569	21.4768 ug/mL	97
50) Acenaphthene	7.092	154	690319	19.6191 ug/mL	95
51) 3Nitroaniline	7.058	138	145988	16.4520 ug/mL	81
52) 24Dinitphenol	7.135	184	113118	21.5589 ug/mL	90
53) Dibenzofuran	7.212	168	1035152	19.5754 ug/mL	99
54) 24Dinitrotolu	7.223	165	239655	20.8233 ug/mL	82
55) 4-Nitrophenol	7.197	65	187426	21.3874 ug/mL#	88
56) 2,3,5,6-Tetrachlorop	7.274	232	225258	19.2100 ug/mL	93
57) 2,3,4,6-Tetrachlorop	7.303	232	250172	19.2176 ug/mL	97
58) Fluorene	7.439	166	828476	19.7131 ug/mL	96
59) 4Clphlphlethr	7.448	204	401077	19.1022 ug/mL	97
60) Diethylphthal	7.391	149	912435	19.7694 ug/mL	97
61) 4Nitroaniline	7.470	138	164627	18.6220 ug/mL	89
64) 46Dinit2mylph	7.487	198	146591	22.3277 ug/mL	95
65) Ntrsdiphlam&Diphlam	7.527	169	1012492	37.1253 ug/mL	96
66) Azobenz&12Diphlhyd	7.547	182	333857	39.4610 ug/mL#	70
67) 4Brphlphlethr	7.749	248	252672	19.7793 ug/mL	96
68) Hexaclbenzene	7.783	284	273570	18.5911 ug/mL	93
69) Pentaclphenol	7.908	266	163281	19.7205 ug/mL	92
70) Phenanthrene	8.033	178	1108068	19.9014 ug/mL	97
71) Anthracene	8.064	178	1194136	20.9061 ug/mL	99
72) Carbazole	8.161	167	1093972	23.7569 ug/mL	99
73) Dinbtylphthal	8.340	149	942400	19.5104 ug/mL	98
74) Fluoranthene	8.638	202	792795	17.2055 ug/mL	98
76) Benzidine	8.703	184	29941	5.7083 ug/mL	91
77) Pyrene	8.752	202	838091	19.7142 ug/mL	97
79) Btylbzylphth	9.090	149	388544	20.7921 ug/mL	99
80) bis2Ethlhxlad	9.135	129	293867	21.0221 ug/mL	94
81) 33Diclbnzidin	9.397	252	119834	16.5278 ug/mL	96
82) B[a]anthracen	9.411	228	755173	19.8052 ug/mL	97
83) Chrysene	9.437	228	639480	18.2350 ug/mL	96
84) bis2Ethlhxlph	9.431	149	493150	19.5312 ug/mL	95
85) Dinoctylphthl	9.829	149	995728	21.4074 ug/mL	97
87) B[b]fluoranth	10.064	252	788641	20.8085 ug/mL	97
88) B[k]fluoranth	10.082	252	693883	19.7082 ug/mL	98
89) Benz[a]pyrene	10.258	252	746653	20.4196 ug/mL	99
90) Indeno-pyrene	10.954	276	790036	19.4974 ug/mL	92
91) Dib[ah]anthr	10.962	278	642902	19.4961 ug/mL	97
92) B[ghi]perylen	11.139	276	689552	19.8584 ug/mL	95

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1CCV277.D Vial: 2
Acq On : 28 Nov 2016 11:46 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 12:09:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Ending CCV %Recovery Report

Data File Name	1CCV279.D
Data File Path	C:\INSTARCH\Data\1S112816\
Operator	RPN
Date Acquired	11/28/2016 21:37
Acq. Method File	1S110916.M
Sample Name	CCV 20ug/ml SVMS7217
Misc Info	500uL+5ul IS S3553B
Vial Number	27
Instrument Name	SVMS1
Sample Multiplier	1

#	Name	Ret Time	Amount	Units	Response	50-150 %REC
1)	14Diclbenzd4	3.75	20.00	ug/mL	243224	ISTD
2)	Ntrsdimeth	1.93	23.65	ug/mL	194264	118
3)	Pyridine	1.94	23.14	ug/mL	342662	116
4)	SURR2Flphenol	2.64	55.16	%REC	303088	110
5)	Aniline	3.42	21.51	ug/mL	439924	108
6)	bis2Clethletr	3.49	22.71	ug/mL	298492	114
7)	SURRPhenol-d5	3.40	52.52	%REC	331340	105
8)	Phenol	3.41	21.59	ug/mL	390957	108
9)	2-Cl-phenol	3.53	21.03	ug/mL	313988	105
10)	13Diclbenz	3.69	19.89	ug/mL	343419	99
11)	14Diclbenz	3.76	19.27	ug/mL	341334	96
12)	12Diclbenz	3.93	19.15	ug/mL	322748	96
13)	Benzyl alcoho	3.91	22.11	ug/mL	211444	111
14)	bis2clispreth	4.08	22.78	ug/mL	729742	114
15)	2Methylphenol	4.06	20.44	ug/mL	237208	102
16)	Ntrspyrrol	4.19	22.29	ug/mL	162793	111
17)	Acetophenone	4.21	20.62	ug/mL	458732	103
18)	Hexaclethane	4.32	19.60	ug/mL	148104	98
19)	N-Ntrsdinprop	4.23	22.05	ug/mL	241662	110
20)	3&4Methylphenol	4.25	21.33	ug/mL	318969	107
21)	Naphthalened8	5.36	20.00	ug/mL	1345682	ISTD
22)	SURRNitrbenzened5	4.39	88.36	%REC	335537	88
23)	Nitrobenzene	4.42	17.20	ug/mL	331199	86
24)	Isophorone	4.74	17.93	ug/mL	624022	90
25)	2-Nitrophenol	4.83	17.85	ug/mL	171008	89
26)	24Dimthpheno	4.94	13.87	ug/mL	198674	69
27)	bis2clethoxym	5.07	17.23	ug/mL	387540	86
28)	24Diclphenol	5.18	17.42	ug/mL	332015	87
29)	124Triclbenz	5.30	17.85	ug/mL	410834	89
30)	Benzoic acid	5.15	19.10	ug/mL	196923	96
31)	Naphthalene	5.39	19.91	ug/mL	1235498	100
32)	4-Cl-aniline	5.51	21.11	ug/mL	483604	106
33)	26Diclphenol	5.51	17.97	ug/mL	314696	90
34)	Hexaclprop	5.53	15.66	ug/mL	270943	78
35)	Hexaclbutdien	5.60	15.60	ug/mL	262003	78
36)	4Cl3methylphe	6.13	20.68	ug/mL	383358	103
37)	2Methylnaphth	6.21	18.24	ug/mL	793954	91

38)	1Methylnaphth	6.31	18.52	ug/mL	670455	93
39)	Acenaphthened10	7.07	20.00	ug/mL	599967	ISTD
40)	Hxclcycpentdi	6.37	13.51	ug/mL	177551	68
41)	1245Tetrclbenz	6.38	16.25	ug/mL	385832	81
42)	246Triclpheno	6.49	17.91	ug/mL	267595	90
43)	245Triclpheno	6.52	18.94	ug/mL	304274	95
44)	SURR2Flbiphenyl	6.57	87.84	%REC	866025	88
45)	2Clnaphthalen	6.65	18.16	ug/mL	742173	91
46)	2Nitroaniline	6.75	22.29	ug/mL	278972	111
47)	Acnaphthylene	6.96	18.20	ug/mL	1228459	91
48)	Dimethylphtha	6.91	17.87	ug/mL	828175	89
49)	26Dinitrotolu	6.94	18.73	ug/mL	190745	94
50)	Acenaphthene	7.09	17.56	ug/mL	698050	88
51)	3Nitroaniline	7.06	20.24	ug/mL	202887	101
52)	24Dinitphenol	7.13	16.37	ug/mL	92453	82
53)	Dibenzofuran	7.21	16.78	ug/mL	1002588	84
54)	24Dinitrotolu	7.22	18.75	ug/mL	243804	94
55)	4-Nitrophenol	7.21	17.89	ug/mL	177164	89
56)	2,3,5,6-Tetrachlorop	7.27	16.97	ug/mL	224831	85
57)	2,3,4,6-Tetrachlorop	7.30	17.43	ug/mL	256444	87
58)	Fluorene	7.44	17.48	ug/mL	830198	87
59)	4Clphlphlethr	7.44	16.22	ug/mL	390107	81
60)	Diethylphthal	7.39	17.39	ug/mL	906971	87
61)	4Nitroaniline	7.46	22.45	ug/mL	224218	112
62)	SURR246Tribrphenl	7.59	38.90	%REC	146840	78
63)	Phenanthrd10	8.02	20.00	ug/mL	1146709	ISTD
64)	46Dinit2mylph	7.49	18.10	ug/mL	124226	91
65)	Ntrsdiphlam&Diphlam	7.53	38.64	ug/mL	1111829	97
66)	Azobenz&12Diphlhyd	7.55	38.04	ug/mL	341411	95
67)	4Brphlphlethr	7.75	18.61	ug/mL	251629	93
68)	Hexaclbenzene	7.78	17.23	ug/mL	268337	86
69)	Pentaclphenol	7.91	16.42	ug/mL	142346	82
70)	Phenanthrene	8.03	19.28	ug/mL	1136064	96
71)	Anthracene	8.06	19.79	ug/mL	1196287	99
72)	Carbazole	8.16	22.60	ug/mL	1101340	113
73)	Dinbtylphthal	8.34	17.48	ug/mL	893693	87
74)	Fluoranthene	8.64	16.65	ug/mL	811985	83
75)	Chrysene-d12	9.42	20.00	ug/mL	606366	ISTD
76)	Benzidine	8.70	12.34	ug/mL	132451	62
77)	Pyrene	8.75	20.39	ug/mL	829658	102
78)	SURRTerphenyl-d14	8.83	101.97	%REC	513154	102
79)	Btylbzylphth	9.09	21.15	ug/mL	378363	106
80)	bis2Ethlhxlad	9.13	21.20	ug/mL	283731	106
81)	33Diclbnzidin	9.39	32.60	ug/mL	242383	163 #
82)	B[a]anthracen	9.41	19.87	ug/mL	725180	99
83)	Chrysene	9.43	18.68	ug/mL	627024	93
84)	bis2Ethlhxlph	9.43	19.16	ug/mL	463049	96
85)	Dinoctylphthl	9.83	21.03	ug/mL	936361	105
86)	Perylene-d12	10.29	20.00	ug/mL	611952	ISTD
87)	B[b]fluoranth	10.06	20.35	ug/mL	738334	102

88)	B[k]fluoranth	10.08	19.05	ug/mL	641942	95
89)	Benz[a]pyrene	10.26	19.15	ug/mL	670369	96
90)	Indeno-pyrene	10.95	17.00	ug/mL	659160	85
91)	Dib[ah]anthr	10.96	17.05	ug/mL	538157	85
92)	B[ghi]perylen	11.14	17.00	ug/mL	564833	85

(#) = recovery out of range Average Percent Recovery = 96

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1CCV279.D Vial: 27
Acq On : 28 Nov 2016 21:37 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 21:49:45 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.745	152	243224	20.00	ug/mL	0.00
21) Naphthalened8	5.365	136	1345682	20.00	ug/mL	0.00
39) Acenaphthened10	7.067	164	599967	20.00	ug/mL	0.00
63) Phenanthrd10	8.016	188	1146709	20.00	ug/mL	0.00
75) Chrysene-d12	9.417	240	606366	20.00	ug/mL	0.00
86) Perylene-d12	10.289	264	611952	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.643	112	303088	55.16	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 55.16%			
7) SURRPhenol-d5	3.396	99	331340	52.52	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 52.52%			
22) SURRNitrbenzened5	4.390	82	335537	88.36	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 88.36%			
44) SURR2Flbiphenyl	6.567	172	866025	87.84	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 87.84%			
62) SURR246Tribrphenl	7.592	330	146840	38.90	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 38.90%#			
78) SURRTerphenyl-d14	8.826	244	513154	101.97	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 101.97%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.932	74	194264	23.6550	ug/mL	85
3) Pyridine	1.944	79	342662	23.1433	ug/mL	91
5) Aniline	3.418	93	439924	21.5120	ug/mL	95
6) bis2Clethletr	3.486	93	298492	22.7099	ug/mL	88
8) Phenol	3.407	94	390957	21.5909	ug/mL	98
9) 2-Cl-phenol	3.532	128	313988	21.0302	ug/mL	97
10) 13Diclbenz	3.685	146	343419	19.8937	ug/mL	96
11) 14Diclbenz	3.765	146	341334	19.2664	ug/mL	95
12) 12Diclbenz	3.927	146	322748	19.1531	ug/mL	97
13) Benzyl alcoho	3.913	108	211444	22.1119	ug/mL	88
14) bis2clispreth	4.077	45	729742	22.7818	ug/mL	95
15) 2Methylphenol	4.058	107	237208	20.4420	ug/mL	97
16) Ntrspyrrol	4.191	100	162793	22.2943	ug/mL	88
17) Acetophenone	4.214	105	458732	20.6163	ug/mL	98
18) Hexaclethane	4.316	117	148104	19.5976	ug/mL	98
19) N-Ntrsdinprop	4.234	70	241662	22.0453	ug/mL	96
20) 3&4Methylphenol	4.251	107	318969	21.3320	ug/mL	96
23) Nitrobenzene	4.416	77	331199	17.1975	ug/mL	96
24) Isophorone	4.740	82	624022	17.9329	ug/mL	98
25) 2-Nitrophenol	4.830	139	171008	17.8544	ug/mL	90
26) 24Dimthpheno	4.944	122	198674	13.8742	ug/mL	97
27) bis2clethoxym	5.075	93	387540	17.2260	ug/mL	99
28) 24Diclphenol	5.180	162	332015	17.4242	ug/mL	98
29) 124Triclbenz	5.296	180	410834	17.8514	ug/mL	90
30) Benzoic acid	5.154	122	196923	19.1003	ug/mL	81
31) Naphthalene	5.393	128	1235498	19.9069	ug/mL	99
32) 4-Cl-aniline	5.512	127	483604	21.1142	ug/mL	96
33) 26Diclphenol	5.512	162	314696	17.9733	ug/mL	91
34) Hexaclprop	5.529	213	270943	15.6607	ug/mL	94
35) Hexaclbutdien	5.601	225	262003	15.5970	ug/mL	96
36) 4Cl3methylphe	6.126	107	383358	20.6758	ug/mL	97
37) 2Methylnaphth	6.214	142	793954	18.2442	ug/mL	96
38) 1Methylnaphth	6.305	141	670455	18.5161	ug/mL	97
40) Hxclcycpentdi	6.373	237	177551	13.5110	ug/mL	99

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1CCV279.D Vial: 27
Acq On : 28 Nov 2016 21:37 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 21:49:45 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

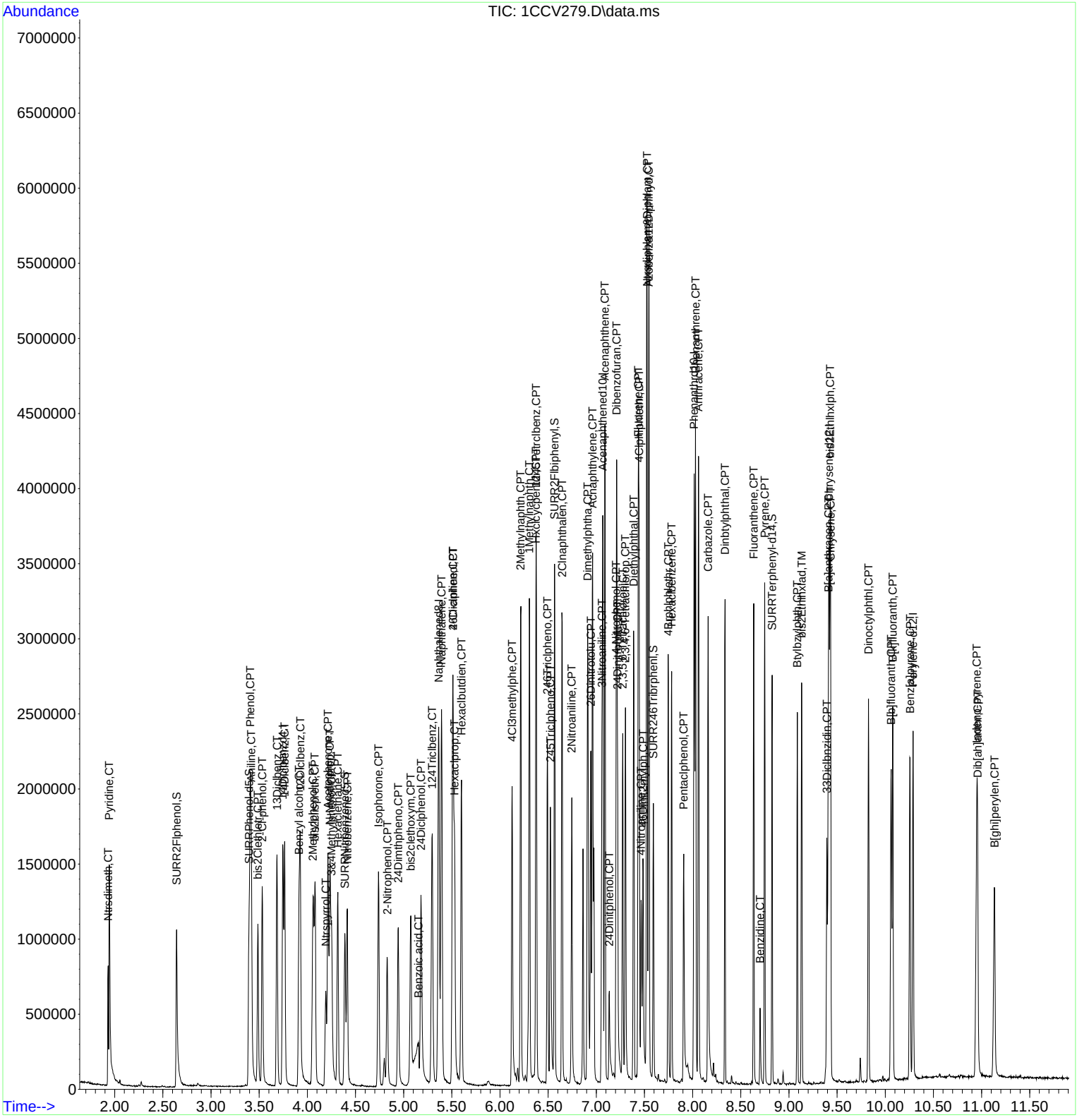
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.376	216	385832	16.2451 ug/mL	97
42) 246Triclpheno	6.493	196	267595	17.9124 ug/mL	96
43) 245Triclpheno	6.524	196	304274	18.9416 ug/mL	96
45) 2Clnaphthalen	6.646	162	742173	18.1604 ug/mL	97
46) 2Nitroaniline	6.746	65	278972	22.2881 ug/mL	94
47) Acnaphthylene	6.962	152	1228459	18.2012 ug/mL	99
48) Dimethylphtha	6.910	163	828175	17.8725 ug/mL	98
49) 26Dinitrotolu	6.944	165	190745	18.7304 ug/mL	99
50) Acenaphthene	7.089	154	698050	17.5580 ug/mL	96
51) 3Nitroaniline	7.058	138	202887	20.2356 ug/mL	87
52) 24Dinitphenol	7.135	184	92453	16.3715 ug/mL	88
53) Dibenzofuran	7.212	168	1002588	16.7799 ug/mL	95
54) 24Dinitrotolu	7.220	165	243804	18.7484 ug/mL	90
55) 4-Nitrophenol	7.206	65	177164	17.8922 ug/mL#	1
56) 2,3,5,6-Tetrachlorop	7.274	232	224831	16.9693 ug/mL	94
57) 2,3,4,6-Tetrachlorop	7.303	232	256444	17.4347 ug/mL	97
58) Fluorene	7.436	166	830198	17.4830 ug/mL	95
59) 4Clphlphlethr	7.445	204	390107	16.2225 ug/mL	96
60) Diethylphthal	7.388	149	906971	17.3918 ug/mL	97
61) 4Nitroaniline	7.464	138	224218	22.4469 ug/mL	88
64) 46Dinit2mylph	7.487	198	124226	18.1038 ug/mL	95
65) Ntrsdiphlam&Diphlam	7.527	169	1111829	38.6385 ug/mL	99
66) Azobenz&12Diphlhyd	7.547	182	341411	38.0448 ug/mL#	72
67) 4Brphlphlethr	7.749	248	251629	18.6109 ug/mL	92
68) Hexaclbenzene	7.783	284	268337	17.2295 ug/mL	92
69) Pentaclphenol	7.908	266	142346	16.4231 ug/mL	98
70) Phenanthrene	8.030	178	1136064	19.2786 ug/mL	98
71) Anthracene	8.061	178	1196287	19.7883 ug/mL	99
72) Carbazole	8.161	167	1101340	22.5974 ug/mL	98
73) Dinbtylphthal	8.337	149	893693	17.4813 ug/mL	99
74) Fluoranthene	8.635	202	811985	16.6498 ug/mL	99
76) Benzidine	8.700	184	132451	12.3448 ug/mL	95
77) Pyrene	8.749	202	829658	20.3885 ug/mL	99
79) Btylbzylphth	9.087	149	378363	21.1527 ug/mL	97
80) bis2Ethlhxlad	9.132	129	283731	21.2046 ug/mL	95
81) 33Diclbnzidin	9.394	252	242383	32.5969 ug/mL	97
82) B[a]anthracen	9.411	228	725180	19.8690 ug/mL	99
83) Chrysene	9.434	228	627024	18.6793 ug/mL	97
84) bis2Ethlhxlph	9.428	149	463049	19.1591 ug/mL	93
85) Dinoctylphthl	9.826	149	936361	21.0312 ug/mL	99
87) B[b]fluoranth	10.062	252	738334	20.3540 ug/mL	97
88) B[k]fluoranth	10.079	252	641942	19.0500 ug/mL	98
89) Benz[a]pyrene	10.258	252	670369	19.1549 ug/mL	99
90) Indeno-pyrene	10.951	276	659160	16.9964 ug/mL	95
91) Dib[ah]anthr	10.959	278	538157	17.0510 ug/mL	98
92) B[ghi]perylen	11.136	276	564833	16.9955 ug/mL	98

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1CCV279.D Vial: 27
Acq On : 28 Nov 2016 21:37 Operator: RPN
Sample : CCV 20ug/ml SVMS7217 Inst : SVMS1
Misc : 500uL+5ul IS S3553B Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 28 21:49:45 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Mon Nov 28 12:07:20 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



SEMI - VOLATILE ORGANIC ANALYSIS
QUALITY CONTROL
DOCUMENTS

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1MBTS01.D Vial: 14
Acq On : 28 Nov 2016 16:14 Operator: RPN
Sample : 133118,MBTS Inst : SVMS1
Misc : 2715,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:37:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

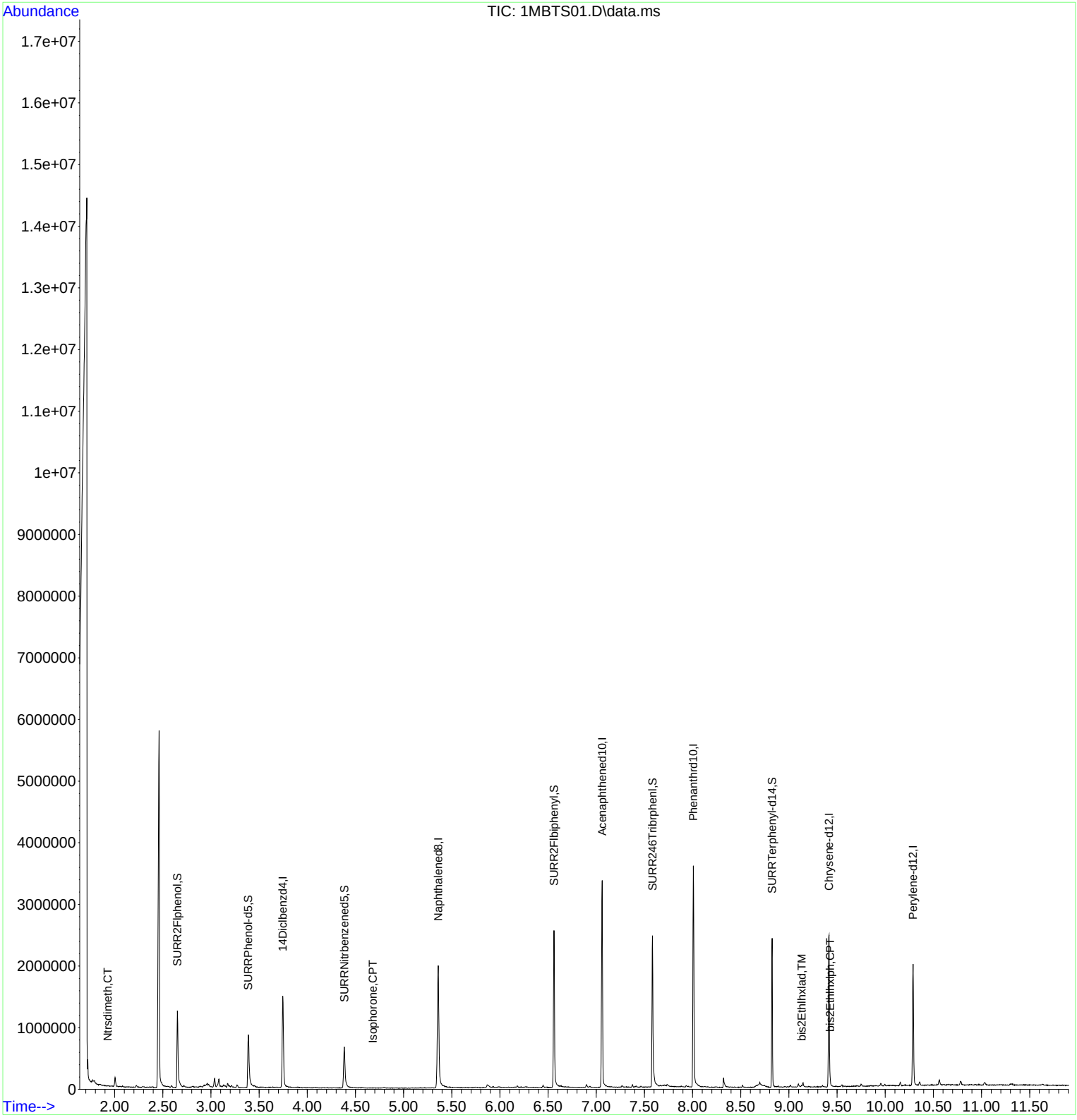
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.745	152	221687	20.00	ug/mL	0.00
21) Naphthalened8	5.359	136	1133096	20.00	ug/mL	0.00
39) Acenaphthened10	7.061	164	511548	20.00	ug/mL	0.00
63) Phenanthrd10	8.007	188	1088718	20.00	ug/mL	-0.01
75) Chrysene-d12	9.417	240	641039	20.00	ug/mL	0.00
86) Perylene-d12	10.289	264	555109	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.651	112	295625	59.03	%REC	0.01
Spiked Amount 100.000	Range 20 - 110		Recovery = 59.03%			
7) SURRPhenol-d5	3.387	99	308490	53.65	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 53.65%			
22) SURRNitrbenzened5	4.385	82	246528	77.10	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 77.10%			
44) SURR2Flbiphenyl	6.561	172	721593	85.85	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 85.85%			
62) SURR246Tribrphenl	7.584	330	259499	80.63	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 80.63%			
78) SURRTerphenyl-d14	8.826	244	476485	89.57	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 89.57%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.927	74	1119	0.1495	ug/mL#	28
24) Isophorone	4.680	82	860	0.0294	ug/mL	81
80) bis2Ethlhxlad	9.133	129	2383	0.1685	ug/mL#	1
84) bis2Ethlhxlph	9.428	149	17757	0.6950	ug/mL	95

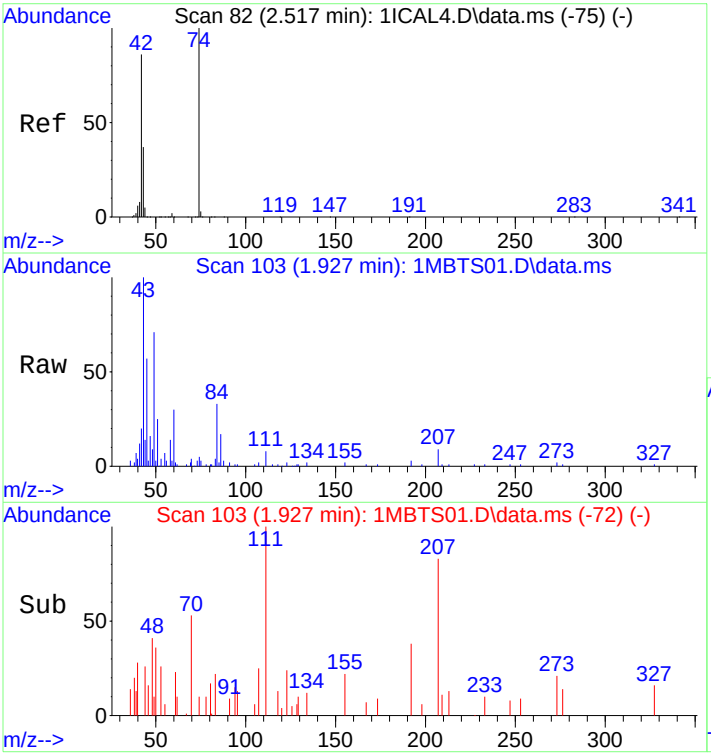
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1MBTS01.D Vial: 14
Acq On : 28 Nov 2016 16:14 Operator: RPN
Sample : 133118,MBTS Inst : SVMS1
Misc : 2715,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:37:48 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

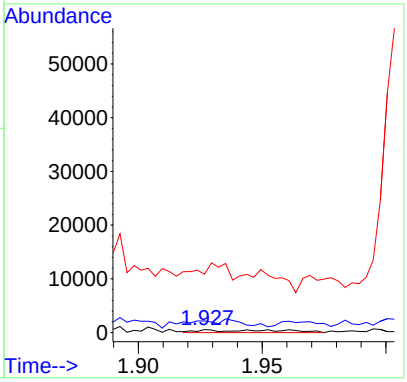


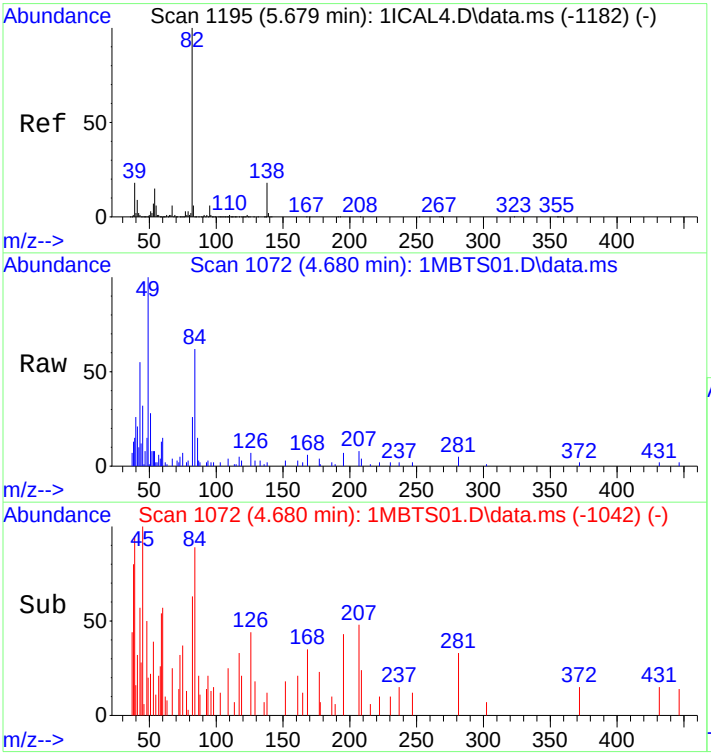


#2
Ntrsdimeth
Concen: 0.15 ug/mL
RT: 1.927 min Scan# 103
Delta R.T. -0.011 min
Lab File: 1MBTS01.D
Acq: 28 Nov 16 4:14 pm

Tgt Ion: 74 Resp: 1119

Ion	Ratio	Lower	Upper
74	100		
42	78.8	86.9	146.9#
43	161.7	21.7	81.7#

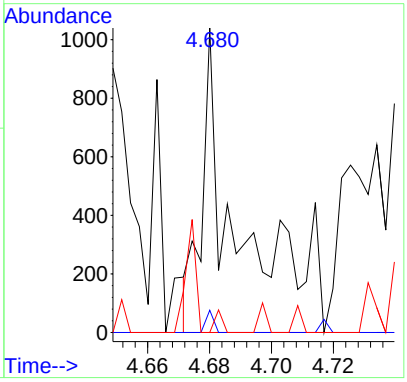


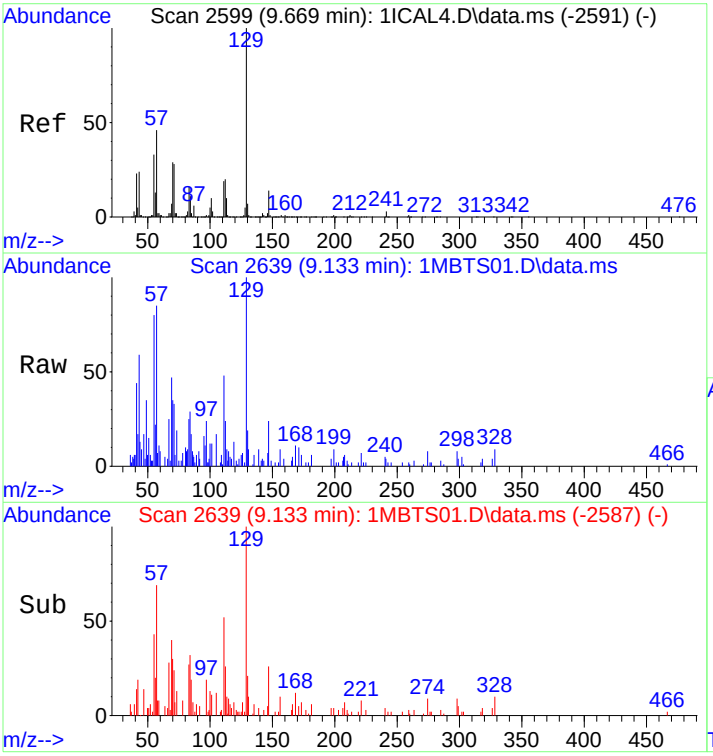


#24
Isophorone
Concen: 0.03 ug/mL
RT: 4.680 min Scan# 1072
Delta R.T. -0.060 min
Lab File: 1MBTS01.D
Acq: 28 Nov 16 4:14 pm

Tgt Ion: 82 Resp: 860

Ion	Ratio	Lower	Upper
82	100		
138	7.3	0.0	45.2
95	0.0	0.0	26.5

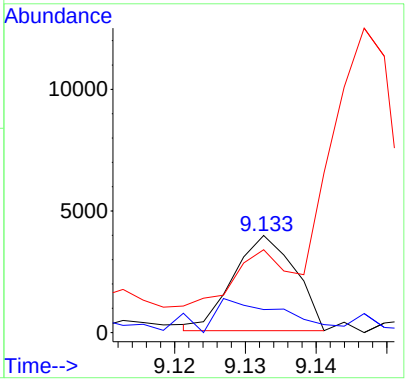


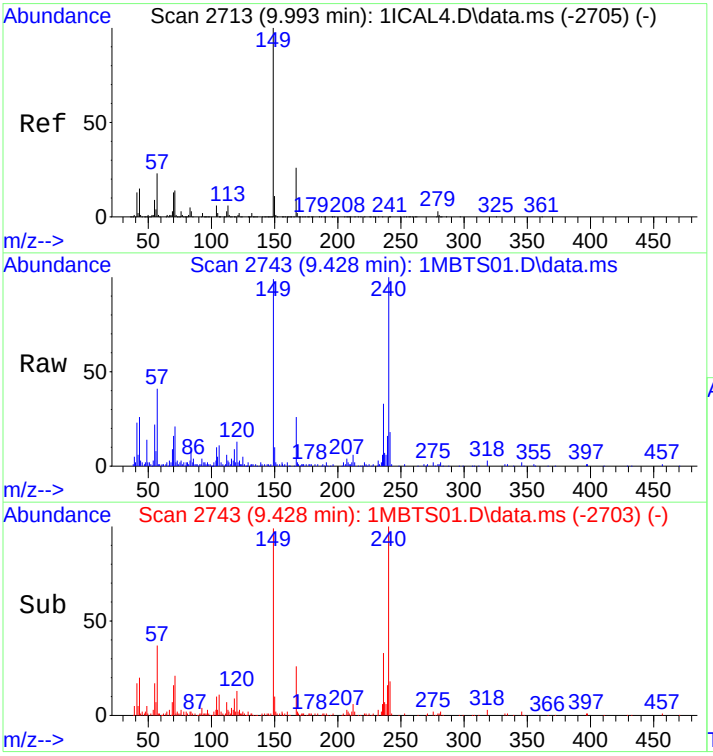


#80
bis2Ethlhxlad
Concen: 0.17 ug/mL
RT: 9.133 min Scan# 2639
Delta R.T. -0.003 min
Lab File: 1MBTS01.D
Acq: 28 Nov 16 4:14 pm

Tgt Ion:129 Resp: 2383

Ion	Ratio	Lower	Upper
129	100		
112	0.0	17.5	26.3#
57	234.7	53.9	80.9#

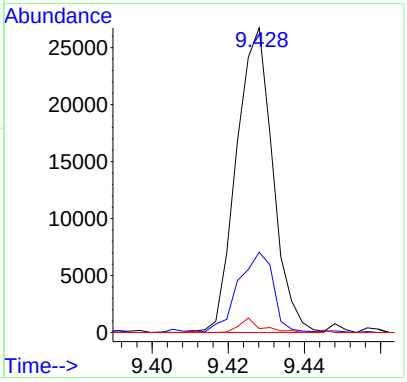




#84
bis2Ethlhxlph
Concen: 0.69 ug/mL
RT: 9.428 min Scan# 2743
Delta R.T. -0.003 min
Lab File: 1MBTS01.D
Acq: 28 Nov 16 4:14 pm

Tgt Ion:149 Resp: 17757

Ion	Ratio	Lower	Upper
149	100		
167	25.9	0.0	53.4
279	1.3	0.0	32.4



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1MBTV01.D Vial: 15
Acq On : 28 Nov 2016 16:35 Operator: RPN
Sample : 133118,MBTV Inst : SVMS1
Misc : 2715,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 12:01:58 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

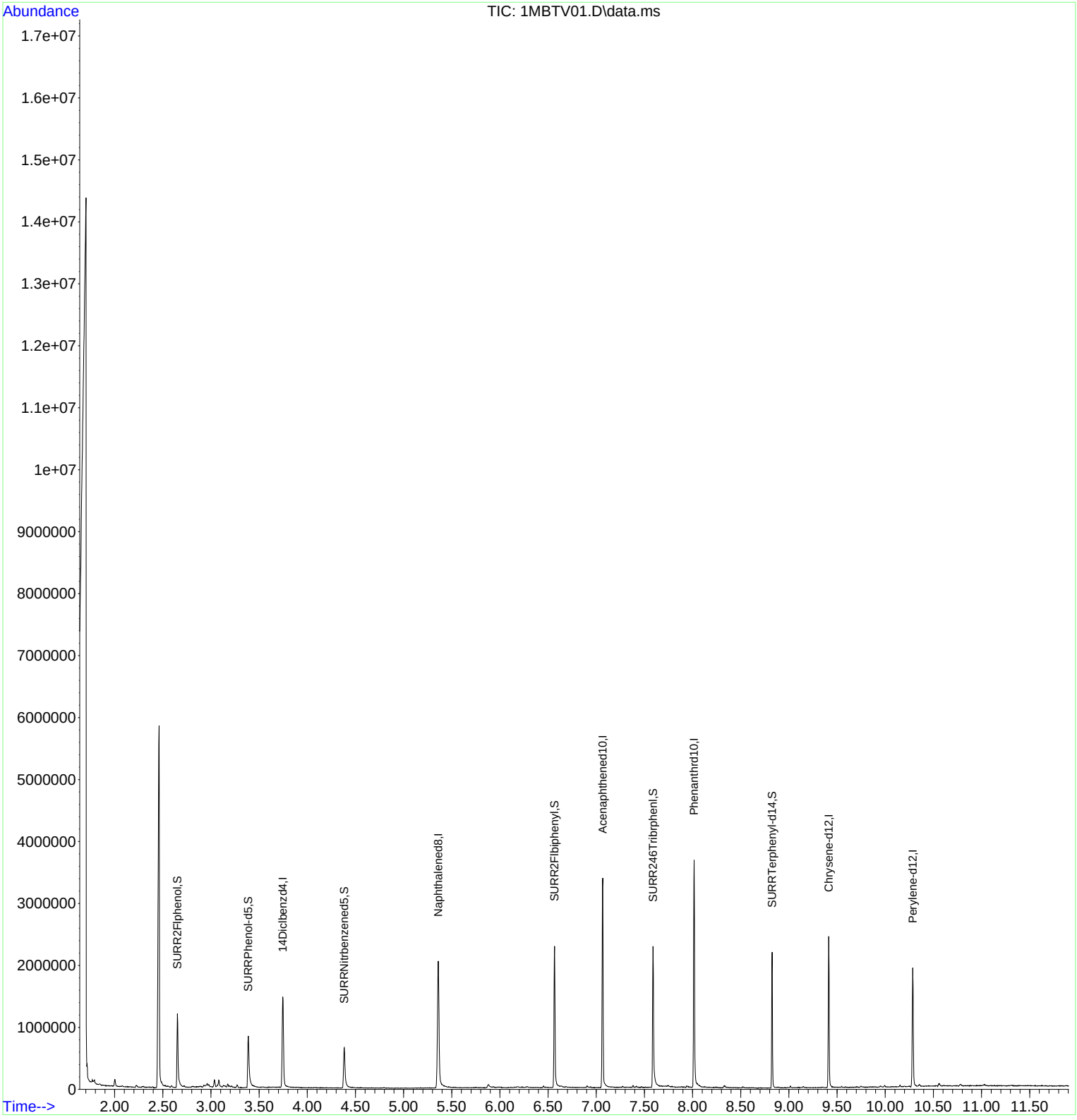
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.745	152	227403	20.00	ug/mL	0.00
21) Naphthalened8	5.359	136	1194342	20.00	ug/mL	0.00
39) Acenaphthened10	7.067	164	516669	20.00	ug/mL	0.00
63) Phenanthrd10	8.016	188	1073882	20.00	ug/mL	0.00
75) Chrysene-d12	9.414	240	621442	20.00	ug/mL	0.00
86) Perylene-d12	10.286	264	535664	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.651	112	285115	55.50	%REC	0.01
Spiked Amount 100.000	Range 20 - 110		Recovery = 55.50%			
7) SURRPhenol-d5	3.387	99	295244	50.05	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 50.05%			
22) SURRNitrbenzened5	4.382	82	245677	72.90	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 72.90%			
44) SUR2Flbiphenyl	6.567	172	659786	77.71	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 77.71%			
62) SURR246Tribrphenl	7.590	330	242583	74.63	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 74.63%			
78) SURRTerphenyl-d14	8.826	244	438383	85.00	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 85.00%			
Target Compounds						Qvalue

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1MBTV01.D Vial: 15
Acq On : 28 Nov 2016 16:35 Operator: RPN
Sample : 133118,MBTV Inst : SVMS1
Misc : 2715,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 12:01:58 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1MBW01.D Vial: 16
Acq On : 28 Nov 2016 16:54 Operator: RPN
Sample : 133118,MBW, Inst : SVMS1
Misc : 810945,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:38:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

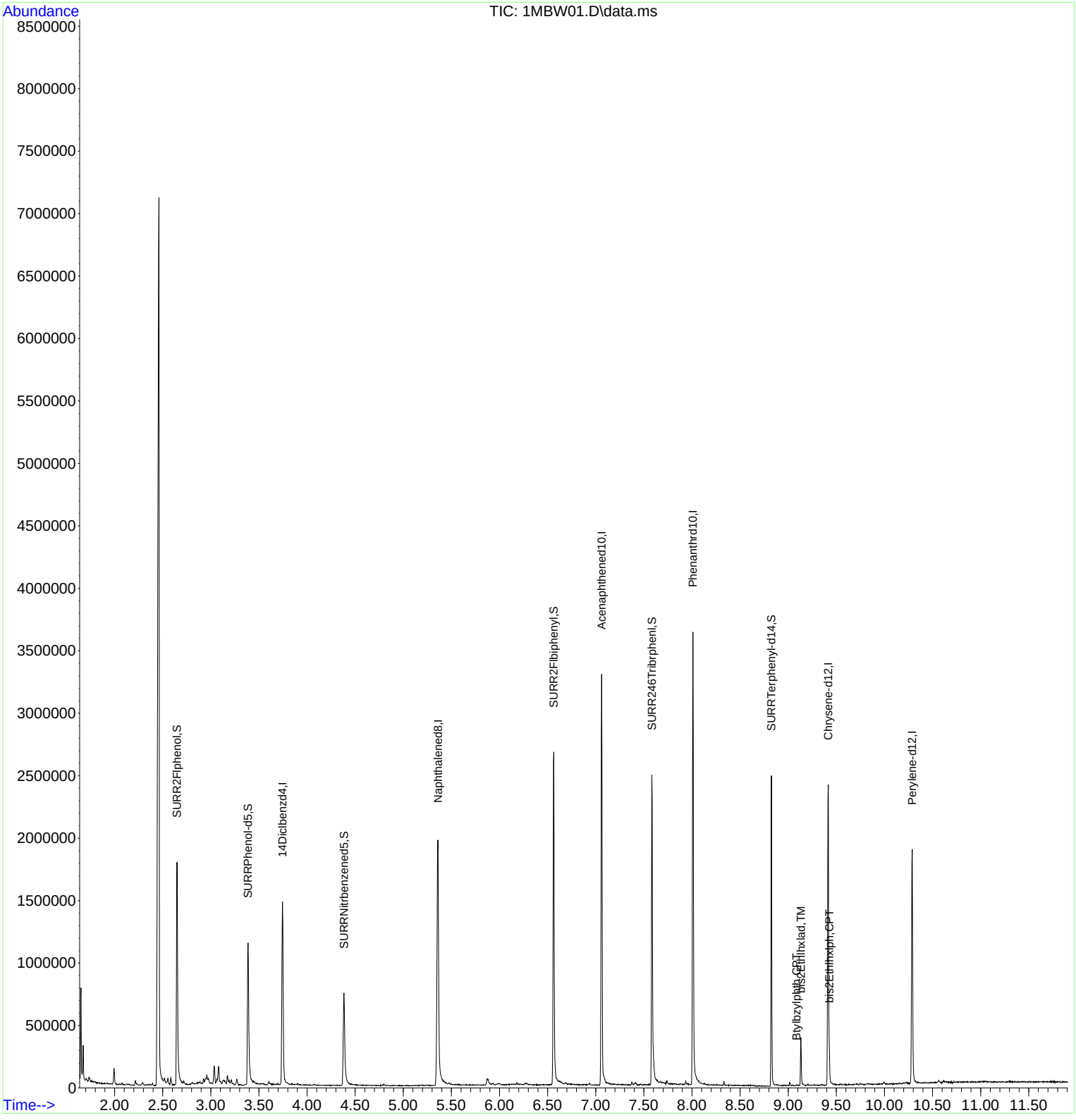
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.745	152	226072	20.00	ug/mL	0.00
21) Naphthalened8	5.362	136	1211008	20.00	ug/mL	0.00
39) Acenaphthened10	7.061	164	514050	20.00	ug/mL	0.00
63) Phenanthrd10	8.010	188	1071484	20.00	ug/mL	0.00
75) Chrysene-d12	9.417	240	640310	20.00	ug/mL	0.00
86) Perylene-d12	10.289	264	554463	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.648	112	417318	81.72	%REC	0.00
Spiked Amount 100.000	Range 20 - 110		Recovery = 81.72%			
7) SURRPhenol-d5	3.387	99	362263	61.78	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 61.78%			
22) SURRNitrbenzened5	4.384	82	281564	82.40	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 82.40%			
44) SUR2Flbiphenyl	6.564	172	764126	90.46	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 90.46%			
62) SURR246Tribrphenl	7.584	330	259415	80.21	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 80.21%			
78) SURRTerphenyl-d14	8.826	244	482024	90.71	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 90.71%			
Target Compounds						Qvalue
79) Btylbzylphth	9.087	149	959	0.0508	ug/mL#	64
80) bis2Ethlhxlad	9.132	129	37277	2.6382	ug/mL	94
84) bis2Ethlhxlph	9.428	149	41619	1.6307	ug/mL	87

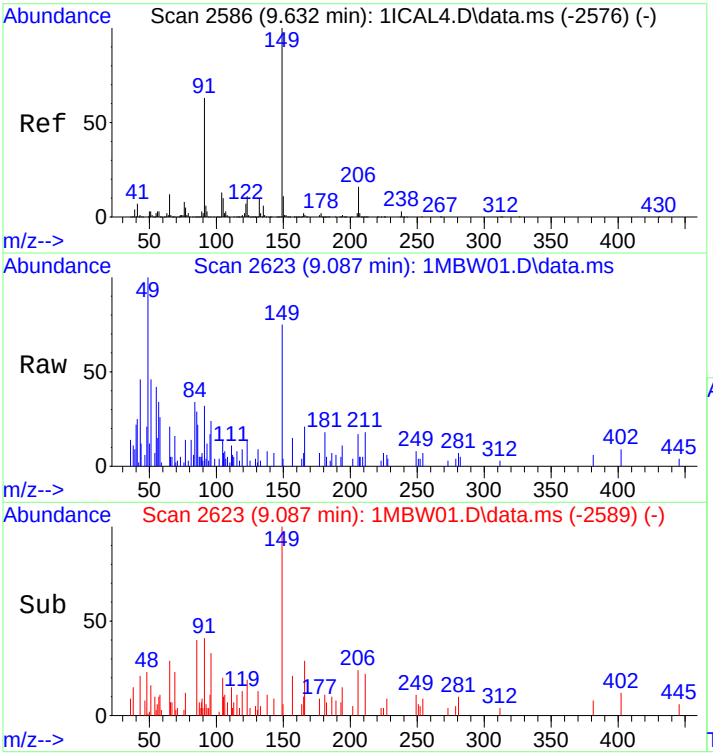
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1MBW01.D Vial: 16
Acq On : 28 Nov 2016 16:54 Operator: RPN
Sample : 133118,MBW, Inst : SVMS1
Misc : 810945,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:38:04 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

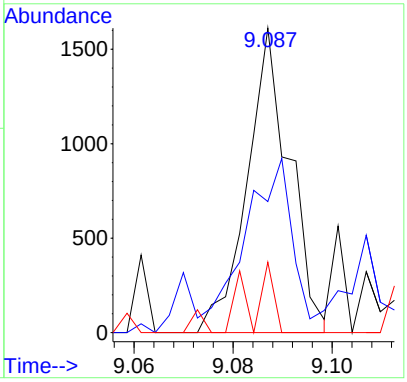


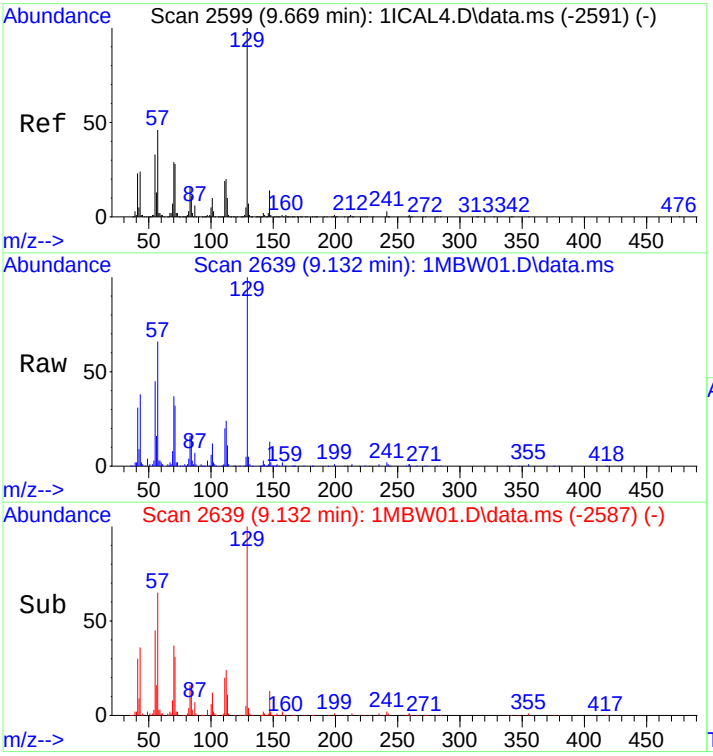


#79
Btylbzylphth
Concen: 0.05 ug/mL
RT: 9.087 min Scan# 2623
Delta R.T. -0.003 min
Lab File: 1MBW01.D
Acq: 28 Nov 16 4:54 pm

Tgt Ion:149 Resp: 959

Ion	Ratio	Lower	Upper
149	100		
91	33.9	37.5	97.5#
206	21.9	0.0	47.1

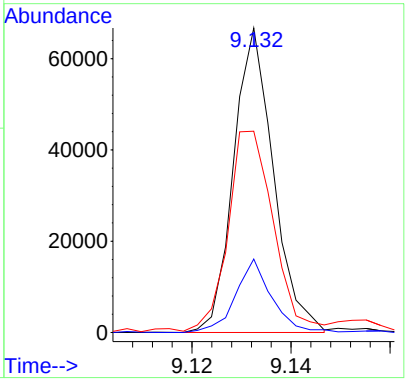


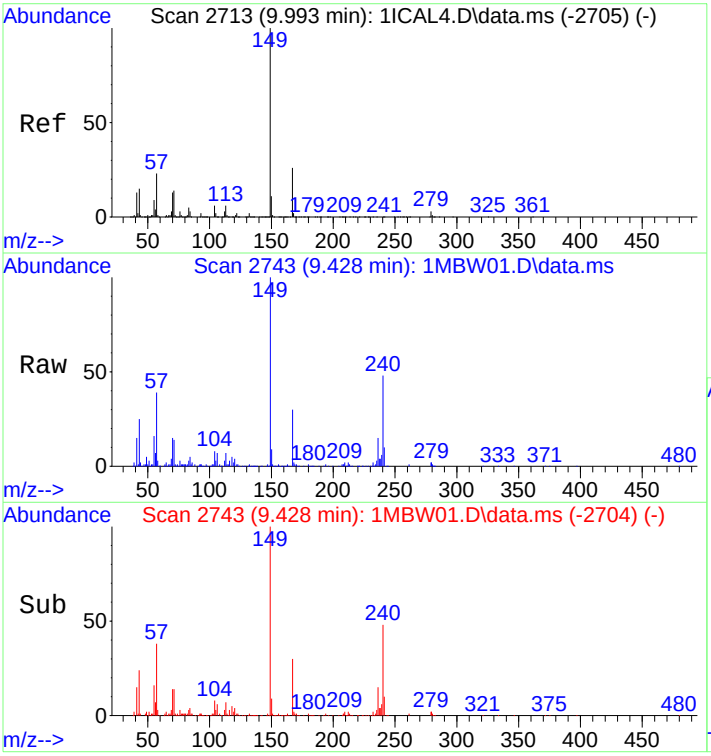


#80
bis2Ethlhxlad
Concen: 2.64 ug/mL
RT: 9.132 min Scan# 2639
Delta R.T. -0.003 min
Lab File: 1MBW01.D
Acq: 28 Nov 16 4:54 pm

Tgt Ion:129 Resp: 37277

Ion	Ratio	Lower	Upper
129	100		
112	21.8	17.5	26.3
57	74.3	53.9	80.9

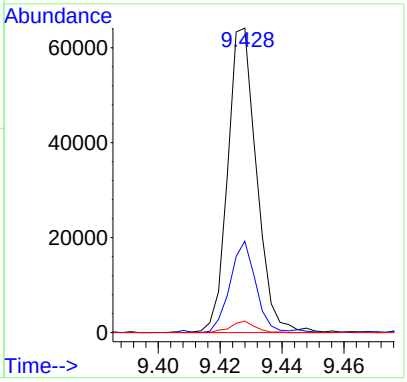




#84
bis2Ethlhxlph
Concen: 1.63 ug/mL
RT: 9.428 min Scan# 2743
Delta R.T. -0.003 min
Lab File: 1MBW01.D
Acq: 28 Nov 16 4:54 pm

Tgt Ion:149 Resp: 41619

Ion	Ratio	Lower	Upper
149	100		
167	30.0	0.0	53.4
279	3.8	0.0	32.4



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1LCSW01.D Vial: 17
Acq On : 28 Nov 2016 17:13 Operator: RPN
Sample : 133118,LCSW, Inst : SVMS1
Misc : 810946,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:37:38 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.748	152	225024	20.00	ug/mL	0.00
21) Naphthalened8	5.362	136	1223087	20.00	ug/mL	0.00
39) Acenaphthened10	7.061	164	509512	20.00	ug/mL	0.00
63) Phenanthrd10	8.010	188	1061395	20.00	ug/mL	0.00
75) Chrysene-d12	9.420	240	602461	20.00	ug/mL	0.00
86) Perylene-d12	10.292	264	544385	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.651	112	425271	83.66	%REC	0.01
Spiked Amount 100.000	Range 20 - 110		Recovery = 83.66%			
7) SURRPhenol-d5	3.390	99	445689	76.36	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 76.36%			
22) SURRNitrbenzened5	4.387	82	294544	85.34	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 85.34%			
44) SURR2Flbiphenyl	6.564	172	795332	95.00	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 95.00%			
62) SURR246Tribrphenl	7.587	330	261636	81.62	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 81.62%			
78) SURRTerphenyl-d14	8.826	244	484609	96.93	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 96.93%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.952	74	126443	16.6419	ug/mL	83
3) Pyridine	1.972	79	149228	11.3254	ug/mL	96
5) Aniline	3.419	93	293070	15.7252	ug/mL#	42
6) bis2Clethletr	3.487	93	255884	21.0428	ug/mL	94
8) Phenol	3.404	94	260488	15.5492	ug/mL	92
9) 2-Cl-phenol	3.532	128	251092	18.1778	ug/mL	98
10) 13Diclbenz	3.686	146	263941	16.5263	ug/mL	96
11) 14Diclbenz	3.765	146	268910	16.4061	ug/mL	97
12) 12Diclbenz	3.924	146	258428	16.5765	ug/mL	99
13) Benzyl alcoho	3.913	108	160879	18.1848	ug/mL	95
14) bis2clispreth	4.076	45	612243	20.6595	ug/mL	97
15) 2Methylphenol	4.055	107	204517	19.0503	ug/mL	95
16) Ntrspyrrol	4.186	100	129157	19.1185	ug/mL	85
17) Acetophenone	4.211	105	400540	19.4569	ug/mL	99
18) Hexaclethane	4.316	117	112070	16.0289	ug/mL	93
19) N-Ntrsdinprop	4.231	70	211901	20.8938	ug/mL	91
20) 3&4Methylphenol	4.243	107	265388	19.1841	ug/mL	94
23) Nitrobenzene	4.410	77	278624	15.9177	ug/mL	97
24) Isophorone	4.737	82	554447	17.5305	ug/mL	98
25) 2-Nitrophenol	4.828	139	140944	16.1905	ug/mL	94
26) 24Dimthpheno	4.939	122	214450	16.4769	ug/mL	97
27) bis2clethoxym	5.072	93	333397	16.3048	ug/mL	98
28) 24Diclphenol	5.177	162	280396	16.1902	ug/mL	95
29) 124Triclbenz	5.294	180	327659	15.6643	ug/mL	98
30) Benzoic acid	5.109	122	94895	10.9609	ug/mL	93
31) Naphthalene	5.390	128	1028171	18.2269	ug/mL	99
32) 4-Cl-aniline	5.504	127	329539	15.8298	ug/mL	94
33) 26Diclphenol	5.507	162	274295	17.2362	ug/mL	88
34) Hexaclprop	5.527	213	203653	12.9512	ug/mL	97
35) Hexaclbutdien	5.598	225	212136	13.8942	ug/mL	96
36) 4Cl3methylphe	6.124	107	324581	19.2604	ug/mL	98
37) 2Methylnaphth	6.212	142	668459	16.9001	ug/mL	99
38) 1Methylnaphth	6.303	141	580196	17.6295	ug/mL	91
40) Hxclcycpentdi	6.371	237	137065	12.2978	ug/mL	97

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1LCSW01.D Vial: 17
Acq On : 28 Nov 2016 17:13 Operator: RPN
Sample : 133118,LCSW, Inst : SVMS1
Misc : 810946,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:37:38 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

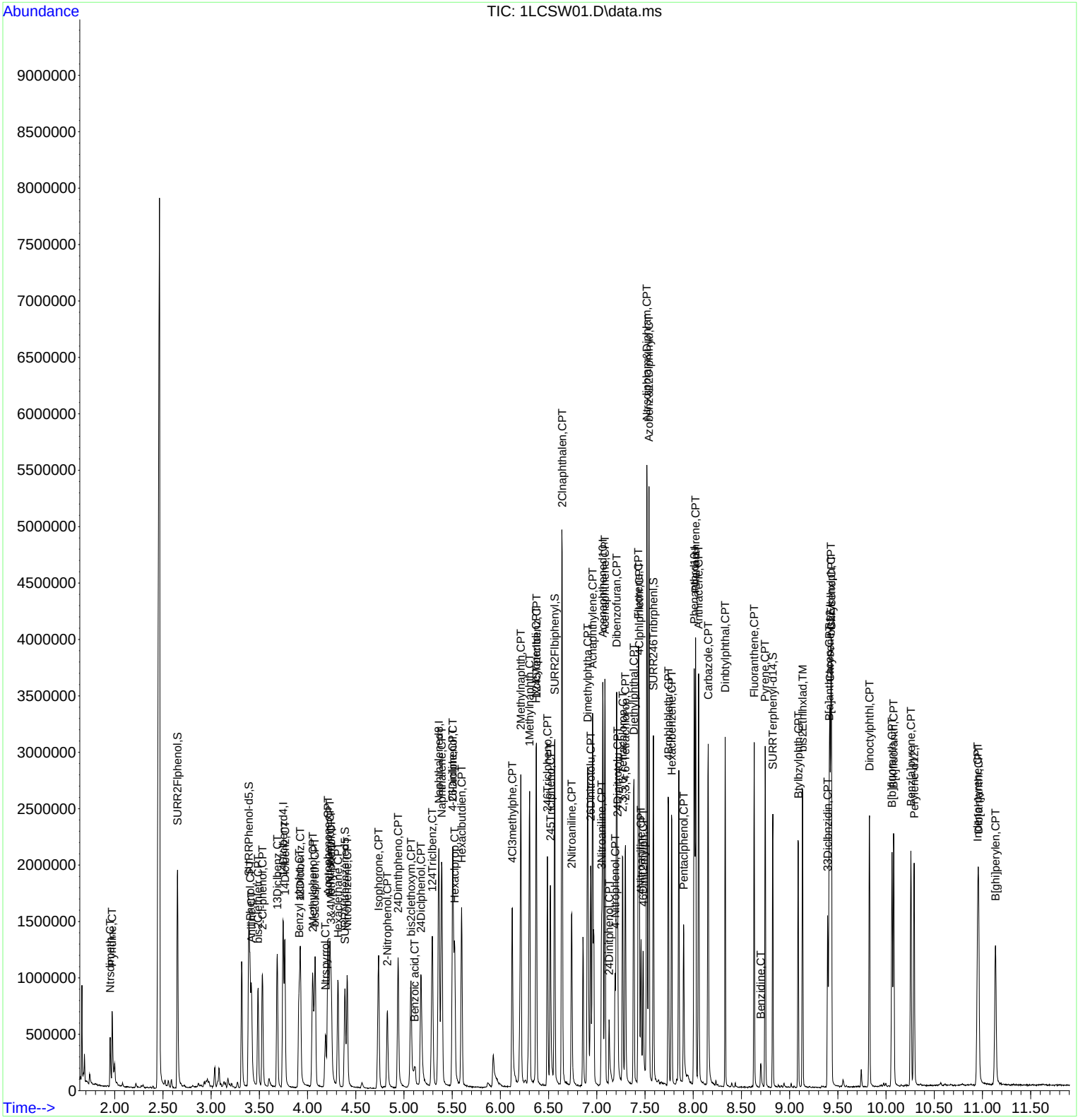
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.374	216	348296	17.3360 ug/mL	98
42) 246Triclpheno	6.487	196	224624	17.7054 ug/mL	97
43) 245Triclpheno	6.519	196	249743	18.3070 ug/mL	97
45) 2Clnaphthalen	6.641	162	576116	16.5998 ug/mL	99
46) 2Nitroaniline	6.740	65	239951	22.5678 ug/mL	95
47) Acnaphthylene	6.956	152	1100653	19.2027 ug/mL	100
48) Dimethylphtha	6.905	163	753112	19.1379 ug/mL	98
49) 26Dinitrotolu	6.936	165	174152	20.1370 ug/mL	99
50) Acenaphthene	7.084	154	598747	17.7339 ug/mL	95
51) 3Nitroaniline	7.050	138	162637	19.1009 ug/mL	93
52) 24Dinitphenol	7.127	184	81156	16.8254 ug/mL	86
53) Dibenzofuran	7.206	168	926004	18.2496 ug/mL	96
54) 24Dinitrotolu	7.215	165	224194	20.3011 ug/mL	90
55) 4-Nitrophenol	7.192	65	153222	18.2214 ug/mL	80
56) 2,3,5,6-Tetrachlorop	7.269	232	205593	18.2721 ug/mL	93
57) 2,3,4,6-Tetrachlorop	7.297	232	227307	18.1973 ug/mL	94
58) Fluorene	7.431	166	741098	18.3774 ug/mL	98
59) 4Clphlphlethr	7.439	204	354966	17.4859 ug/mL	97
60) Diethylphthal	7.385	149	844824	19.0762 ug/mL	98
61) 4Nitroaniline	7.459	138	190412	22.4467 ug/mL	90
64) 46Dinit2mylph	7.482	198	117163	18.4237 ug/mL	91
65) Ntrsdiphlam&Diphlam	7.519	169	999227	37.4230 ug/mL	99
66) Azobenz&12Diphlhyd	7.541	182	309840	37.2565 ug/mL#	76
67) 4Brphlphlethr	7.743	248	229088	18.3057 ug/mL	93
68) Hexaclbenzene	7.777	284	242241	16.8041 ug/mL	95
69) Pentaclphenol	7.902	266	153115	18.9195 ug/mL	99
70) Phenanthrene	8.024	178	1013791	18.5865 ug/mL	98
71) Anthracene	8.056	178	1100996	19.6759 ug/mL	99
72) Carbazole	8.155	167	1008939	22.3655 ug/mL	100
73) Dinbtylphthal	8.331	149	851302	17.9906 ug/mL	100
74) Fluoranthene	8.633	202	710478	15.7394 ug/mL	98
76) Benzidine	8.701	184	65249	8.0552 ug/mL	94
77) Pyrene	8.746	202	753385	18.6341 ug/mL	99
79) Btylbzylphth	9.090	149	351764	19.7931 ug/mL	96
80) bis2Ethlhxlad	9.135	129	268928	20.2286 ug/mL	95
81) 33Diclbnzidin	9.394	252	220187	30.1710 ug/mL	97
82) B[a]anthracen	9.411	228	663195	18.2885 ug/mL	98
83) Chrysene	9.434	228	590149	17.6948 ug/mL	98
84) bis2Ethlhxlph	9.428	149	514046	21.4070 ug/mL	96
85) Dinoctylphthl	9.829	149	890275	20.1257 ug/mL	100
87) B[b]fluoranth	10.062	252	659298	20.4311 ug/mL	98
88) B[k]fluoranth	10.079	252	631660	21.0714 ug/mL	97
89) Benz[a]pyrene	10.258	252	644304	20.6951 ug/mL	99
90) Indeno-pyrene	10.951	276	642867	18.6337 ug/mL	93
91) Dib[ah]anthr	10.960	278	535101	19.0584 ug/mL	98
92) B[ghi]perylen	11.136	276	569040	19.2472 ug/mL	93

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\1LCSW01.D Vial: 17
Acq On : 28 Nov 2016 17:13 Operator: RPN
Sample : 133118,LCSW, Inst : SVMS1
Misc : 810946,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:37:38 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\804535MS.D Vial: 23
Acq On : 28 Nov 2016 19:06 Operator: RPN
Sample : 133118,MSW804535, Inst : SVMS1
Misc : 810948,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:38:18 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 14Diclbenzd4	3.748	152	237636	20.00	ug/mL	0.00
21) Naphthalened8	5.362	136	1287283	20.00	ug/mL	0.00
39) Acenaphthened10	7.067	164	543105	20.00	ug/mL	0.00
63) Phenanthrd10	8.016	188	1089957	20.00	ug/mL	0.00
75) Chrysene-d12	9.417	240	605628	20.00	ug/mL	0.00
86) Perylene-d12	10.286	264	523941	20.00	ug/mL	0.00
System Monitoring Compounds						
4) SURR2Flphenol	2.654	112	400587	74.62	%REC	0.01
Spiked Amount 100.000	Range 20 - 110		Recovery = 74.62%			
7) SURRPhenol-d5	3.393	99	427168	69.30	%REC	0.00
Spiked Amount 100.000	Range 10 - 115		Recovery = 69.30%			
22) SURRNitrbenzened5	4.387	82	278062	76.55	%REC	0.00
Spiked Amount 100.000	Range 40 - 110		Recovery = 76.55%			
44) SURR2Flbiphenyl	6.567	172	761461	85.32	%REC	0.00
Spiked Amount 100.000	Range 50 - 110		Recovery = 85.32%			
62) SURR246Tribrphenl	7.593	330	246069	72.01	%REC	0.00
Spiked Amount 100.000	Range 40 - 125		Recovery = 72.01%			
78) SURRTerphenyl-d14	8.826	244	438828	87.31	%REC	0.00
Spiked Amount 100.000	Range 50 - 135		Recovery = 87.31%			
Target Compounds						Qvalue
2) Ntrsdimeth	1.964	74	65979	8.2230	ug/mL	76
3) Pyridine	2.001	79	74983	5.7315	ug/mL	87
5) Aniline	3.424	93	158249	8.2481	ug/mL	70
6) bis2Clethletr	3.487	93	239528	18.6523	ug/mL	97
8) Phenol	3.404	94	247041	13.9638	ug/mL	90
9) 2-Cl-phenol	3.535	128	239649	16.4286	ug/mL	98
10) 13Diclbenz	3.686	146	251106	14.8882	ug/mL	93
11) 14Diclbenz	3.765	146	258117	14.9118	ug/mL	95
12) 12Diclbenz	3.927	146	247278	15.0195	ug/mL	97
13) Benzyl alcoho	3.916	108	139926	14.9769	ug/mL	92
14) bis2clispreth	4.077	45	576499	18.4209	ug/mL	98
15) 2Methylphenol	4.055	107	201657	17.7870	ug/mL	96
16) Ntrspyrrol	4.189	100	127044	17.8076	ug/mL	82
17) Acetophenone	4.211	105	376235	17.3063	ug/mL	97
18) Hexaclethane	4.314	117	107863	14.6084	ug/mL	98
19) N-Ntrsdinprop	4.231	70	202379	18.8958	ug/mL	88
20) 3&4Methylphenol	4.248	107	250858	17.1714	ug/mL	97
23) Nitrobenzene	4.410	77	271197	14.7208	ug/mL	96
24) Isophorone	4.734	82	524268	15.7497	ug/mL	97
25) 2-Nitrophenol	4.828	139	134921	14.7257	ug/mL	95
26) 24Dimthpheno	4.942	122	204972	14.9633	ug/mL	96
27) bis2clethoxym	5.072	93	324228	15.0656	ug/mL	96
28) 24Diclphenol	5.175	162	272174	14.9317	ug/mL	97
29) 124Triclbenz	5.294	180	311897	14.1672	ug/mL	94
30) Benzoic acid	5.129	122	143360	14.9496	ug/mL	98
31) Naphthalene	5.390	128	990101	16.6767	ug/mL	98
32) 4-Cl-aniline	5.510	127	125238	5.7159	ug/mL	91
33) 26Diclphenol	5.510	162	272799	16.2873	ug/mL	96
34) Hexaclprop	5.527	213	198140	11.9722	ug/mL	97
35) Hexaclbutdien	5.601	225	195081	12.1400	ug/mL	96
36) 4Cl3methylphe	6.129	107	317965	17.9269	ug/mL	91
37) 2Methylnaphth	6.215	142	628192	15.0901	ug/mL	94
38) 1Methylnaphth	6.305	141	538999	15.5610	ug/mL	96
40) Hxclcycpentdi	6.376	237	135123	11.3901	ug/mL	94

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\804535MS.D Vial: 23
Acq On : 28 Nov 2016 19:06 Operator: RPN
Sample : 133118,MSW804535, Inst : SVMS1
Misc : 810948,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:38:18 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M

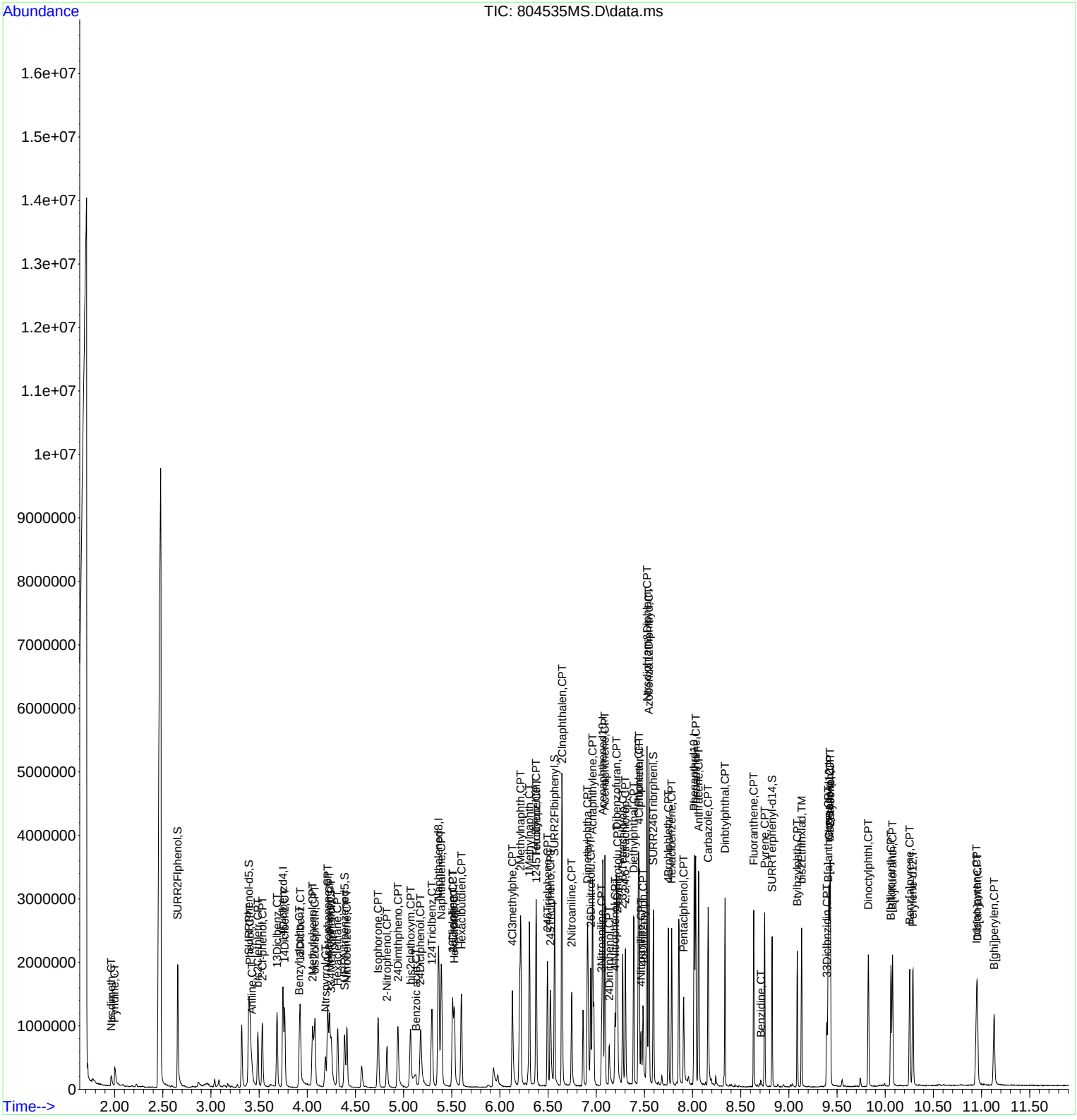
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 1245Tetrclbenz	6.379	216	325600	15.0802 ug/mL	94
42) 246Triclpheno	6.496	196	217726	16.1001 ug/mL	95
43) 245Triclpheno	6.524	196	244241	16.7963 ug/mL	96
45) 2Clnaphthalen	6.646	162	558741	15.1034 ug/mL	97
46) 2Nitroaniline	6.746	65	222982	19.7323 ug/mL	95
47) Acnaphthylene	6.962	152	1077706	17.6394 ug/mL	98
48) Dimethylphtha	6.908	163	724689	17.2766 ug/mL	99
49) 26Dinitrotolu	6.945	165	168673	18.2971 ug/mL	96
50) Acenaphthene	7.090	154	593258	16.4845 ug/mL	98
51) 3Nitroaniline	7.056	138	121785	13.4184 ug/mL	83
52) 24Dinitphenol	7.135	184	89079	17.2404 ug/mL	90
53) Dibenzofuran	7.212	168	891264	16.4785 ug/mL	97
54) 24Dinitrotolu	7.220	165	205465	17.4544 ug/mL	90
55) 4-Nitrophenol	7.198	65	154926	17.2845 ug/mL#	88
56) 2,3,5,6-Tetrachlorop	7.274	232	194463	16.2139 ug/mL	93
57) 2,3,4,6-Tetrachlorop	7.303	232	216288	16.2442 ug/mL	96
58) Fluorene	7.439	166	710280	16.5237 ug/mL	97
59) 4Clphlphlethr	7.445	204	346588	15.8971 ug/mL	99
60) Diethylphthal	7.391	149	781024	16.5447 ug/mL	95
61) 4Nitroaniline	7.465	138	160653	17.7671 ug/mL	87
64) 46Dinit2mylph	7.487	198	118246	18.1278 ug/mL	94
65) Ntrsdiphlam&Diphlam	7.527	169	985857	35.8373 ug/mL	99
66) Azobenz&12Diphlhyd	7.547	182	299689	34.9658 ug/mL#	79
67) 4Brphlphlethr	7.749	248	212843	16.5619 ug/mL	94
68) Hexaclbenzene	7.783	284	232751	15.7227 ug/mL	93
69) Pentaclphenol	7.908	266	146513	17.6984 ug/mL	91
70) Phenanthrene	8.033	178	964136	17.2129 ug/mL	99
71) Anthracene	8.064	178	1027774	17.8861 ug/mL	100
72) Carbazole	8.161	167	961199	20.7489 ug/mL	100
73) Dinbtylphthal	8.337	149	798582	16.4342 ug/mL	100
74) Fluoranthene	8.635	202	684068	14.7572 ug/mL	97
76) Benzidine	8.712	184	1944	4.0275 ug/mL	49
77) Pyrene	8.749	202	705477	17.3580 ug/mL	98
79) Btylbzylphth	9.087	149	338958	18.9728 ug/mL	98
80) bis2Ethlhxlad	9.133	129	254381	19.0343 ug/mL	96
81) 33Diclbnzidin	9.394	252	155280	21.9872 ug/mL	97
82) B[a]anthracen	9.408	228	612959	16.8148 ug/mL	98
83) Chrysene	9.431	228	546640	16.3045 ug/mL	97
84) bis2Ethlhxlph	9.425	149	416461	17.2525 ug/mL	96
85) Dinoctylphthl	9.823	149	812704	18.2760 ug/mL	97
87) B[b]fluoranth	10.059	252	610174	19.6466 ug/mL	97
88) B[k]fluoranth	10.076	252	575002	19.9298 ug/mL	97
89) Benz[a]pyrene	10.255	252	571163	19.0617 ug/mL	98
90) Indeno-pyrene	10.948	276	559077	16.8373 ug/mL	91
91) Dib[ah]anthr	10.957	278	464346	17.1837 ug/mL	98
92) B[ghi]perylen	11.130	276	480861	16.8993 ug/mL	92

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

Quantitation Report (QT Reviewed)

Data File : C:\INSTARCH\Data\1S112816\804535MS.D Vial: 23
Acq On : 28 Nov 2016 19:06 Operator: RPN
Sample : 133118,MSW804535, Inst : SVMS1
Misc : 810948,500uL+5ul IS S3553D Multiplr: 1.00
Integrator: RTE
Quant Time: Nov 29 11:38:18 2016

Quant Method : C:\INSTARCH\METHODS\1S110916.M
Quant Title : Method for 8270 analysis
QLast Update : Tue Nov 29 11:36:18 2016
Response via : Initial Calibration
DataAcq Meth:1S110916.M



SEMI - VOLATILE ORGANIC ANALYSIS
LOGBOOK
DOCUMENTS

S SVOC 8270 WATER Analytical Run
133118 on 11/28/2016

Date Analyzed: _____ JJY 12/05/16 Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
123578	804535		11/09/2016 1640		GEO CONSULTANTS, LLC	FORBES S-1	SVOC 8270 QSM 5 TCLP		M	**4**	
		F1-IDW-BIN						60339			
123579	804567		11/09/2016 1855		GEO CONSULTANTS, LLC	FORBES S-2	SVOC 8270 QSM 5 TCLP		M	**4**	
		F2-IDW-BIN						60339			
123619	805712		11/11/2016 1400		MAXXAM ANALYTICS	AFFF SI	SVOC 8270 QSM 5 TCLP		M	**4**	
		PETER-IDW-SOIL						60339			
123805	809338		11/18/2016 1337		ERT	RVAAP FY16	SVOC 8270 QSM 5 TCLP		M	**4**	Y
		RVAAP-50-RT						60339			
123805	809341		11/18/2016 1345		ERT	RVAAP FY16	SVOC 8270 QSM 5 TCLP		M	**4**	Y
		RVAAP-50-TD						60339			
	810945						SVOC 8270 QSM 5 TCLP				
				MBW				60339			
	810946						SVOC 8270 QSM 5 TCLP				
				LCSW				60339			
	810948		11/09/2016 1640				SVOC 8270 QSM 5 TCLP				
		F1-IDW-BIN		MSW 804535				60339			

8 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

PREP WORKSHEET
on 11/28/2016

Prep Batch **60,339** Date Prepped: 11/28/2016 Prepped By JLH

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	810945	MBW		SVOC 8270 QSM 5 TCLP	LIQUID	1.0		0.100		
	810946	LCSW		SVOC 8270 QSM 5 TCLP	LIQUID	1.0		0.100		
123578	804535			SVOC 8270 QSM 5 TCLP	TCLP	1.0		0.100	4	
123579	804567			SVOC 8270 QSM 5 TCLP	TCLP	1.0		0.100	4	
123619	805712			SVOC 8270 QSM 5 TCLP	TCLP	1.0		0.100	4	
123805	809338			SVOC 8270 QSM 5 TCLP	TCLP	1.0		0.100	4	
	809341			SVOC 8270 QSM 5 TCLP	TCLP	1.0		0.100	4	
	810948	MSW	804535	SVOC 8270 QSM 5 TCLP	TCLP	1.0		0.100		

Notes:_____

FSV6-02 & FSV7-02

Method 8270-SV GC/MS Extraction Bench Sheet

(SOP Reference #'s 8270C, 8270D, 8270 SIM)

3510=WATER
3545=PFE or 3546=Microwave >>
(PFE=Pressurized Fluid Extraction)

Prep Batch #:	60339
Prep Method:	3510
Analyst:	JLH
Date:	11/28/2016
Start Time:	09:30
End Date:	11/28/2016
End Time:	15:45

Matrix: TCLP
Balance Used: NA
Ave MW temp(°C): NA

Reagent Lots>>>

Sodium Sulfate	S3513
Diatomaceous Earth	NA
Dionex Solution	NA
Methylene Chloride	56230
Acetone	NA
Sulfuric Acid	MISC0339
Sodium Hydroxide	MISC0336

Initial Concentration By: NA
Date: NA
GPC Cleanup? (yes/no): NO
Date: NA
Final Concentration By: JLH
Date: 11/28/2016

Microwave Cell #	Sample ID	Comments	(Solids) Sample Weight (g)	(Liquids) Sample Volume (L)	Final Volume (ml)	ph Adj. <2 (Yes/No)	pH Adj. >12 Yes/No)
	810945	(MB)		0.100	1.0	Y	Y
	810946	(LCS)		0.100	1.0	Y	Y
	804535			0.100	1.0	Y	Y
	804567			0.100	1.0	Y	Y
	805712			0.100	1.0	Y	Y
	809338	EMULSIFIED		0.100	1.0	Y	Y
	809341	EMULSIFIED		0.100	1.0	Y	Y
	SBLANK 2715			0.100	1.0	Y	Y
	VBLANK 2715			0.100	1.0	Y	Y
	810948	(MS) Parent Sample		0.100	1.0	Y	Y
		(MSD) 804535					

MB=Method Blank, LCS=Laboratory Control Sample, MS=Matrix Spike & MSD=Matrix Spike Duplicate

MS/MSD/ LCS Spike Amount (ml): 1
Spike Concentration (ug/mL): 20
Spike Reference #: SVMS7308

Surrogate Spike Amount (ml): 1
Surrogate Spike Conc. (ug/mL): 20/40
Surrogate Spike Reference #: SVMS7236/7311

Relinquished to: RPN
Date: 11/28/2016

Reviewed By: JJY
Date: 11/28/2016

FSV6-01

8270 SVOC Analysis Data Review Checklist

Analytical Run #: 133118	**Independent Reviewer: red**
Sequence Date: 11/28/2016	**Date of Review: 11/29/2016**
Analyst/Data Interpreter: RPN	**Approval: yes**

Instructions: Complete one checklist per *analytical run* . Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirements:	Acceptance Criteria	Analyst Review		Independent Review		Comments (indicate reference to an attachment if necessary)
		Yes	No	Yes	No	
1. INITIAL CALIBRATION (ICAL)						
a. Was the initial calibration performed using a minimum of five standard concentration levels?	Lowest standard at or near MRL	**Yes**		**x**		TCLP
b. SPCC responses.	Avg. RRF ≥ 0.05	**Yes**		**x**		
c. Is the variation between calibration response factors for all concentration levels <15% RSD, is r >.995, or r^2 > 0.990 for the regression line. RSD≤ 15%, ≤ 30% for CCCs.	RSD≤ 15%, ≤ 30% for CCCs	**Yes**		**x**		
d. Were the standards used for the ICAL uniquely identified?		**Yes**		**x**		
e. Was there a DFTPP standard analyzed prior to the ICAL?		**Yes**		**x**		
f. Was an instrument blank (IB) analyzed prior to the ICAL?		**Yes**		**x**		
2. INITIAL CALIBRATION VERIFICATION (ICV)						
a. Were there a second source ICVs for all target analytes analyzed after the initial calibration and prior to analysis of any samples?	Second source	**Yes**		**x**		
b. Were the SPCC within QC limits	RRF ≥ 0.05	**Yes**		**x**		
c. Were the CCCs within QC limits	%D ≤ 20%	**Yes**		**x**		
d. Were the ICVs uniquely identified (i.e. Standard Number)?		**Yes**		**x**		
3. CONTINUING CALIBRATION VERIFICATION (CCV)						
a. Were CCVs for target analytes analyzed at the beginning of the sequence and after every 12 hours.		**Yes**		**x**		
b. Were SPCC compounds acceptable?	RRF ≥ 0.050	**Yes**		**x**		
c. Were the CCCs compounds acceptable?	%D ≤ 20%	**Yes**		**x**		
d. Were the recoveries for the CCVs acceptable?	%D≤20%	**Yes**		**x**		
e. Was each CCV uniquely identified (i.e. Standard Number)?		**Yes**		**x**		

Additional Comments:

Analytical Run #: 133118

FSV6-01

8270 SVOC Analysis Data Review Checklist

Requirements:	Acceptance Criteria	Analyst		Independent		Comments (indicate reference to an attachment if necessary)
		Yes	No	Yes	No	
4. DFTPP						
a. Was a DFTPP tune check ran at the beginning of every twelve hour shift?		**Yes**		**x**		
b. Were the relative abundance criteria met?		**Yes**		**x**		
c. Was the peak tailing <2 on Pentachlorophenol and <2 on Benzidine?	Tailing <2%	**Yes**		**x**		
d. Was the breakdown of DDT to DDE and DDD less than 20%	Breakdown ≤20%	**Yes**		**x**		
5. BLANKS						
a. Was method blank (MB) analyzed prior to the analysis of samples?		**Yes**		**x**		
b. Were the MB results less than the reporting limit (RL)?	< MRL	**Yes**		**x**		
c. Was a MB prepped and analyzed at a frequency of one per Prep Batch?	Batch <20 samples	**Yes**		**x**		
6. LABORATORY CONTROL SAMPLE (LCS)						
a. Was a LCS analyzed prior to the analysis of samples?		**Yes**		**x**		
b. Were the LCS recoveries in each LCS within the acceptance criteria?	In-house limits or client specified limits	**Yes**		**x**		
7. MATRIX SPIKES						
a. Was a matrix spiked (MS) sample analyzed at a frequency one per Prep Batch?	Batch <20 samples	**Yes**		**Yes**		
b. Were MS recoveries in each MS within the acceptance criteria?	In-house limits or client specified limits	**Yes**		**Yes**		
8. LABORATORY CONTROL SPIKE / MATRIX SPIKE DUPLICATE						
a. Was a duplicate matrix spike or laboratory control spike sample analyzed at a . frequency one per Prep Batch?	Batch <20 samples		**No**		**x**	
b. Were MSD or LCSD recoveries within the acceptance criteria?	In-house limits or client specified limits	**N/A**		**N/A**		
c. Is the relative percent difference (RPD) between a matrix spike (MS) and its' duplicate (MSD) or laboratory control spike (LCS) and its' duplicate (LCSD) within the acceptance criteria?	In-house limits or client specified limits	**N/A**		**N/A**		

Additional Comments:

Analytical Run #: 133118

FSV6-01

8270 SVOC Analysis Data Review Checklist

Requirements:	Acceptance Criteria	Analyst		Independent		Comments (indicate reference to an attachment if necessary)
		Yes	No	Yes	No	
9. SAMPLES (INCLUDING BLANKS, STANDARDS, AND QC SAMPLES)						
a. Are chromatogram characteristics, including peak shapes and areas, consistent with those of the CCV?		**Yes**		**x**		
b. Are surrogate recoveries for all samples, blanks, standards, and QC samples within acceptance criteria?			**No**		**x**	See below
c. Were all samples having analytes detected in amounts exceeding the calibration range diluted and reanalyzed?		**Yes**		**x**		
d. Were all samples extracted within holding times and analyzed within 40 days of extracting?	Analysis within 40 days of extraction	**Yes**		**x**		
e. Did the samples require additional cleanup steps? (i.e. acid treatment, acid-base fractioning, and GPC)	GPC, Acid/Base, Treatments		**No**		**x**	
10. RECORDS AND REPORTING						
a. Are Run, Prep Batch and Extraction sheets, Summary sheets, Sequence file, initial and rerun raw and process data present in the data file?		**Yes**		**x**		
b. Are all chromatograms dated and initialed?		**Yes**		**x**		
c. Are reported results whose amounts exceeded the acceptance criteria flagged with an appropriate qualifier and, if needed, a NCR completed?		**Yes**		**x**		
d. Do all values, dilution factors and qualifiers listed on the raw reports match the LIMS data?		**Yes**		**x**		
e. Is the ICAL method referenced on the Raw Data?		**Yes**		**x**		

Additional Comments:

Sample 805712 had low recoveries of 4 out of 6 surrogates. The sample was re-analyzed to confirm the results. Failing surrogates were qualified with an "S".

Sequence Name: C:\INSTARCH\Sequence\1S110916.S
Comment: 8270
Operator: JJY
Data Path: C:\INSTARCH\DATA\1S110916\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

JJY
11/30/16

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info	
1)	Sample	99	1IB	1S110916 InstrumentBlank
2)	DFTPP	1	1DFTP207	1DFTPP DFTPP TUNE SVMS7269
3)	Sample	2	1IB01	1S110916 InstrumentBlank
4)	Sample	3	1ICAL7A	1S110916 ICAL 50ug/ml SVMS7280
5)	Sample	4	1ICAL6A	1S110916 ICAL 40ug/ml SVMS7279
6)	Sample	5	1ICAL5A	1S110916 ICAL 30ug/ml SVMS7278
7)	Sample	6	1ICAL4A	1S110916 ICAL 20ug/ml SVMS7277
8)	Sample	7	1ICAL3A	1S110916 ICAL 10ug/ml SVMS7276
9)	Sample	8	1ICAL2A	1S110916 ICAL 5ug/ml SVMS7275
10)	Sample	9	1ICAL1A	1S110916 ICAL 1ug/ml SVMS7274
11)	Sample	10	1ICV1A	1S110916 ICV 20ug/ml SVMS7281
12)	Sample	11	1ICV2A	1S110916 ICV 40ug/ml SVMS7282
13)	Sample	12	1IB02	1S110916 InstrumentBlank
14)	Sample	13	1ICAL7	1S110916 ICAL 50ug/ml SVMS7214
15)	Sample	14	1ICAL6	1S110916 ICAL 40ug/ml SVMS7213
16)	Sample	15	1ICAL5	1S110916 ICAL 30ug/ml SVMS7212
17)	Sample	16	1ICAL4	1S110916 ICAL 20ug/ml SVMS7211
18)	Sample	17	1ICAL3	1S110916 ICAL 10ug/ml SVMS7210
19)	Sample	18	1ICAL2	1S110916 ICAL 5ug/ml SVMS7209
20)	Sample	19	1ICAL1	1S110916 ICAL 1ug/ml SVMS7208
21)	Sample	20	1ICV1	1S110916 ICV 20ug/ml SVMS7215
22)	Sample	21	1ICV2	1S110916 ICV 40ug/ml SVMS7216
23)	DFTPP	22	1DFTP208	1DFTPP DFTPP TUNE SVMS7269
24)	Sample	23	1CCV244	1S110916 CCV 20ug/ml SVMS7217
25)	Sample	24	1CCV245	1S110916 CCV 20ug/ml SVMS7283
26)	Sample	25	1IB03	1S110916 Instrument blank
27)	Sample	26	1MBS01	1S110916 132456,MBS,
28)	Sample	27	1LCSS01	1S110916 132456,LCSS,
29)	Sample	28	799703	1S110916 132456,799703,
30)	Sample	29	799703MS	1S110916 132456,MSS799703,
31)	Sample	30	799703SD	1S110916 132456,MSDS799703,
32)	Sample	31	1MBS02	1S110916 132416,MBS,
33)	Sample	32	1LCSS02	1S110916 132416,LCSS,
34)	Sample	33	792783	1S110916 132416,792783,
35)	Sample	34	792784	1S110916 132416,792784,
36)	Sample	35	792785	1S110916 132416,792785,
37)	Sample	36	792786	1S110916 132416,792786,
38)	Sample	37	792789	1S110916 132416,792789,
39)	Sample	38	792790	1S110916 132416,792790,
40)	Sample	39	792791	1S110916 132416,792791,
41)	Sample	40	792792	1S110916 132416,792792,
42)	Sample	41	792788	1S110916 132416,792788,
43)	Sample	42	792788MS	1S110916 132416,MSS792788,

Sequence Name: C:\INSTARCH\Sequence\1S110916.S

	Line	Type	Vial	DataFile	Method	Sample Name
44)		Sample	43	792788SD	1S110916	132416,MSDS792788,
45)		Sample	44	1CCV246	1S110916	CCV 20ug/ml SVMS7217
46)		Sample	45	1CCV247	1S110916	CCV 20ug/ml SVMS7283
47)		DFTPP	46	1DFTP209	1DFTPP	DFTPP TUNE SVMS7269
48)		DFTPP	47	1DFTP210	1DFTPP	DFTPP TUNE SVMS7269
49)		Sample	48	1CCV248	1S110916	CCV 20ug/ml SVMS7217
50)		Sample	49	1IB04	1S110916	Instrument blank
51)		Sample	50	792785D	1S110916	132416,792785,10
52)		Sample	51	792786D	1S110916	132416,792786,10
53)		Sample	52	792788SR	1S110916	132416,MSS792788,2
54)		Sample	53	792788DR	1S110916	132416,MSDS792788,2
55)		Sample	54	1CCV249	1S110916	CCV 20ug/ml SVMS7217

JJY
11/30/16

Sequence Name: C:\INSTARCH\Sequence\1S112816.S
Comment: 8270
Operator: RPN
Data Path: C:\INSTARCH\DATA\1S112816\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

JJY
12/05/16

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info	
1)	Sample	99	1IB01	1S110916 INSTRUMENT BLANK
2)	DFTPP	1	1DFTP229	1DFTPP DFTPP TUNE SVMS7269
3)	Sample	2	1CCV277	1S110916 CCV 20ug/ml SVMS7217
4)	Sample	3	1CCV278	1S110916 CCV 20ug/ml SVMS7283
5)	Sample	4	1MBS01	1S110916 133061,MBS,
6)	Sample	5	1LCSS03	1S110916 133061,LCSS,
7)	Sample	6	790948D	1S110916 133061,790948,10
8)	Sample	7	790948	1S110916 133061,790948,
9)	Sample	8	1IB02	1S110916 INSTRUMENT BLANK
10)	Sample	9	1MBS02	1S110916 133056,MBS,
11)	Sample	10	1LCSS02	1S110916 133056,LCSS,
12)	Sample	8	1IB03	1S110916 INSTRUMENT BLANK
13)	Sample	6	790948D2	1S110916 133061,790948,4
14)	Sample	11	808740	1S110916 133056,808740,
15)	Sample	12	808741	1S110916 133056,808741,
16)	Sample	13	808742	1S110916 133056,808742,
17)	Sample	14	1MBTS01	1S110916 133118,MBTS
18)	Sample	15	1MBTV01	1S110916 133118,MBTV
19)	Sample	16	1MBW01	1S110916 133118,MBW,
20)	Sample	17	1LCSW01	1S110916 133118,LCSW,
21)	Sample	18	804567	1S110916 133118,804567,
22)	Sample	19	805712	1S110916 133118,805712,
23)	Sample	20	809338	1S110916 133118,809338,
24)	Sample	21	809341	1S110916 133118,809341,
25)	Sample	22	804535	1S110916 133118,804535,
26)	Sample	23	804535MS	1S110916 133118,MSW804535,
27)	Sample	14	1MBTS02	1S110916 133119,MBTS
28)	Sample	15	1MBTV02	1S110916 133119,MBTV
29)	Sample	16	1MBW02	1S110916 133119,MBW,
30)	Sample	17	1LCSW02	1S110916 133119,LCSW,
31)	Sample	24	807696	1S110916 133119,807696,
32)	Sample	25	808426	1S110916 133119,808426,
33)	Sample	26	808434	1S110916 133119,808434,
34)	Sample	27	1CCV279	1S110916 CCV 20ug/ml SVMS7217
35)	DFTPP	28	1DFTP230	1DFTPP DFTPP TUNE SVMS7269
36)	Sample	29	1CCV280	1S110916 CCV 20ug/ml SVMS7217
37)	Sample	30	808745	1S110916 133056,808745,
38)	Sample	31	808746	1S110916 133056,808746,
39)	Sample	32	808747	1S110916 133056,808747,
40)	Sample	33	808748	1S110916 133056,808748,
41)	Sample	34	808749	1S110916 133056,808749,
42)	Sample	35	808750	1S110916 133056,808750,
43)	Sample	36	808738D	1S110916 133056,808738,10

Sequence Name: C:\INSTARCH\Sequence\1S112816.S

	Line	Type	Vial	DataFile	Method	Sample Name
44)		Sample	37	808739D	1S110916	133056,808739,10
45)		Sample	38	808743D	1S110916	133056,808743,10
46)		Sample	19	805712R	1S110916	133118,805712,
47)		Sample	39	808744D	1S110916	133056,808744,10
48)		Sample	25	808426D	1S110916	133119,808426,5
49)		Sample	29	1CCV281	1S110916	CCV 20ug/ml SVMS7217
50)		Sample	33	808748R	1S110916	133056,808748,
51)		Sample	40	808737D	1S110916	133056,808737,2
52)		Sample	41	808737MS	1S110916	133056,MSS808737,2
53)		Sample	42	808737SD	1S110916	133056,MSDS808737,2
54)		Sample	43	808751	1S110916	133056,808751,
55)		Sample	44	808752	1S110916	133056,808752,
56)		Sample	45	808753	1S110916	133056,808753,
57)		Sample	46	808754	1S110916	133056,808754,
58)		Sample	47	808755	1S110916	133056,808755,
59)		Sample	48	808757	1S110916	133056,808757,
60)		Sample	36	808738	1S110916	133056,808738,
61)		Sample	37	808739	1S110916	133056,808739,
62)		Sample	38	808743	1S110916	133056,808743,
63)		Sample	39	808744	1S110916	133056,808744,
64)		Sample	43	808751D	1S110916	133056,808751,10
65)		Sample	40	808737R	1S110916	133056,808737,2
66)		Sample	41	808737SR	1S110916	133056,MSS808737,2
67)		Sample	42	808737DR	1S110916	133056,MSDS808737,2

JJY
12/05/16

SVOC Logbook 01
01/19/2015

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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7206	8270I CAL STOCK STD	Methylene Chloride EMD 56190	RPN	10/04/16	04/04/17

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S3561	1000	ug/ml	1000	10	100
S3499B	2000	ug/ml	500	10	100
S3551A	2000	ug/ml	500	10	100
S3502B	10000	ug/ml	100	10	100
S3501B	5000	ug/ml	200	10	100

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7207	8270I ICV STOCK STD	Methylene Chloride EMD 56190	RPN	10/04/16	04/04/17

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S3488	1000	ug/ml	500	5	100
S3500	2000	ug/ml	250	5	100
S3552	2000	ug/ml	250	5	100
S3502B	10000	ug/ml	50	5	100
S3501B	5000	ug/ml	100	5	100

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	Initial Calibration	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
	8270 ICAL Working Stds	Methylene Chloride EMD 56190	RPN	10/04/16	04/04/17

Standard Number	Standard Description	Parent ID	Parent Concentration	Units	Standard Volume (ml)	Final Volume (ml)	Final Concentration (ug/ml)
SVMS7208	ICAL 1	SVMS7206	100	ug/ml	0.005	0.5	1
SVMS7209	ICAL 2	SVMS7206	100	ug/ml	0.025	0.5	5
SVMS7210	ICAL 3	SVMS7206	100	ug/ml	0.050	0.5	10
SVMS7211	ICAL 4	SVMS7206	100	ug/ml	0.100	0.5	20
SVMS7212	ICAL 5	SVMS7206	100	ug/ml	0.150	0.5	30
SVMS7213	ICAL 6	SVMS7206	100	ug/ml	0.200	0.5	40
SVMS7214	ICAL 7	SVMS7206	100	ug/ml	0.250	0.5	50
SVMS7215	ICV1	SVMS7207	100	ug/ml	0.100	0.5	20
SVMS7216	ICV2	SVMS7207	100	ug/ml	0.200	0.5	40
SVMS7217	CCV	SVMS7206	100	ug/ml	0.100	0.5	20
SVMS		SVMS					
SVMS		SVMS					
SVMS		SVMS					

SVOC Logbook 01
01/19/2015

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Author: rduranceau on: 26.10.2016 14:05:52
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8270 Spike 20ug/ml

Standard Number: SVMS7234 **Standard Description:** 8270 Spike

Analyst: JJY **Solvent/Lot:** Acetone EMD Millipore lot 55338

Prep Date: 10/14/2016 **Expiration Date:** 4/14/2017

Parent Standard	CTL ID	Concentration (ug/ml)	Volume Added	Final Volume	Final Concentraion (ug/ml)
8270 Mega Mix	S3562	1000	1.00	50.00	20
Benzadines	S3556	2000	0.500	50.00	20
Custom Mix	S3551B	2000	0.500	50.00	20
Biphenyl	S3575A	1000	1.00	50.00	20
Additions Std	S3559A	1000	1.00	50.00	20

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01/19/2015

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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7235	8270 Surrogates	Acetone EMD Millipore lot 55338	JJY	10/17/2016	04/17/2017

STD Parent ID	Parent Concentration	Units	Standard Volume (ml)	Final Volume (ml)	Final Concentration (ug/ml)
S3354A	5000	ug/mL	0.400	100.00	20.00
S3355A	10000	ug/mL	0.400	100.00	40.00

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7236	8270 Surrogates	Acetone EMD Millipore lot 55338	JJY	10/17/2016	04/17/2017

STD Parent ID	Parent Concentration	Units	Standard Volume (ml)	Final Volume (ml)	Final Concentration (ug/ml)
S3354A	5000	ug/mL	0.400	100.00	20.00
S3355A	10000	ug/mL	0.400	100.00	40.00

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7237	8270 Surrogates	Acetone EMD Millipore lot 55338	JJY	10/17/2016	04/17/2017

STD Parent ID	Parent Concentration	Units	Standard Volume (ml)	Final Volume (ml)	Final Concentration (ug/ml)
S3354A	5000	ug/mL	0.400	100.00	20.00
S3355A	10000	ug/mL	0.400	100.00	40.00

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SVOC Logbook 01
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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7269	DFTPP TUNE MIX 50ug/ml	Methylene chloride EMD 56190	JJY	11/03/16	05/03/17

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S3568	1000	ug/ml	500	10	50

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7270	DFTPP TUNE MIX 5ug/ml	Methylene chloride EMD 56190	RPN	11/03/16	05/03/17

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
SVMS7269	50	ug/ml	100	1	5

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SVOC Logbook 01
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8270 Spike 20ug/ml

Standard Number: SVMS7308 **Standard Description:** 8270 Spike

Analyst: RPN **Solvent/Lot:** Acetone EMD Millipore / 55189

Prep Date: 11/16/2016 **Expiration Date:** 05/16/2017

Parent Standard	CTL ID	Concentration (ug/ml)	Volume Added	Final Volume	Final Concentraion (ug/ml)
8270 Mega Mix	S3497	1000	500ul	25ml	20
Benzadines	S3499B	2000	250ul	25ml	20
Custom Mix	S3551A	2000	250ul	25ml	20
Biphenyl	S3575B	1000	500ul	25ml	20
Additions Std	S3560	1000	500ul	25ml	20

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7309	8270 Addl. MDL 0.5ug/ml	Methylene Chloride EMD 56217	RPN	11/16/16	05/09/17

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
SVMS7272	100	ug/ml	5	1	0.05

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SVOC Logbook 01
01/19/2015

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Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7311	8270 Surrogates	Acetone EMD Millipore lot 55189	JJY	11/28/2016	05/28/2017

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S3554C	5000	ug/mL	0.400	100	20.0
S3555B	10000	ug/mL	0.400	100	40.0

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7312	8270 Surrogates	Acetone EMD Millipore lot 55189	JJY	11/28/2016	05/28/2017

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S3554C	5000	ug/mL	0.400	100	20.0
S3555B	10000	ug/mL	0.400	100	40.0

Standard Number	Standard Description	Solvent Manufacturer Lot	Analyst	Prep Date	Expiration Date
SVMS7313	8270 Surrogates	Acetone EMD Millipore lot 55189	JJY	11/28/2016	05/28/2017

STD Parent ID	Parent Concentration	Units	Standard Volume (ul)	Final Volume (ml)	Final Concentration (ug/ml)
S3554C	5000	ug/mL	0.400	100	20.0
S3554B	10000	ug/mL	0.400	100	40.0

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CT Laboratories LLC

METALS
CLP FORMS
DOCUMENTS

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

RVAAP-50-RT

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix (soil/water):	TCLP	SDG No.:	123805
% Solids:		Lab Sample ID:	809338
Analytical Method:	EPA 7470A	Date Received:	11/19/2016
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	11/23/2016 09:30
Analytical Run #:	133090	Analysis Date/Time	11/29/2016 07:52
Analytical Prep Batch #:	60365	Prep. Date/Time:	11/28/2016 09:35
ICAL Calibration #:	11282016	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
7439-97-6	Mercury	0.00011	J	M	0.00003	0.00006	0.00012	0.00012

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Sample Description

RVAAP-50-RT

INORGANIC ANALYSIS DATA SHEET

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix (soil/water):	TCLP	SDG No.:	123805
% Solids:		Lab Sample ID:	809338
Analytical Method:	EPA 6010C	Date Received:	11/19/2016
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	11/23/2016 09:30
Analytical Run #:	133097	Analysis Date/Time	11/29/2016 15:05
Analytical Prep Batch #:	60373	Prep. Date/Time:	11/28/2016 15:00
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers		DL	LOD	LOQ	RL
7440-38-2	Arsenic	0.013	J		0.0040	0.012	0.024	0.024
7440-39-3	Barium	0.091			0.00029	0.00090	0.0018	0.0018
7440-43-9	Cadmium	0.00034	J		0.00030	0.0010	0.0020	0.0020
7440-47-3	Chromium	0.0020	U		0.00060	0.0020	0.0040	0.0040
7439-92-1	Lead	0.015			0.0014	0.0020	0.0040	0.0040
7782-49-2	Selenium	0.0065	U	M	0.0022	0.0065	0.013	0.013
7440-22-4	Silver	0.0020	U		0.00070	0.0020	0.0040	0.0040

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INORGANIC ANALYSIS DATA SHEET

Sample Description

RVAAP-50-TD

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix (soil/water):	TCLP	SDG No.:	123805
% Solids:		Lab Sample ID:	809341
Analytical Method:	EPA 7470A	Date Received:	11/19/2016
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	11/23/2016 09:30
Analytical Run #:	133090	Analysis Date/Time	11/29/2016 08:00
Analytical Prep Batch #:	60365	Prep. Date/Time:	11/28/2016 09:35
ICAL Calibration #:	11292016	Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-97-6	Mercury	0.000060	U	0.00003	0.00006	0.00012	0.00012

CT LABORATORIES
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INORGANIC ANALYSIS DATA SHEET

Sample Description

RVAAP-50-TD

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix (soil/water):	TCLP	SDG No.:	123805
% Solids:		Lab Sample ID:	809341
Analytical Method:	EPA 6010C	Date Received:	11/19/2016
Dilution Factor:	1.00	TCLP/SPLP Extraction Date/time:	11/23/2016 09:30
Analytical Run #:	133097	Analysis Date/Time	11/29/2016 15:48
Analytical Prep Batch #:	60373	Prep. Date/Time:	11/28/2016 15:00
ICAL Calibration #:		Concentration Units:	mg/L

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-38-2	Arsenic	0.014	J	0.0040	0.012	0.024	0.024
7440-39-3	Barium	0.062		0.00029	0.00090	0.0018	0.0018
7440-43-9	Cadmium	0.0010	U	0.00030	0.0010	0.0020	0.0020
7440-47-3	Chromium	0.0020	U	0.00060	0.0020	0.0040	0.0040
7439-92-1	Lead	0.0057		0.0014	0.0020	0.0040	0.0040
7782-49-2	Selenium	0.0065	U	0.0022	0.0065	0.013	0.013
7440-22-4	Silver	0.0020	U	0.00070	0.0020	0.0040	0.0040

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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811813

ICAL Calibration #: 11282016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/29/16 07:21	0.00300	0.00290	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811903

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/29/16	09:53	0.00300	0.00312	104	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

ICV

2A-1

INITIAL CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812573

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Arsenic	11/29/16	13:53	2.00	2.07	104	90	110
Barium	11/29/16	13:53	2.00	2.02	101	90	110
Cadmium	11/29/16	13:53	0.0500	0.0480	96	90	110
Chromium	11/29/16	13:53	0.200	0.200	100	90	110
Lead	11/29/16	13:53	0.500	0.519	104	90	110
Selenium	11/29/16	13:53	2.00	2.12	106	90	110
Silver	11/29/16	13:53	0.0500	0.0485	97	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812574

ICAL Calibration #: Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Arsenic	11/29/16	14:00	0.0600	0.0647	108	80	120
Barium	11/29/16	14:00	0.0300	0.0321	107	80	120
Cadmium	11/29/16	14:00	0.0150	0.0161	107	80	120
Chromium	11/29/16	14:00	0.0300	0.0307	102	80	120
Lead	11/29/16	14:00	0.0300	0.0320	107	80	120
Selenium	11/29/16	14:00	0.0600	0.0648	108	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

LLQC

2A-1

LOWER LIMIT OF QUANTITATION CHECK (LLQC)

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812579

ICAL Calibration #: Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Silver	11/29/16	14:44	0.0100	0.00959	96	80	120

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811893

ICAL Calibration #: 11282016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/29/16 07:47	0.00300	0.00314	105	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811895

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/29/16 08:13	0.00300	0.00301	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811911

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/29/16 12:40	0.00300	0.00318	106	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

CCV

2A-2

CONTINUING CALIBRATION VERIFICATION

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811913

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Mercury	11/29/16 12:14	0.00300	0.00310	103	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV High Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 1 - HIGH RANGE)

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812582

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Arsenic	11/29/16	15:55	5.00	4.66	93	90	110
Barium	11/29/16	15:55	5.00	4.65	93	90	110
Cadmium	11/29/16	15:55	0.500	0.458	92	90	110
Chromium	11/29/16	15:55	5.00	4.95	99	90	110
Lead	11/29/16	15:55	5.00	4.75	95	90	110
Selenium	11/29/16	15:55	5.00	4.99	100	90	110
Silver	11/29/16	15:55	0.500	0.461	92	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
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Sample No.

CCV Low Level

2A-2

CONTINUING CALIBRATION VERIFICATION (LEVEL 2 - LOW RANGE)

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812583

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Arsenic	11/29/16	16:02	0.500	0.494	99	90	110
Barium	11/29/16	16:02	0.500	0.483	97	90	110
Cadmium	11/29/16	16:02	0.0500	0.0499	100	90	110
Chromium	11/29/16	16:02	0.500	0.461	92	90	110
Lead	11/29/16	16:02	0.500	0.502	100	90	110
Selenium	11/29/16	16:02	0.500	0.501	100	90	110
Silver	11/29/16	16:02	0.0500	0.0501	100	90	110

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

MRL

2B

MRL STANDARD CHECK

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812576

ICAL Calibration #: Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Arsenic	11/29/16	14:21	0.0200	0.0215	108	70	130
Barium	11/29/16	14:21	0.0100	0.0108	108	70	130
Cadmium	11/29/16	14:21	0.00500	0.00504	101	70	130
Chromium	11/29/16	14:21	0.0100	0.00842	84	70	130
Lead	11/29/16	14:21	0.0100	0.0100	100	70	130
Selenium	11/29/16	14:21	0.0200	0.0178	89	70	130
Silver	11/29/16	14:21	0.0200	0.0144	72	70	130

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No.

MRL

2B

MRL STANDARD CHECK

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812585

ICAL Calibration #: Concentration Units:

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time		Spiked Conc.	Measured Conc.	%R**	Lower Limit (1)	Upper Limit (1)
Arsenic	11/30/16	05:10	0.0200	0.0222	111	70	130
Barium	11/30/16	05:10	0.0100	0.0110	110	70	130
Cadmium	11/30/16	05:10	0.00500	0.00508	102	70	130
Chromium	11/30/16	05:10	0.0100	0.00863	86	70	130
Lead	11/30/16	05:10	0.0100	0.00970	97	70	130
Selenium	11/30/16	05:10	0.0200	0.0228	114	70	130
Silver	11/30/16	05:10	0.0200	0.0143	72	70	130

Default Limits (not applicable to MDL Check) **No percent recovery is calculated for MDL checks. The check is simply whether the analyte is detected.

(1) Control Limits: 70-130

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811814

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11282016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/29/2016 07:23	0	U	0.00003	0.00006

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811904

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/29/2016 09:55	0	U	0.00003	0.00006

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

ICB

3-1

INITIAL CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812575

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Arsenic	11/29/2016 14:14	-0.00167	U	0.004	0.012
Barium	11/29/2016 14:14	-0.000005	U	0.00029	0.00090
Cadmium	11/29/2016 14:14	-0.000100	U	0.0003	0.0010
Chromium	11/29/2016 14:14	-0.00165	U	0.0006	0.0020
Lead	11/29/2016 14:14	0.000443	U	0.0014	0.0020
Selenium	11/29/2016 14:14	0.00252		0.0022	0.0065
Silver	11/29/2016 14:14	-0.000132	U	0.0007	0.0020

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811894

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11282016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/29/2016 07:49	0	U	0.00003	0.00006

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811896

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/29/2016 08:15	0	U	0.00003	0.00006

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811912

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/29/2016 12:42	0	U	0.00003	0.00006

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
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Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811914

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: 11292016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/29/2016 12:16	0	U	0.00003	0.00006

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was
less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

CCB

3-2

CONTINUING CALIBRATION BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 812584

Analytical Prep Batch # 0 Preparation Date/Time:

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Arsenic	11/29/2016 16:08	-0.000070	U	0.004	0.012
Barium	11/29/2016 16:08	-0.000104	U	0.00029	0.00090
Cadmium	11/29/2016 16:08	-0.000105	U	0.0003	0.0010
Chromium	11/29/2016 16:08	-0.00133	U	0.0006	0.0020
Lead	11/29/2016 16:08	-0.00101	U	0.0014	0.0020
Selenium	11/29/2016 16:08	0.00151	U	0.0022	0.0065
Silver	11/29/2016 16:08	0.000032	U	0.0007	0.0020

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133090 Lab Sample ID: 811111

Analytical Prep Batch # 60365 Preparation Date/Time: 11/28/2016 09:35

ICAL Calibration #: 11282016 Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Mercury	11/29/2016 07:45	0	U	0.00003	0.00006

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No

MB

3-3

METHOD BLANKS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Analytical Run #: 133097 Lab Sample ID: 811165

Analytical Prep Batch # 60373 Preparation Date/Time: 11/28/2016 15:00

ICAL Calibration #: Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Measured Concentration	C***	Detection Limit**	Control Limit
Arsenic	11/29/2016 14:58	-0.000532	U	0.004	0.012
Barium	11/29/2016 14:58	0.000027	U	0.00029	0.00090
Cadmium	11/29/2016 14:58	-0.000135	U	0.0003	0.0010
Chromium	11/29/2016 14:58	-0.00144	U	0.0006	0.0020
Lead	11/29/2016 14:58	0.000111	U	0.0014	0.0020
Selenium	11/29/2016 14:58	0.00201	U	0.0022	0.0065
Silver	11/29/2016 14:58	-0.000036	U	0.0007	0.0020

** Detection Limit only reported if value was less than the control limit.
***A "U" indicates the analyte was not detected in the method blank at the detection limit or the Control Limit whichever was less.

CT LABORATORIES
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Sample No:

4-1

ICP INTERFERENCE CHECK SAMPLE (SOL. A)

ICSA

Lab Name: CT Laboratories
Contract: ERT-RVAAP FY16
ICP ID Number: TJA 6000
SDG No.: 123805
ICS Source: SPEX

Analytical Run #: 133097
Lab Sample ID: 812577
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	11/29/2016 14:28	500.0	549.0	110	80	120
Arsenic	11/29/2016 14:28	0	0.00000200		-0.006	0.006
Barium	11/29/2016 14:28	0	0.000203		-0.0007	0.0007
Cadmium	11/29/2016 14:28	0	0.00000100		-0.00026	0.00026
Calcium	11/29/2016 14:28	500.0	518.0	104	80	120
Chromium	11/29/2016 14:28	0	-0.000451		-0.0019	0.0019
Iron	11/29/2016 14:28	500.0	462.0	92	80	120
Lead	11/29/2016 14:28	0	-0.000121		-0.0015	0.0015
Magnesium	11/29/2016 14:28	500.0	529.0	106	80	120
Selenium	11/29/2016 14:28	0	0.00000100		-0.012	0.012
Silver	11/29/2016 14:28	0	-0.0000920		-0.0020	0.0020

CT LABORATORIES
delivering more than data from your environmental analyses

Sample No:

4-2

ICP INTERFERENCE CHECK SAMPLE (SOL. AB)

ICSAB

Lab Name: CT Laboratories
Contract: ERT-RVAAP FY16
ICP ID Number: TJA 6000
SDG No.: 123805
ICS Source: SPEX, Ultra

Analytical Run #: 133097
Lab Sample ID: 812578
Inorganics MRL Standard Source: SPEX, Ultra,Inorganic Ventures and Mallinkrodt
ICAL Calibration #:
Concentration Units: mg/L

Analysis Type: Initial Analysis

Analyte	Analysis Date/Time	Spiked Conc.	Measured Conc.	%R	Lower Limit (1)	Upper Limit (1)
Aluminum	11/29/2016 14:36	500.0	508.0	102	80	120
Arsenic	11/29/2016 14:36	0.500	0.543	109	80	120
Barium	11/29/2016 14:36	0.500	0.441	88	80	120
Cadmium	11/29/2016 14:36	0.500	0.451	90	80	120
Calcium	11/29/2016 14:36	500.0	484.0	97	80	120
Chromium	11/29/2016 14:36	0.500	0.465	93	80	120
Iron	11/29/2016 14:36	500.0	426.0	85	80	120
Lead	11/29/2016 14:36	0.500	0.455	91	80	120
Magnesium	11/29/2016 14:36	500.0	487.0	97	80	120
Selenium	11/29/2016 14:36	0.500	0.504	101	80	120
Silver	11/29/2016 14:36	0.500	0.542	108	80	120

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description

RVAAP-50-RT

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:	LIQUID	SDG No.:	123805
% Solids for Sample:		Concentration Units:	mg/L
Sample No	811114	Parent Sample No.:	809338
Analytical Prep Batch #	60365	Analytical Preparation Date/Time:	11/28/2016 09:35
Analytical Run #:	133090	ICAL Calibration #:	11282016

Analysis Type *Initial Analysis* Analysis Date: ----- 11/29/2016 Analysis Time: -------- 07:56

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Mercury	82-119	0.00384		0.00011	J	0.00200	186		CV	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
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5A

SPIKE SAMPLE RECOVERY

Sample Description

RVAAP-50-RT

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:	LIQUID	SDG No.:	123805
% Solids for Sample:		Concentration Units:	mg/L
Sample No	811168	Parent Sample No.:	809338
Analytical Prep Batch #	60373	Analytical Preparation Date/Time:	11/28/2016 15:00
Analytical Run #:	133097	ICAL Calibration #:	

Analysis Type *Initial Analysis* Analysis Date: ----- 11/29/2016 Analysis Time: -------- 15:27

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Arsenic	87-113	4.25		0.013	J	4.00	106		P	
Barium	88-113	3.74		0.091		4.00	91		P	
Cadmium	88-113	0.0820		0.00034	J	0.100	82		P	*FAIL*
Chromium	90-113	0.343		BDL	U	0.400	86		P	*FAIL*
Lead	86-113	0.853		0.015		1.00	84		P	*FAIL*
Selenium	83-114	4.74		BDL	U	4.00	118		P	*FAIL*
Silver	84-115	0.0944		BDL	U	0.100	94		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5B

POST DIGESTION SPIKE SAMPLE RECOVERY

Sample Description: **RVAAP-50-RT**

Lab Name: CT Laboratories | Contract: ERT-RVAAP FY16

Matrix: LIQUID | SDG No.: 123805

% Solids for Sample: | Concentration Units: mg/L

Sample No: 812581 | Parent Sample No.: 809338

Analytical Prep Batch #: 0 | Analytical Preparation Date/Time:

Analytical Run #: 133097 | ICAL Calibration #:

Analysis Type: *Initial Analysis* | Analysis Date: ----- 11/29/2016 | Analysis Time: -------- 15:41

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Arsenic	80-120	4.49		0.013	J	4	112		P	
Barium	80-120	3.95		0.091		4	96		P	
Cadmium	80-120	0.0860		0.00034	J	0.1	86		P	
Chromium	80-120	0.360		BDL	U	0.4	90		P	
Lead	80-120	0.895		0.015		1	88		P	
Selenium	80-120	4.94		BDL	U	4	124		P	*FAIL*
Silver	80-120	0.0978		BDL	U	0.1	98		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description

RVAAP-50-RT

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix:	LIQUID	SDG No.:	123805
% Solids for Sample:		Concentration Units:	mg/L
Sample No	811115	Parent Sample No.:	811114
Analytical Prep Batch #	60365	Analytical Preparation Date/Time:	11/28/2016 09:35
Analytical Run #:	133090	ICAL Calibration #:	11282016

Analysis Type *Initial Analysis* Analysis Date: ----- 11/29/2016 Analysis Time: -------- 07:58

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Mercury	82-119	0.00355		0.00011	J	0.00200	172		CV	*FAIL*

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

5C

SPIKE DUPLICATE SAMPLE RECOVERY

Sample Description: **RVAAP-50-RT**

Lab Name: CT Laboratories | Contract: ERT-RVAAP FY16

Matrix: LIQUID | SDG No.: 123805

% Solids for Sample: | Concentration Units: mg/L

Sample No: 811169 | Parent Sample No.: 811168

Analytical Prep Batch #: 60373 | Analytical Preparation Date/Time: 11/28/2016 15:00

Analytical Run #: 133097 | ICAL Calibration #:

Analysis Type: *Initial Analysis* | Analysis Date: ----- 11/29/2016 | Analysis Time: -------- 15:34

Analyte	Control Limit (%R)	Spike Result	C (Spike)	Parent Result	C (Parent)	Spike Amount	%R	Q	M	
Arsenic	87-113	4.26		0.013	J	4.00	106		P	
Barium	88-113	3.77		0.091		4.00	92		P	
Cadmium	88-113	0.0817		0.00034	J	0.100	81		P	*FAIL*
Chromium	90-113	0.338		BDL	U	0.400	84		P	*FAIL*
Lead	86-113	0.847		0.015		1.00	83		P	*FAIL*
Selenium	83-114	4.73		BDL	U	4.00	118		P	*FAIL*
Silver	84-115	0.0928		BDL	U	0.100	93		P	

BDL = analyte concentration was below detection limit

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

RVAAP-50-RT

Lab Name: CT Laboratories

Contract: ERT-RVAAP FY16

Matrix: LIQUID

SDG No.: 123805

% Solid for Sample:

Concentration Units: mg/L

Analytical Prep Batch # 1

Analytical Preparation Date/Time 60365

Analytical Run #: 133090

ICAL Calibration #: 11282016

Sample #: 811113

Parent Sample #: 809338

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Mercury	11/29/2016	07:54	20	0.00011	J	0.000119	J	8		CV

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

RVAAP-50-RT

Lab Name: CT Laboratories
Contract: ERT-RVAAP FY16
Matrix: LIQUID
SDG No.: 123805
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch # 1
Analytical Preparation Date/Time 60373
Analytical Run #: 133097
ICAL Calibration #:
Sample #: 811167
Parent Sample #: 809338

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M	
Arsenic	11/29/2016	15:20	20	0.013	J	0.0123	J	6		P	
Barium	11/29/2016	15:20	20	0.091		0.0879		3		P	
Cadmium	11/29/2016	15:20	20	0.00034	J	0.00030	U	200		P	*FAIL*
Chromium	11/29/2016	15:20	20	0.00060	U	0.00060	U	0		P	
Lead	11/29/2016	15:20	20	0.015		0.0134		11		P	
Selenium	11/29/2016	15:20	20	0.0022	U	0.0022	U	0		P	
Silver	11/29/2016	15:20	20	0.00070	U	0.00070	U	0		P	

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **RVAAP-50-RT**

Lab Name: CT Laboratories
Contract: ERT-RVAAP FY16
Matrix: LIQUID
SDG No.: 123805
% Solid for Sample:
Concentration Units: mg/L
Analytical Prep Batch #: 60365
Analytical Preparation Date/Time: 11/28/2016 09:35
Analytical Run #: 133090
ICAL Calibration #: 11282016
Sample #: 811115
Parent Sample #: 811114

Analysis Type: *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Mercury	11/29/2016	07:58	20	0.00384		0.00355		8		CV

CT LABORATORIES
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6A

MATRIX SPIKE DUPLICATES

Sample Description: **RVAAP-50-RT**

Lab Name: CT Laboratories | Contract: ERT-RVAAP FY16

Matrix: LIQUID | SDG No.: 123805

% Solid for Sample: | Concentration Units: mg/L

Analytical Prep Batch #: 60373 | Analytical Preparation Date/Time: 11/28/2016 15:00

Analytical Run #: 133097 | ICAL Calibration #:

Sample #: 811169 | Parent Sample #: 811168

Analysis Type: *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Matrix Spik Parent Conc. (S)	C	Matrix Spike Duplicate Conc. (D)	C	RPD	Q	M
Arsenic	11/29/2016	15:34	20	4.25		4.26		0		P
Barium	11/29/2016	15:34	20	3.74		3.77		1		P
Cadmium	11/29/2016	15:34	20	0.0820		0.0817		0		P
Chromium	11/29/2016	15:34	20	0.343		0.338		1		P
Lead	11/29/2016	15:34	20	0.853		0.847		1		P
Selenium	11/29/2016	15:34	20	4.74		4.73		0		P
Silver	11/29/2016	15:34	20	0.0944		0.0928		2		P

CT LABORATORIES
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7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract ERT-RVAAP FY16

LCS Source: SPEX and Ultra SDG No.: 123805

Concentration Units: mg/L

Analytical Run #: 133090 Sample No.:#: 811112

Analytical Prep Batch #: 60365 Preparation Date/Time: 11/28/2016 09:35

ICAL Calibration #: 11282016

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Mercury	11/29/2016 12:25	82-119	0.00246		0.00300	82		CV

CT LABORATORIES
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7-1

Sample No:

LABORATORY CONTROL SAMPLE - AQUEOUS

LCS

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

LCS Source: SPEX and Ultra SDG No.: 123805

Concentration Units: mg/L

Analytical Run #: 133097 Sample No.:#: 811166

Analytical Prep Batch #: 60373 Preparation Date/Time: 11/28/2016 15:00

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Arsenic	11/29/2016 14:51	87-113	3.79		4.00	95		P
Barium	11/29/2016 14:51	88-113	3.86		4.00	96		P
Cadmium	11/29/2016 14:51	88-113	0.0935		0.100	94		P
Chromium	11/29/2016 14:51	90-113	0.367		0.400	92		P
Lead	11/29/2016 14:51	86-113	1.01		1.00	101		P
Selenium	11/29/2016 14:51	83-114	4.25		4.00	106		P
Silver	11/29/2016 14:51	84-115	0.0933		0.100	93		P

CT LABORATORIES
delivering more than data from your environmental analyses

7-2

Sample No:

LABORATORY CONTROL SAMPLE - SOLID

LCS

Lab Name: CT Laboratories Contract

LCS Source: SPEX and Ultra SDG No.:

Concentration Units:

CT LABORATORIES
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ICP SERIAL DILUTION

Sample Description

RVAAP-50-RT

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

Matrix: LIQUID SDG No.: 123805

Concentration Units: ug/L

Sample No.: 812580 Parent Sample No.: 809338

LIMS Run #: 133097 ICAL Calibration #:.:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Initial Sample Result (I)	C (I)	Serial Dilution Result (S)	C (S)	% Diff.	Q	M	
Arsenic	11/29/2016 15:12	13.4		21.45		60		P	*INVALID*
Barium	11/29/2016 15:12	90.9		87		4		P	
Cadmium	11/29/2016 15:12	.339		0.285		16		P	*INVALID*
Chromium	11/29/2016 15:12	BDL	U	0.003	U	0		P	*INVALID*
Lead	11/29/2016 15:12	14.7		9.2		37		P	*INVALID*
Selenium	11/29/2016 15:12	BDL	U	0.011	U	0		P	*INVALID*
Silver	11/29/2016 15:12	BDL	U	0.4		0		P	*INVALID*

CT LABORATORIES
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10

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

SDG No.: 123805

Matrix: LIQUID

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	MDL (mg/L)	M
Mercury	253.7			0.00003	CV

CT LABORATORIES
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10

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

ICP ID Number: TJA SDG No.: 123805

Matrix: LIQUID

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	MDL (mg/L)	M
Arsenic	193.7			0.004	P
Barium	455.4			0.00029	P
Cadmium	226.502			0.0003	P
Chromium	267.716			0.0006	P
Lead	220.35			0.0014	P
Selenium	196.02			0.0022	P
Silver	328.068			0.0007	P

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CT Laboratories Contract: ERT-RVAAP FY16

ICP ID Number: TA SDG No.: 123805

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	15.00	1000000	P
Antimony	15.00	10000	P
Arsenic	15.00	10000	P
Barium	15.00	10000	P
Beryllium	15.00	1000	P
Boron	15.00	1000	P
Cadmium	15.00	1000	P
Calcium	15.00	1000000	P
Chromium	15.00	100000	P
Cobalt	15.00	10000	P
Copper	15.00	100000	P
Iron	15.00	1000000	P
Lead	15.00	100000	P
Lithium	15.00	10000	P
Magnesium	15.00	1000000	P
Manganese	15.00	100000	P
Molybdenum	15.00	10000	P
Nickel	15.00	10000	P
Potassium	15.00	200000	P
Selenium	15.00	10000	P
Silicon	15.00	1000	P
Silver	15.00	100	P
Sodium	15.00	200000	P
Strontium	15.00	10000	P
Thallium	15.00	10000	P
Tin	15.00	10000	P
Titanium	15.00	1000	P
Tungsten	15.00	10000	P
Vanadium	15.00	10000	P
Zinc	15.00	100000	P

CT LABORATORIES
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PREPARATION LOG

Lab Name: CT Laboratories Project: ERT-RVAAP FY16

Method: EPA 7470A SDG No.: 123805

Preparation Batch #: 60365 Preparation Date/Time: 11/28/2016 / 09:35

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
809338	Normal Sample	RVAAP-50-RT	TCLP	25.0
809341	Normal Sample	RVAAP-50-TD	TCLP	25.0
811111	Method Blank		LIQUID	25.0
811112	Lab Control Spike		LIQUID	25.0
811113	Lab Duplicate	RVAAP-50-RT	TCLP	25.0
811114	Matrix Spike	RVAAP-50-RT	TCLP	25.0
811115	Matrix Spike Duplicate	RVAAP-50-RT	TCLP	25.0

CT LABORATORIES
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PREPARATION LOG

Lab Name: CT Laboratories Project: ERT-RVAAP FY16

Method: EPA 3010A SDG No.: 123805

Preparation Batch #: 60373 Preparation Date/Time: 11/28/2016 / 15:00

Lab Sample #	QC Type	Sample Description	Matrix	**Weight (g for solid/soil) or Volume (mL for liquid/aqueous)**
809338	Normal Sample	RVAAP-50-RT	TCLP	50.0
809341	Normal Sample	RVAAP-50-TD	TCLP	50.0
811165	Method Blank		LIQUID	50.0
811166	Lab Control Spike		LIQUID	50.0
811167	Lab Duplicate	RVAAP-50-RT	TCLP	50.0
811168	Matrix Spike	RVAAP-50-RT	TCLP	50.0
811169	Matrix Spike Duplicate	RVAAP-50-RT	TCLP	50.0

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories
Contract: ERT-RVAAP FY16

Lab Code: CTL
SDG No.: 123805

Instrument ID Number: CETAC
Method Number: CV

Start & End Date: 11/29/2016 to 11/29/2016
Analytical Run #: 133090

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
811813	ICV	1.00	11/29 07:21																X													
811814	ICB	1.00	11/29 07:23																X													
811111	MBW	1.00	11/29 07:45																X													
811893	CCV	1.00	11/29 07:47																X													
811894	CCB	1.00	11/29 07:49																X													
809338	Initial	1.00	11/29 07:52																X													
811113	DUP	1.00	11/29 07:54																X													
811114	MSW	1.00	11/29 07:56																X													
811115	MSDW	1.00	11/29 07:58																X													
809341	Initial	1.00	11/29 08:00																X													
811895	CCV	1.00	11/29 08:13																X													
811896	CCB	1.00	11/29 08:15																X													
811903	ICV	1.00	11/29 09:53																X													
811904	ICB	1.00	11/29 09:55																X													
811913	CCV	1.00	11/29 12:14																X													
811914	CCB	1.00	11/29 12:16																X													
811112	LCSW	1.00	11/29 12:25																X													
811911	CCV	1.00	11/29 12:40																X													
811912	CCB	1.00	11/29 12:42																X													

CT LABORATORIES
delivering more than data from your environmental analyses

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ANALYSIS RUN LOG

Lab Name: CT Laboratories | Contract: ERT-RVAAP FY16

Lab Code: CTL | SDG No.: 123805

Instrument ID Number: TJA | Method Number: P

Start & End Date: 11/29/2016 to 11/30/2016 | Analytical Run #: 133097

Sample Number	Analysis or QC Type	DF	Analysis Date/ Time	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Li	Ni	K	Se	Si	Ag	Na	Sr	Tl	Sn	W	V	Zn
812573	ICV	1.00	11/29 13:53			X	X			X		X				X								X		X							
812574	ICVLL	1.00	11/29 14:00			X	X			X		X				X								X									
812575	ICB	1.00	11/29 14:14			X	X			X		X				X								X		X							
812576	MRL	1.00	11/29 14:21			X	X			X		X				X								X		X							
812577	ICSA	1.00	11/29 14:28	X		X	X			X	X	X			X	X	X							X		X							
812578	ICSAB	1.00	11/29 14:36	X		X	X			X	X	X			X	X	X							X		X							
812579	ICVLL	1.00	11/29 14:44																							X							
811166	LCSW	1.00	11/29 14:51			X	X			X		X				X								X		X							
811165	MBW	1.00	11/29 14:58			X	X			X		X				X								X		X							
809338	Initial	1.00	11/29 15:05			X	X			X		X				X								X		X							
812580	L	5	11/29 15:12			X	X			X		X				X								X		X							
811167	DUP	1.00	11/29 15:20			X	X			X		X				X								X		X							
811168	MSW	1.00	11/29 15:27			X	X			X		X				X								X		X							
811169	MSDW	1.00	11/29 15:34			X	X			X		X				X								X		X							
812581	PDSW	1.00	11/29 15:41			X	X			X		X				X								X		X							
809341	Initial	1.00	11/29 15:48			X	X			X		X				X								X		X							
812582	CCV1	1.00	11/29 15:55			X	X			X		X				X								X		X							
812583	CCV2	1.00	11/29 16:02			X	X			X		X				X								X		X							
812584	CCB	1.00	11/29 16:08			X	X			X		X				X								X		X							
812585	MRL	1.00	11/30 05:10			X	X			X		X				X								X		X							

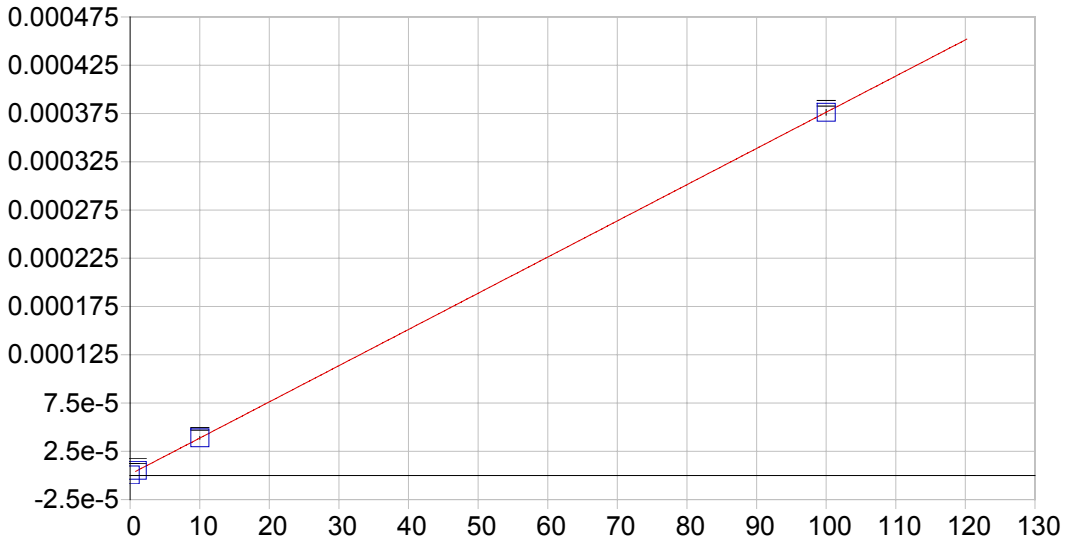
METALS
RAW DATA
DOCUMENTS

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Resl
														Slope
Ag 328.068 {103}	11/30/2016 12:03:54	11/29/2016 12:56:57	Linear	1/Var	0.000001	0.000004	0.000000	1.000000	0.999995	0.000000	0.637991	2.126638	OK.	1.000000
Al 309.271 {109}	11/30/2016 12:03:54	11/29/2016 13:24:31	Curvilin	None	0.000195	0.000001	0.000000	1.000000	0.999999	0.000055	21.692842	72.309472	OK.	1.000000
Al 396.152 { 85}	11/30/2016 12:03:54	11/29/2016 13:40:16	Curvilin	1/Conc	-0.000017	0.000003	0.000000	1.000000	0.999995	0.000021	6.316849	21.056163	OK.	1.000000
Al 167.079 {502}	11/30/2016 12:03:54	11/29/2016 13:03:26	Linear	1/Var	0.000152	0.000019	0.000000	1.000000	0.998878	0.000047	1.020985	3.403284	OK.	1.000000
As 193.759 {474}	11/30/2016 12:03:54	11/29/2016 13:09:57	Linear	1/Var	-0.000075	0.000014	0.000000	1.000000	0.999867	0.000019	3.224994	10.749979	OK.	1.000000
As 189.042 {479}	11/30/2016 12:03:54	11/29/2016 13:09:57	Linear	1/Conc	0.000020	0.000002	0.000000	1.000000	0.999624	0.000001	11.694791	38.982636	OK.	1.000000
Ba 233.527 {445}	11/30/2016 12:03:54	11/29/2016 13:03:26	Linear	1/Conc	0.000051	0.000154	0.000000	1.000000	0.999461	0.000006	0.200950	0.669832	OK.	1.000000
Ba 455.403 { 74}	11/30/2016 12:03:54	11/29/2016 13:09:57	Linear	None	0.000006	0.000004	0.000000	1.000000	1.000000	0.000015	0.406721	1.355738	OK.	1.000000
Ba 493.409 { 68}	11/30/2016 12:03:54	11/29/2016 13:09:57	Linear	1/Var	0.017609	0.000165	0.000000	1.000000	0.999962	0.000139	0.397013	1.323376	OK.	1.000000
Be 313.042 {108}	11/30/2016 12:03:54	11/29/2016 13:03:26	Linear	1/Conc	0.000045	0.000067	0.000000	1.000000	0.999928	0.000000	0.033634	0.112112	OK.	1.000000
Be 234.861 {144}	11/30/2016 12:03:54	11/29/2016 13:03:26	Linear	1/Conc	-0.000000	0.000000	0.000000	1.000000	0.999971	0.000000	3.676473	12.254911	OK.	1.000000
Ca 315.887 {107}	11/30/2016 12:03:54	11/29/2016 13:40:16	Curvilin	1/Var	0.000011	0.000000	0.000000	1.000000	0.999862	0.000013	16.838697	56.128989	OK.	1.000000
Ca 317.933 {106}	11/30/2016 12:03:54	11/29/2016 13:40:16	Curvilin	1/Conc	0.003212	0.000001	0.000000	1.000000	1.000000	0.000001	7.682853	25.609510	OK.	1.000000
Ca 393.366 { 86}	11/30/2016 12:03:54	11/29/2016 13:03:26	Linear	1/Conc	0.000268	0.000020	0.000000	1.000000	0.999989	0.000002	0.058129	0.193764	OK.	1.000000
Ca 396.847 { 85}	11/30/2016 12:03:54	11/29/2016 13:09:57	Linear	1/Conc	0.002053	0.000196	0.000000	1.000000	0.999972	0.000069	0.078227	0.260755	OK.	1.000000
Cd 226.502 {449}	11/30/2016 12:03:54	11/29/2016 13:03:27	Linear	1/Var	0.000019	0.000303	0.000000	1.000000	0.999740	0.000050	0.162604	0.542012	OK.	1.000000
Cd 228.802 {447}	11/30/2016 12:03:54	11/29/2016 13:03:27	Linear	1/Conc	0.000130	0.000490	0.000000	1.000000	0.999911	0.000006	0.138455	0.461515	OK.	1.000000
Co 228.616 {447}	11/30/2016 12:03:54	11/29/2016 13:09:57	Linear	1/Conc	-0.000068	0.000267	0.000000	1.000000	0.999938	0.000011	0.225390	0.751301	OK.	1.000000
Co 238.892 {141}	11/30/2016 12:03:54	11/29/2016 13:09:57	Linear	1/Var	0.000001	0.000003	0.000000	1.000000	0.999872	0.000004	0.572862	1.909538	OK.	1.000000
Cr 205.560 {464}	11/30/2016 12:03:54	11/29/2016 13:17:09	Linear	1/Var	0.000166	0.000206	0.000000	1.000000	0.994956	0.000305	0.184925	0.616418	OK.	1.000000
Cr 267.716 {126}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Var	0.000007	0.000004	0.000000	1.000000	0.999905	0.000005	0.611573	2.038576	OK.	1.000000
Cu 224.700 {450}	11/30/2016 12:03:54	11/29/2016 13:09:58	Curvilin	1/Conc	-0.000100	0.000100	-0.000000	1.000000	0.999839	0.000007	0.495011	1.650038	OK.	1.000000
Cu 324.754 {104}	11/30/2016 12:03:54	11/29/2016 13:17:10	Linear	None	-0.000319	0.000003	0.000000	1.000000	0.999986	0.000788	3.360030	11.200101	OK.	1.000000
Cu 327.396 {103}	11/30/2016 12:03:54	11/29/2016 13:17:10	Curvilin	1/Conc	-0.000028	0.000002	0.000000	1.000000	0.999986	0.000001	5.768185	19.227283	OK.	1.000000
Fe 234.349 {144}	11/30/2016 12:03:54	11/29/2016 13:40:16	Curvilin	1/Var	0.000021	0.000001	0.000000	1.000000	0.998828	0.000015	1.329258	4.430860	OK.	1.000000
Fe 239.562 {140}	11/30/2016 12:03:54	11/29/2016 13:40:16	Curvilin	1/Conc	0.000001	0.000000	0.000000	1.000000	0.999944	0.000000	23.361140	77.870468	OK.	1.000000
Fe 259.940 {129}	11/30/2016 12:03:54	11/29/2016 13:40:16	Full Fit	1/Conc	0.000008	0.000001	0.000000	0.980000	0.999975	0.000015	4.618885	15.396282	OK.	1.000000
Mg 202.582 {466}	11/30/2016 12:03:54	11/29/2016 13:40:16	Curvilin	1/Conc	-0.000096	0.000017	-0.000000	1.000000	0.999722	0.000660	2.403645	8.012150	OK.	1.000000
Mg 279.079 {121}	11/30/2016 12:03:54	11/29/2016 13:40:16	Curvilin	1/Conc	0.000001	0.000000	0.000000	1.000000	0.999978	0.000001	60.170333	200.567776	OK.	1.000000
Mg 280.270 {120}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Var	0.000168	0.000049	0.000000	1.000000	0.998223	0.000044	0.027014	0.090047	OK.	1.000000
Mn 257.610 {131}	11/30/2016 12:03:54	11/29/2016 13:09:58	Curvilin	1/Conc	0.000166	0.001368	-0.000000	1.000000	0.999825	0.000220	0.077052	0.256839	OK.	1.000000
Mn 259.373 {130}	11/30/2016 12:03:54	11/29/2016 13:17:10	Curvilin	1/Var	0.000000	0.000000	0.000000	1.000000	0.999998	0.000000	2.432210	8.107368	OK.	1.000000
Mo 202.030 {466}	11/30/2016 12:03:54	11/29/2016 13:03:27	Linear	1/Conc	0.000051	0.000127	0.000000	1.000000	0.999632	0.000010	0.278969	0.929895	OK.	1.000000
Mo 204.598 {464}	11/30/2016 12:03:54	11/29/2016 13:09:58	Curvilin	1/Conc	0.000001	0.000001	0.000000	1.000000	0.999963	0.000000	0.580220	1.934068	OK.	1.000000
Mo 204.598 {465}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	-0.000000	0.000000	0.000000	1.000000	0.999989	0.000000	1.002515	3.341715	OK.	1.000000
Ni 221.647 {452}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	None	0.000016	0.000002	0.000000	1.000000	0.999998	0.000020	0.507760	1.692533	OK.	1.000000
Ni 231.604 {445}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	-0.000002	0.000003	0.000000	1.000000	0.999952	0.000000	0.323875	1.079584	OK.	1.000000
Pb 216.999 {455}	11/30/2016 12:03:54	11/29/2016 13:17:10	Linear	1/Var	0.000022	0.000020	0.000000	1.000000	0.999805	0.000173	2.876206	9.587353	OK.	1.000000
Pb 220.353 {453}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	0.000025	0.000042	0.000000	1.000000	0.999887	0.000006	1.719155	5.730517	OK.	1.000000
Pb 220.353 {153}	11/30/2016 12:03:54	11/29/2016 13:17:10	Linear	1/Conc	0.000055	0.000018	0.000000	1.000000	0.999983	0.000014	5.232753	17.442510	OK.	1.000000
Sb 206.833 {463}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	-0.000121	0.000020	0.000000	1.000000	0.999975	0.000002	2.198050	7.326832	OK.	1.000000
Sb 217.581 {455}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	0.000018	0.000024	0.000000	1.000000	0.999902	0.000003	2.066060	6.886867	OK.	1.000000
Se 196.090 {472}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	0.000023	0.000010	0.000000	1.000000	0.999956	0.000001	3.605151	12.017170	OK.	1.000000
Se 206.279 {463}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	-0.000060	0.000003	0.000000	1.000000	0.999918	0.000002	17.789619	59.298731	OK.	1.000000
Se 196.090 {471}	11/30/2016 12:03:54	11/29/2016 13:09:58	Linear	1/Conc	-0.000057	0.000006	0.000000	1.000000	0.999879	0.000001	6.378297	21.260989	OK.	1.000000
Tl 190.856 {476}	11/30/2016 12:03:54	11/29/2016 13:09:58	Curvilin	1/Conc	0.000050	0.000021	-0.000000	1.000000	0.999985	0.000002	2.038796	6.795986	OK.	1.000000

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Resl Slope
Tl 190.856 {477}	11/30/2016 12:03:54	11/29/2016 13:09:58	Curvilin	1/Var	-0.000033	0.000012	-0.000000	1.000000	0.999921	0.000035	3.043191	10.143969	OK.	1.000000
V 290.882 {116}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.999987	0.000000	9.950332	33.167774	OK.	1.000000
V 292.402 {115}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Conc	0.000005	0.000007	0.000000	1.000000	0.999952	0.000001	0.439129	1.463765	OK.	1.000000
Zn 206.200 {463}	11/30/2016 12:03:54	11/29/2016 13:17:10	Linear	1/Var	0.000085	0.000203	0.000000	1.000000	0.999187	0.000721	0.239235	0.797451	OK.	1.000000
Zn 213.856 {458}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Var	0.000008	0.000003	0.000000	1.000000	0.996678	0.000004	0.151765	0.505882	OK.	1.000000
Y 324.228 {104}*	11/30/2016 12:03:54	11/29/2016 11:59:19	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000
Y 371.030 { 91}*	11/30/2016 12:03:54	11/29/2016 11:59:19	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000
Y 224.306 {451}*	11/30/2016 12:03:54	11/29/2016 11:59:19	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000
Na 588.995 { 57}	11/30/2016 12:03:54	11/29/2016 13:24:31	Linear	1/Conc	0.000489	0.000002	0.000000	1.000000	0.962136	0.000915	3.002710	10.009035	OK.	1.000000
Si 251.611 {134}	11/30/2016 12:03:54	11/29/2016 13:24:31	Linear	1/Conc	0.000004	0.000000	0.000000	1.000000	0.999997	0.000000	17.559718	58.532393	OK.	1.000000
Ti 334.941 {101}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Conc	0.000015	0.000007	0.000000	1.000000	0.999945	0.000001	1.284753	4.282510	OK.	1.000000
Sr 407.771 { 83}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Conc	-0.000009	0.000282	0.000000	1.000000	0.999948	0.000011	0.062152	0.207173	OK.	1.000000
Sn 189.989 {478}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Var	0.000087	0.000012	0.000000	1.000000	0.986847	0.000290	2.183641	7.278803	OK.	1.000000
B 249.678 {135}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Conc	0.000006	0.000003	0.000000	1.000000	0.999952	0.000000	0.895772	2.985907	OK.	1.000000
B 249.773 {135}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Conc	0.000013	0.000004	0.000000	1.000000	0.999986	0.000000	0.577073	1.923576	OK.	1.000000
Li 670.784 { 50}	11/30/2016 12:03:54	11/29/2016 13:09:59	Linear	1/Var	0.000045	0.000145	0.000000	1.000000	0.999707	0.000201	0.438744	1.462480	OK.	1.000000
K 766.490 { 44}	11/30/2016 12:03:54	11/29/2016 13:24:31	Linear	1/Conc	0.000066	0.000004	0.000000	1.000000	0.962452	0.002246	15.370400	51.234666	OK.	1.000000
P 213.618 {457}	11/30/2016 12:03:54	11/29/2016 13:24:31	Linear	1/Conc	-0.000002	0.000000	0.000000	1.000000	1.000000	0.000000	3.788952	12.629841	OK.	1.000000
S 182.034 {485}	11/30/2016 12:03:54	11/29/2016 13:24:31	Linear	1/Var	0.000068	0.000001	0.000000	1.000000	0.647193	0.001726	26.760666	89.202220	OK.	1.000000
W 239.709 {140}	11/30/2016 12:03:54	11/29/2016 13:24:31	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000	0.372714	0.000000	1002.75600	3342.52002	OK.	1.000000
Hg 184.950 {482}	11/30/2016 12:03:54	11/29/2016 13:03:28	Linear	1/Conc	0.000015	0.000053	0.000000	1.000000	0.999985	0.000005	0.707918	2.359725	OK.	1.000000
Hg 194.227 {473}	11/30/2016 12:03:54	11/29/2016 13:03:28	Linear	1/Conc	-0.000031	0.000050	0.000000	1.000000	0.999982	0.000006	0.689827	2.299423	OK.	1.000000

Element, Wavelength and Order	lope	QC Norm	
	Y-int	Slope factor	Offset
Ag 328.068 {103}	0.000000	1	0
Al 309.271 {109}	0.000000	1	0
Al 396.152 { 85}	0.000000	1	0
Al 167.079 {502}	0.000000	1	0
As 193.759 {474}	0.000000	1	0
As 189.042 {479}	0.000000	1	0
Ba 233.527 {445}	0.000000	1	0
Ba 455.403 { 74}	0.000000	1	0
Ba 493.409 { 68}	0.000000	1	0
Be 313.042 {108}	0.000000	1	0
Be 234.861 {144}	0.000000	1	0
Ca 315.887 {107}	0.000000	1	0
Ca 317.933 {106}	0.000000	1	0
Ca 393.366 { 86}	0.000000	1	0
Ca 396.847 { 85}	0.000000	1	0
Cd 226.502 {449}	0.000000	1	0
Cd 228.802 {447}	0.000000	1	0
Co 228.616 {447}	0.000000	1	0
Co 238.892 {141}	0.000000	1	0
Cr 205.560 {464}	0.000000	1	0
Cr 267.716 {126}	0.000000	1	0
Cu 224.700 {450}	0.000000	1	0
Cu 324.754 {104}	0.000000	1	0
Cu 327.396 {103}	0.000000	1	0
Fe 234.349 {144}	0.000000	1	0
Fe 239.562 {140}	0.000000	1	0
Fe 259.940 {129}	0.000000	1	0
Mg 202.582 {466}	0.000000	1	0
Mg 279.079 {121}	0.000000	1	0
Mg 280.270 {120}	0.000000	1	0
Mn 257.610 {131}	0.000000	1	0
Mn 259.373 {130}	0.000000	1	0
Mo 202.030 {466}	0.000000	1	0
Mo 204.598 {464}	0.000000	1	0
Mo 204.598 {465}	0.000000	1	0
Ni 221.647 {452}	0.000000	1	0
Ni 231.604 {445}	0.000000	1	0
Pb 216.999 {455}	0.000000	1	0
Pb 220.353 {453}	0.000000	1	0
Pb 220.353 {153}	0.000000	1	0
Sb 206.833 {463}	0.000000	1	0
Sb 217.581 {455}	0.000000	1	0
Se 196.090 {472}	0.000000	1	0
Se 206.279 {463}	0.000000	1	0
Se 196.090 {471}	0.000000	1	0
Tl 190.856 {476}	0.000000	1	0

Element, Wavelength and Order	lope	QC Norm	
	Y-int	Slope factor	Offset
Tl 190.856 {477}	0.000000	1	0
V 290.882 {116}	0.000000	1	0
V 292.402 {115}	0.000000	1	0
Zn 206.200 {463}	0.000000	1	0
Zn 213.856 {458}	0.000000	1	0
Y 324.228 {104}*	0.000000	1	0
Y 371.030 { 91}*	0.000000	1	0
Y 224.306 {451}*	0.000000	1	0
Na 588.995 { 57}	0.000000	1	0
Si 251.611 {134}	0.000000	1	0
Ti 334.941 {101}	0.000000	1	0
Sr 407.771 { 83}	0.000000	1	0
Sn 189.989 {478}	0.000000	1	0
B 249.678 {135}	0.000000	1	0
B 249.773 {135}	0.000000	1	0
Li 670.784 { 50}	0.000000	1	0
K 766.490 { 44}	0.000000	1	0
P 213.618 {457}	0.000000	1	0
S 182.034 {485}	0.000000	1	0
W 239.709 {140}	0.000000	1	0
Hg 184.950 {482}	0.000000	1	0
Hg 194.227 {473}	0.000000	1	0

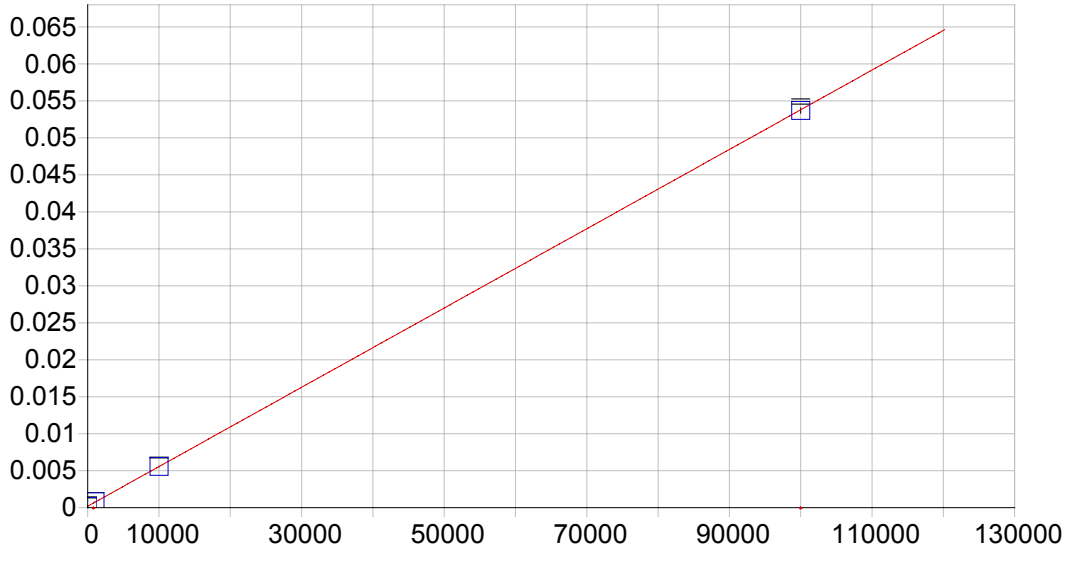


Ag 328.068 {103}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.637991		
Predicted MQL:	2.126638		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.20601	-.206	.000	.00000	.000	1
CalStd5=10	10.000	10.041	.041	.407	.00004	.000	1
CalStd8=100	100.00	99.980	-.020	-.020	.00038	.000	1
CalStd3=1	1.0000	1.0774	.077	7.74	.00001	.000	1

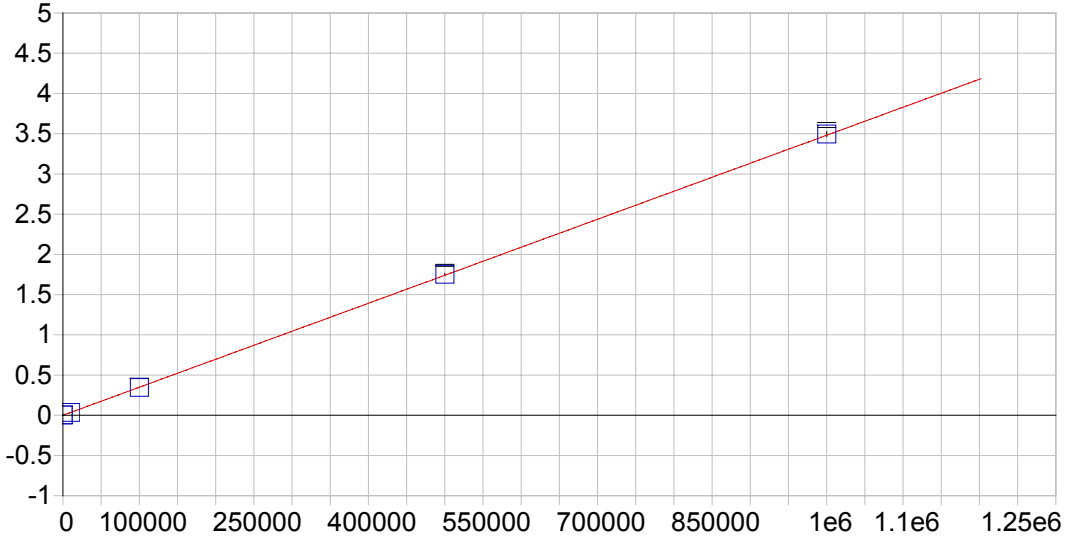


Al 309.271 {109}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	None

A0 (Offset):	0.000195	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999999	Status:	OK.
Std Error of Est:	0.000055		
Predicted MDL:	21.692842		
Predicted MQL:	72.309472		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-68.376	-68.4	.000	.00016	.000	1
CalStd10=10	10000.	9989.5	-10.5	-.105	.00555	.000	1
CalStd9=100	1000.0	1076.7	76.7	7.67	.00077	.000	1
CalStd12-100	100000.	99793.	-207.	-.207	.05369	.000	1

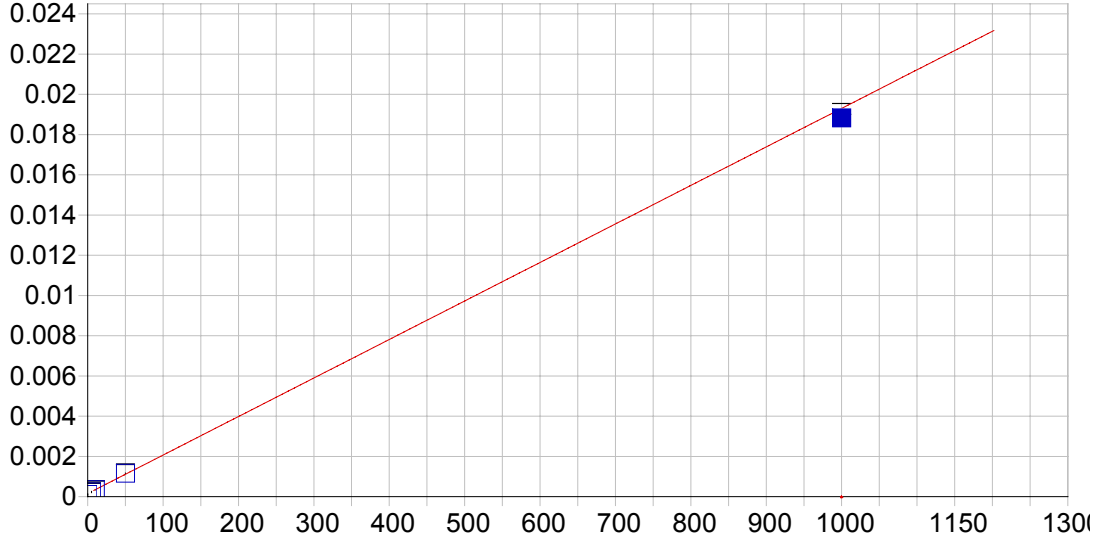


Al 396.152 { 85}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000017	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	6.316849		
Predicted MQL:	21.056163		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00256	-.003	.000	-.00002	.000	1
CalStd14-100	1000000.	1004100.	4100.	.410	3.4955	.030	1
CalStd13=50	500000.	503080.	3080.	.616	1.7513	.012	1
CalStd10=10	10000.	9911.7	-88.3	-.883	.03449	.000	1
CalStd12-100	100000.	99101.	-899.	-.899	.34498	.002	1
CalStd9=100	1000.0	1018.1	18.1	1.81	.00353	.000	1

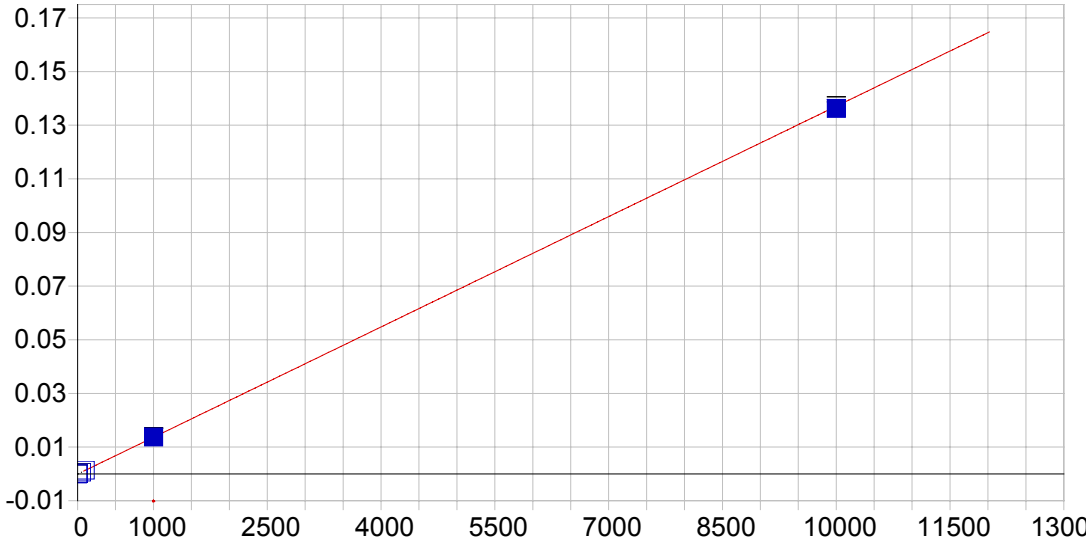


Al 167.079 {502}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000152	Re-Slope:	1.000000
A1 (Gain):	0.000019	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998878	Status:	OK.
Std Error of Est:	0.000047		
Predicted MDL:	1.020985		
Predicted MQL:	3.403284		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.4527	-2.45	.000	.00010	.000	1
CalStd9=100	1000.0	974.70	-25.3	-2.53	.01883	.000	1
CalStd5=10	10.000	9.7861	-.214	-2.14	.00034	.000	1
CalStd4=5	5.0000	4.0258	-.974	-19.5	.00023	.000	1
CalStd7=50	50.000	52.384	2.38	4.77	.00115	.000	1

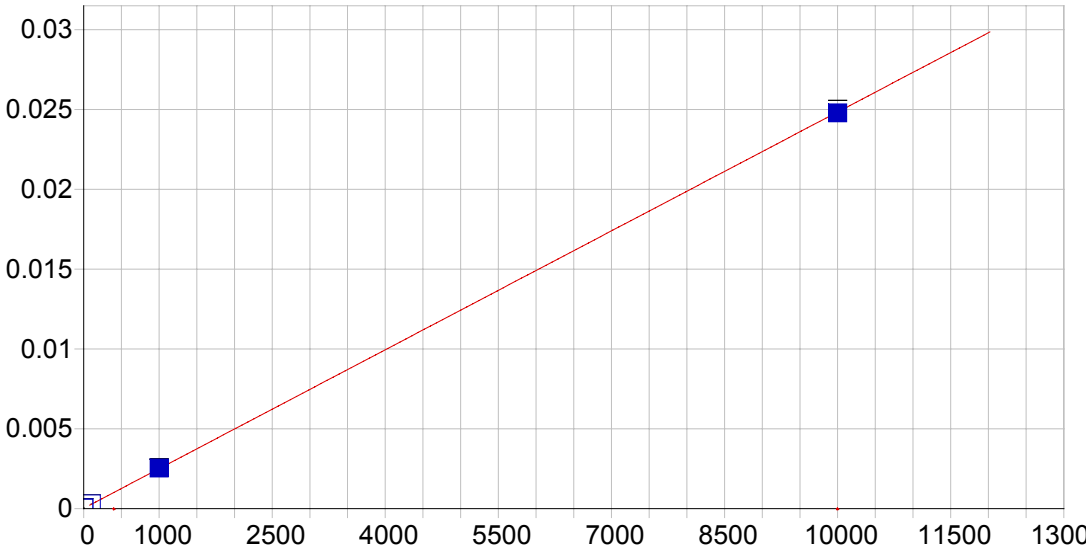


As 193.759 {474}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	-0.000075	Re-Slope:	1.000000
A1 (Gain):	0.000014	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999867	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	3.224994		
Predicted MQL:	10.749979		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.09675	.097	.000	-.00007	.000	1
CalStd9=100	1000.0	1004.0	4.03	.403	.01371	.000	1
CalStd7=50	50.000	49.678	-.322	-.644	.00061	.000	1
CalStd5=10	10.000	6.7681	-3.23	-32.3	.00002	.000	1
CalStd8=100	100.00	104.30	4.30	4.30	.00136	.000	1
CalStd10=10	10000.	9935.7	-64.3	-.643	.13631	.001	1

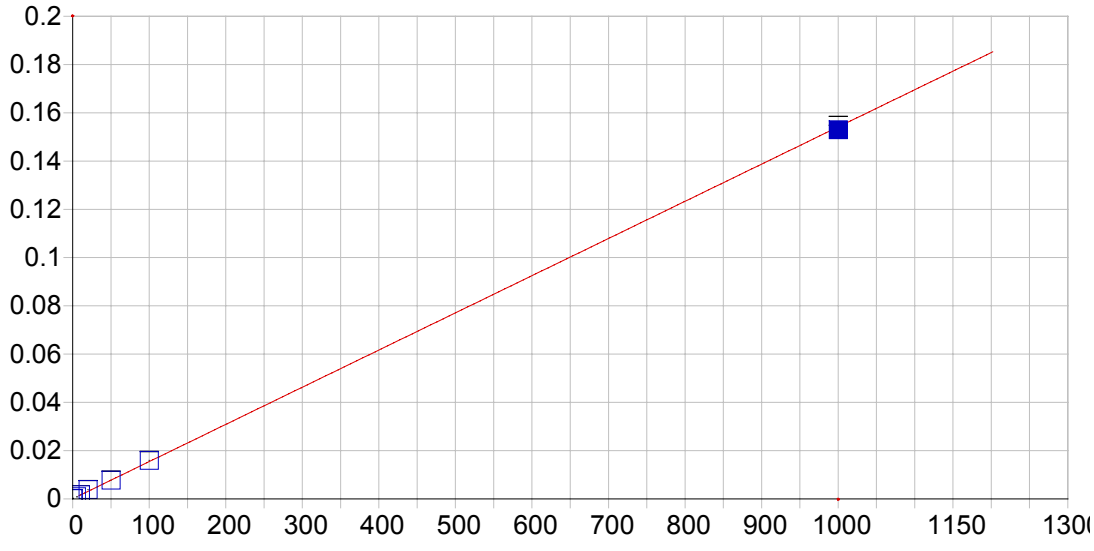


As 189.042 {479}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset):	0.000020	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999624	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	11.694791		
Predicted MQL:	38.982636		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00653	-.007	.000	.00002	.000	1
CalStd9=100	1000.0	1011.4	11.4	1.14	.00253	.000	1
CalStd10=10	10000.	9973.0	-27.0	-.270	.02478	.000	1
CalStd8=100	100.00	109.60	9.60	9.60	.00029	.000	1
CalStd4=5	5.0000	11.008	6.01	120.	.00005	.000	1

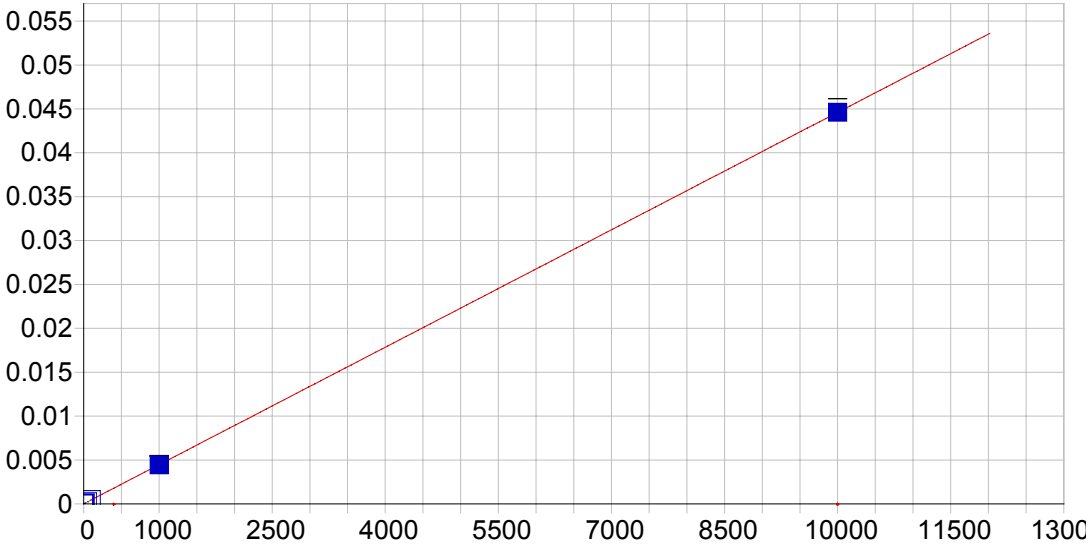


Ba 233.527 {445}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000051	Re-Slope:	1.000000
A1 (Gain):	0.000154	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999461	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.200950		
Predicted MQL:	0.669832		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00036	.000	.000	.00005	.000	1
CalStd7=50	50.000	49.818	-.182	-.363	.00773	.000	1
CalStd5=10	10.000	10.469	.469	4.69	.00166	.000	1
CalStd6=20	20.000	24.703	4.70	23.5	.00386	.000	1
CalStd8=100	100.00	102.75	2.75	2.75	.01589	.000	1
CalStd4=5	5.0000	5.2422	.242	4.84	.00086	.000	1
CalStd9=100	1000.0	992.00	-8.00	-.800	.15291	.002	1
CalStd3=1	1.0000	1.0124	.012	1.24	.00021	.000	1

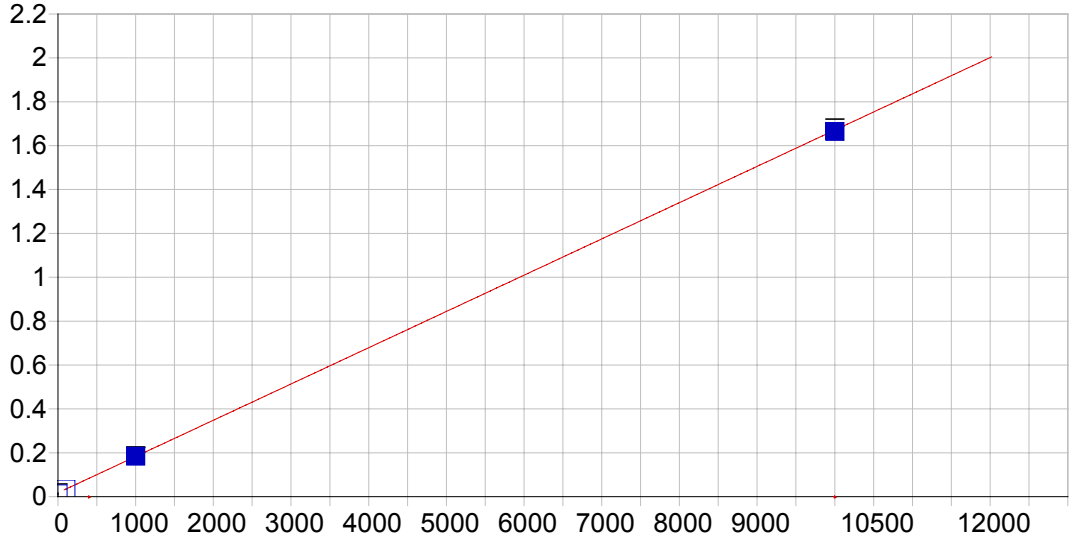


Ba 455.403 { 74}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.406721		
Predicted MQL:	1.355738		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.47456	-.475	.000	.00000	.000	1
CalStd7=50	50.000	50.758	.758	1.52	.00023	.000	1
CalStd5=10	10.000	9.9979	-.002	-.021	.00005	.000	1
CalStd6=20	20.000	24.335	4.34	21.7	.00011	.000	1
CalStd8=100	100.00	102.75	2.75	2.75	.00046	.000	1
CalStd4=5	5.0000	4.7707	-.229	-4.59	.00003	.000	1
CalStd9=100	1000.0	992.95	-7.05	-.705	.00443	.000	1
CalStd3=1	1.0000	.25182	-.748	-74.8	.00001	.000	1
CalStd10=10	10000.	10001.	.665	.007	.04461	.001	1

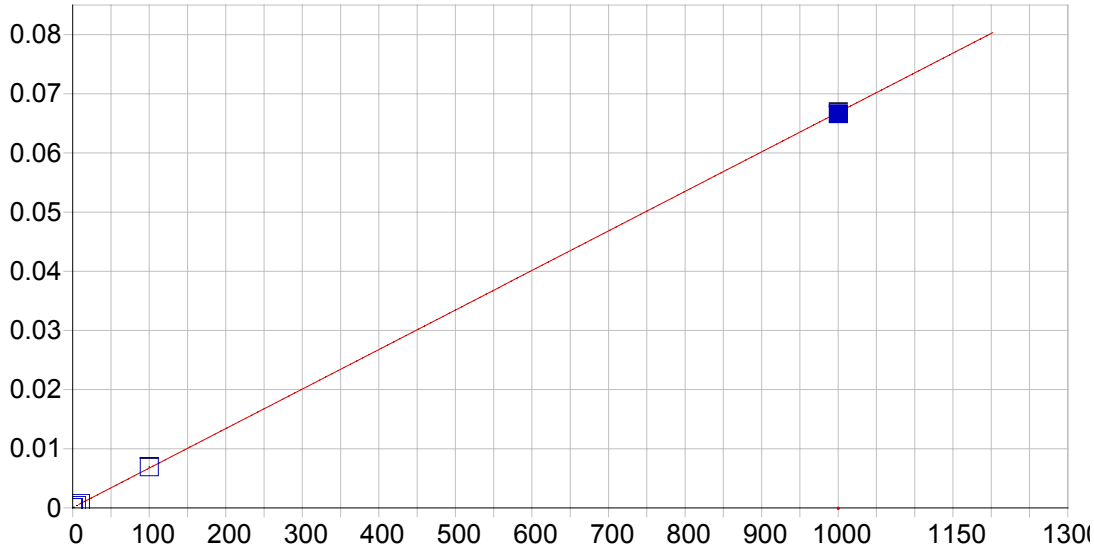


Ba 493.409 { 68}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.017609	Re-Slope:	1.000000
A1 (Gain):	0.000165	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000139		
Predicted MDL:	0.397013		
Predicted MQL:	1.323376		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-31.577	-31.6	.000	.01239	.005	1
CalStd9=100	1000.0	1003.3	3.34	.334	.18351	.001	1
CalStd8=100	100.00	100.00	.000	.000	.03414	.000	1
CalStd10=10	10000.	9959.2	-40.8	-.408	1.6644	.016	1

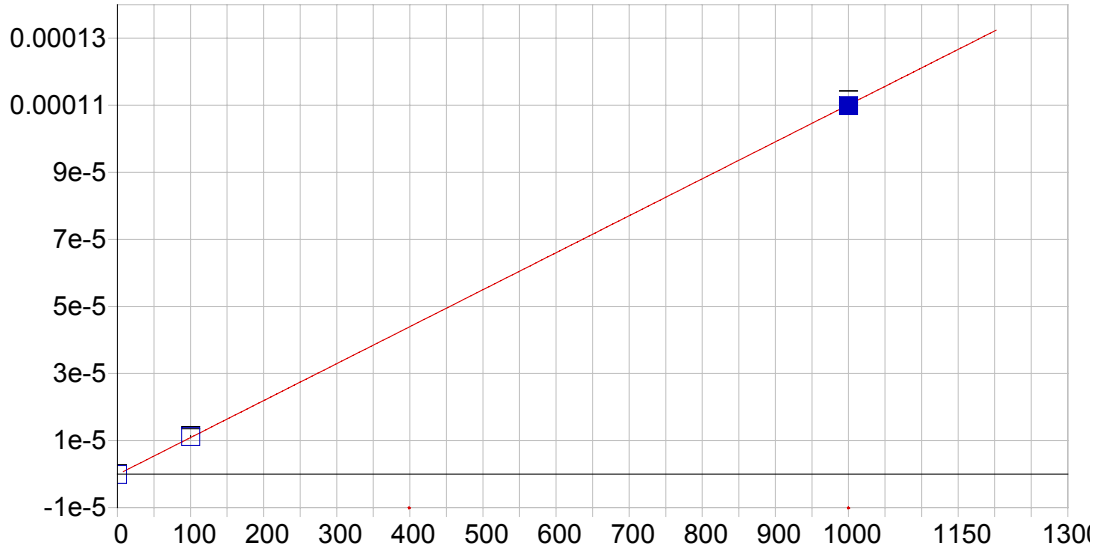


Be 313.042 {108}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000045	Re-Slope:	1.000000
A1 (Gain):	0.000067	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999928	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.033634		
Predicted MQL:	0.112112		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00006	.000	.000	.00005	.000	1
CalStd5=10	10.000	10.544	.544	5.44	.00075	.000	1
CalStd8=100	100.00	102.94	2.94	2.94	.00692	.000	1
CalStd2=0.5	.50000	.54522	.045	9.04	.00008	.000	1
CalStd4=5	5.0000	5.3363	.336	6.73	.00040	.000	1
CalStd1=0.25	.25000	.24446	-.006	-2.22	.00006	.000	1
CalStd9=100	1000.0	996.09	-3.91	-.391	.06660	.000	1
CalStd3=1	1.0000	1.0445	.044	4.45	.00011	.000	1

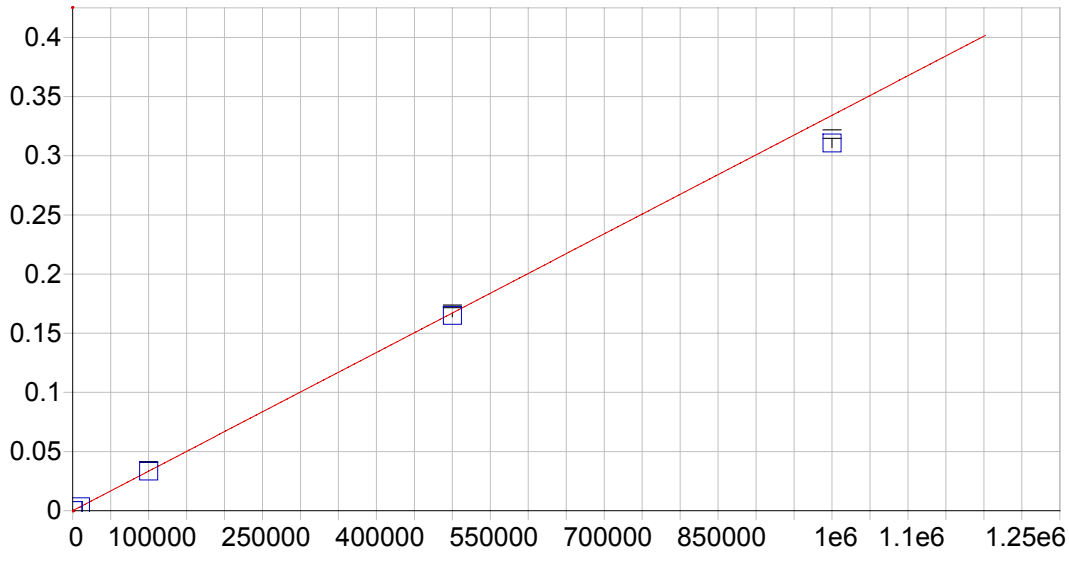


Be 234.861 {144}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999971	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.676473		
Predicted MQL:	12.254911		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00215	-.002	.000	.00000	.000	1
CalStd9=100	1000.0	997.61	-2.39	-.239	.00011	.000	1
CalStd8=100	100.00	102.39	2.39	2.39	.00001	.000	1

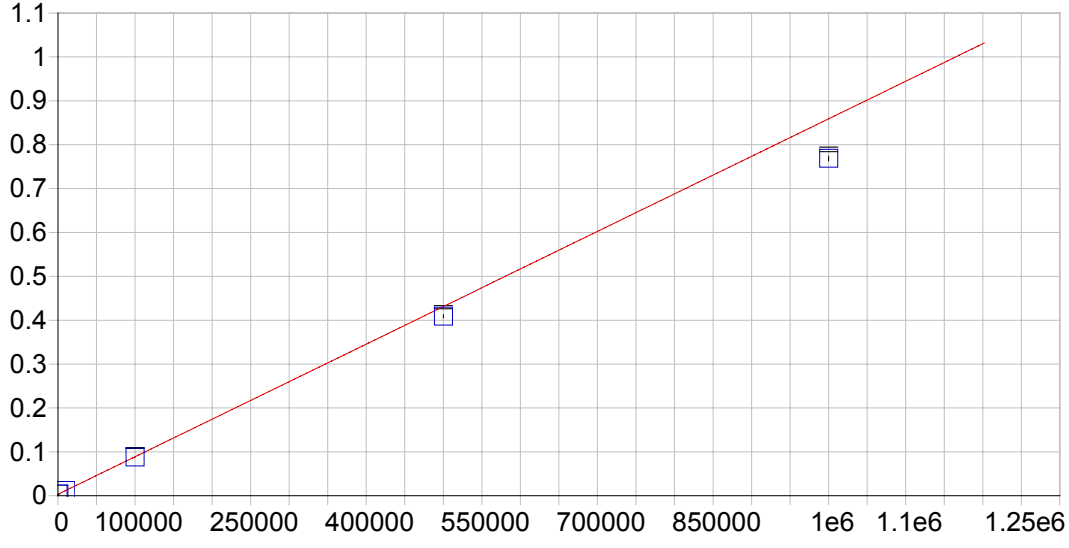


Ca 315.887 {107}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000011	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999862	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	16.838697		
Predicted MQL:	56.128989		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	1.4865	1.49	.000	.00001	.000	1
CalStd10=10	10000.	9720.7	-279.	-2.79	.00326	.000	1
CalStd13=50	500000.	493710.	-6290.	-1.26	.16500	.001	1
CalStd14-100	1000000.	929460.	-70500.	-7.05	.31062	.004	1
CalStd9=100	1000.0	999.80	-.196	-.020	.00034	.000	1
CalStd12-100	100000.	100090.	89.4	.089	.03346	.000	1

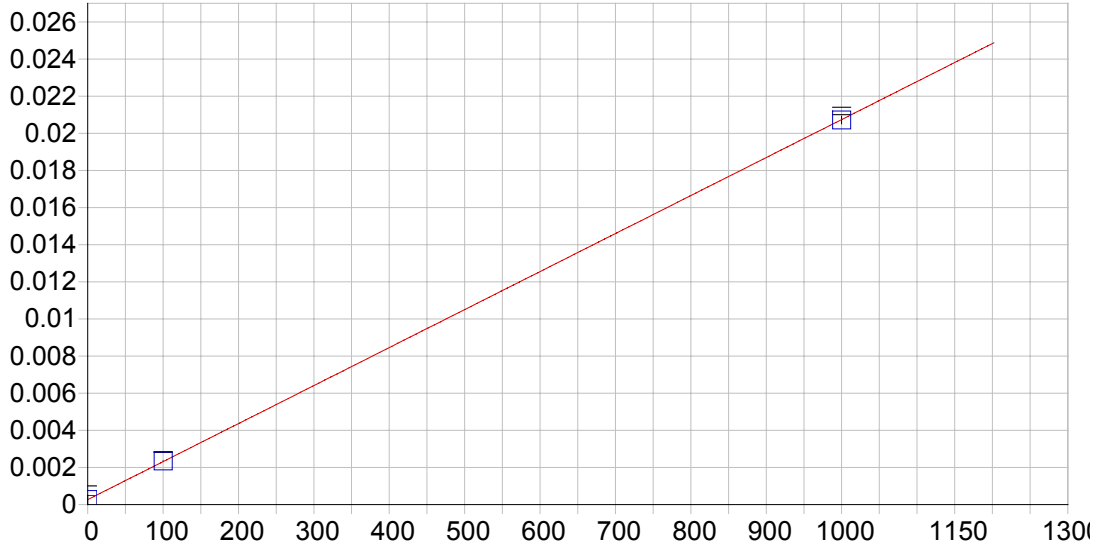


Ca 317.933 {106}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Curvilinear Weighting: 1/Conc

A0 (Offset):	0.003212	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	7.682853		
Predicted MQL:	25.609510		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01792	.018	.000	.00321	.000	1
CalStd10=10	10000.	9968.8	-31.2	-.312	.01174	.000	1
CalStd13=50	500000.	473990.	-26000.	-5.20	.40886	.004	1
CalStd14-100	1000000.	894390.	-106000.	-10.6	.76863	.005	1
CalStd9=100	1000.0	985.08	-14.9	-1.49	.00406	.000	1
CalStd12-100	100000.	98787.	-1210.	-1.21	.08775	.001	1

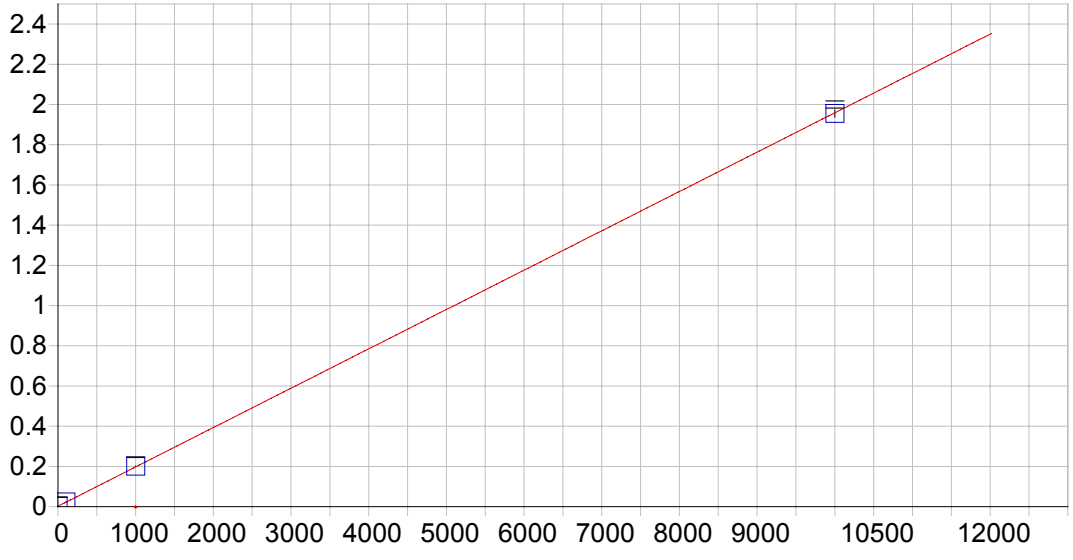


Ca 393.366 { 86}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000268	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.058129		
Predicted MQL:	0.193764		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00130	-.001	.000	.00027	.000	1
CalStd9=100	1000.0	998.55	-1.45	-.145	.02071	.000	1
CalStd8=100	100.00	101.45	1.45	1.45	.00234	.000	1

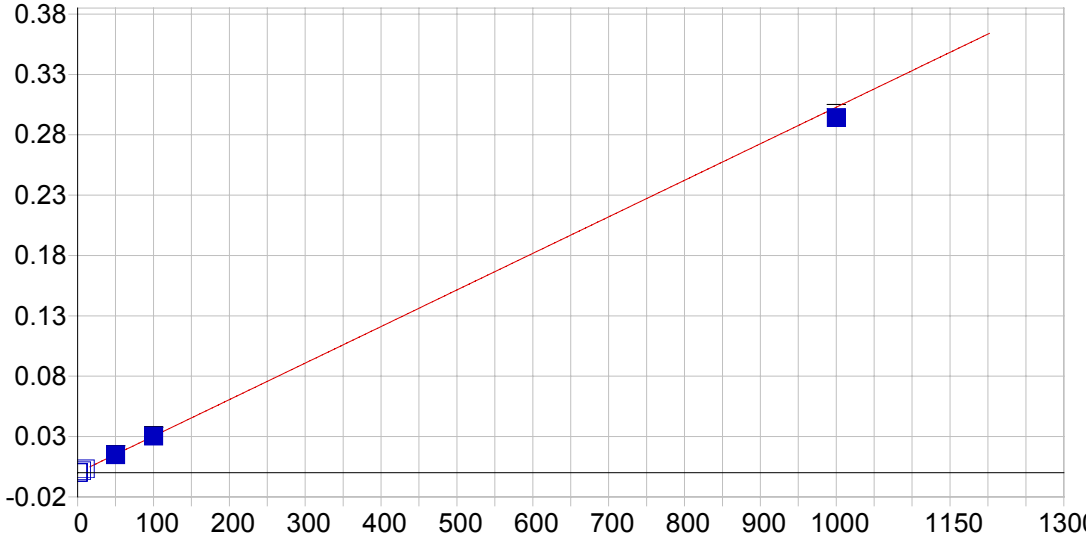


Ca 396.847 { 85}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002053	Re-Slope:	1.000000
A1 (Gain):	0.000196	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999972	Status:	OK.
Std Error of Est:	0.000069		
Predicted MDL:	0.078227		
Predicted MQL:	0.260755		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00746	-.007	.000	.00205	.002	1
CalStd10=10	10000.	9980.0	-20.0	-.200	1.9547	.018	1
CalStd8=100	100.00	106.29	6.29	6.29	.02285	.000	1
CalStd9=100	1000.0	1013.7	13.7	1.37	.20039	.001	1

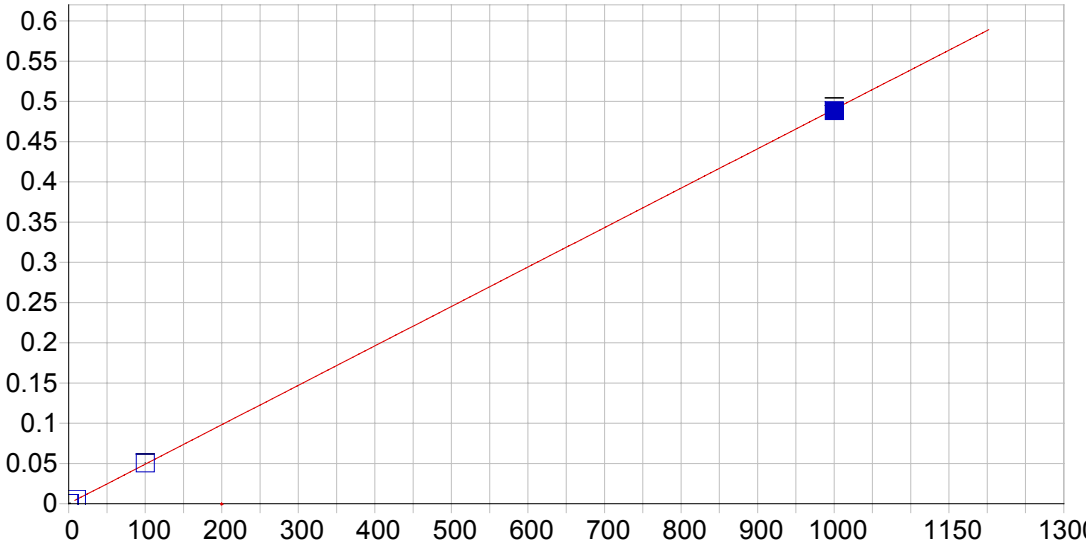


Cd 226.502 {449}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.000303	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999740	Status:	OK.
Std Error of Est:	0.000050		
Predicted MDL:	0.162604		
Predicted MQL:	0.542012		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.15231	-.152	.000	-.00003	.000	1
CalStd7=50	50.000	49.045	-.955	-1.91	.01487	.000	1
CalStd3=1	1.0000	1.0369	.037	3.69	.00033	.000	1
CalStd2=0.5	.50000	.39454	-.105	-21.1	.00014	.000	1
CalStd4=5	5.0000	5.0961	.096	1.92	.00156	.000	1
CalStd8=100	100.00	99.891	-.109	-.109	.03027	.000	1
CalStd5=10	10.000	10.155	.155	1.55	.00309	.000	1
CalStd9=100	1000.0	971.47	-28.5	-2.85	.29430	.003	1

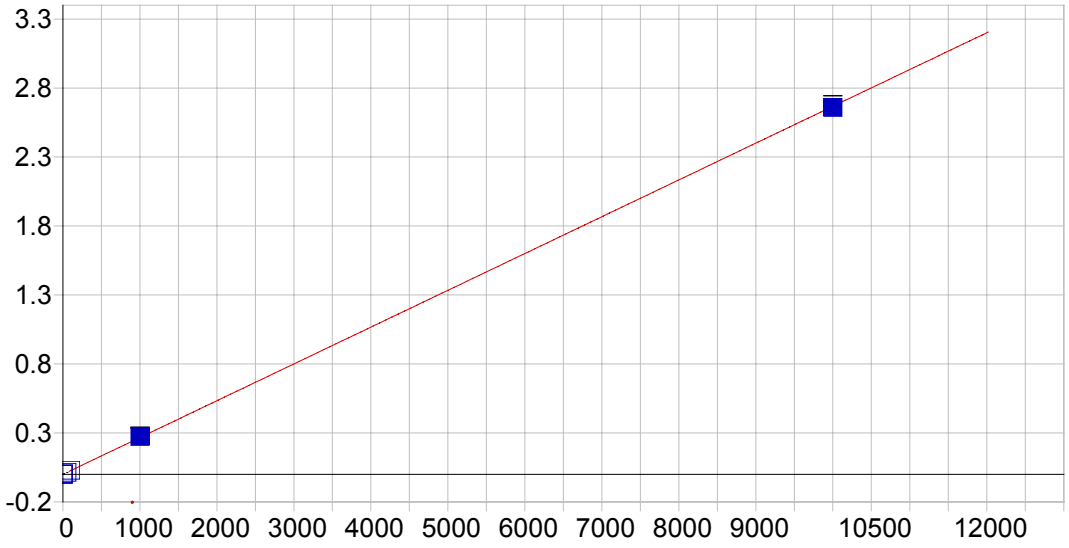


Cd 228.802 {447}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000130	Re-Slope:	1.000000
A1 (Gain):	0.000490	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999911	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.138455		
Predicted MQL:	0.461515		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00025	.000	.000	.00013	.000	1
CalStd9=100	1000.0	996.23	-3.77	-.377	.48826	.005	1
CalStd8=100	100.00	102.92	2.92	2.92	.05056	.000	1
CalStd2=0.5	.50000	.66584	.166	33.2	.00046	.000	1
CalStd3=1	1.0000	1.0813	.081	8.13	.00066	.000	1
CalStd5=10	10.000	10.599	.599	5.99	.00532	.000	1

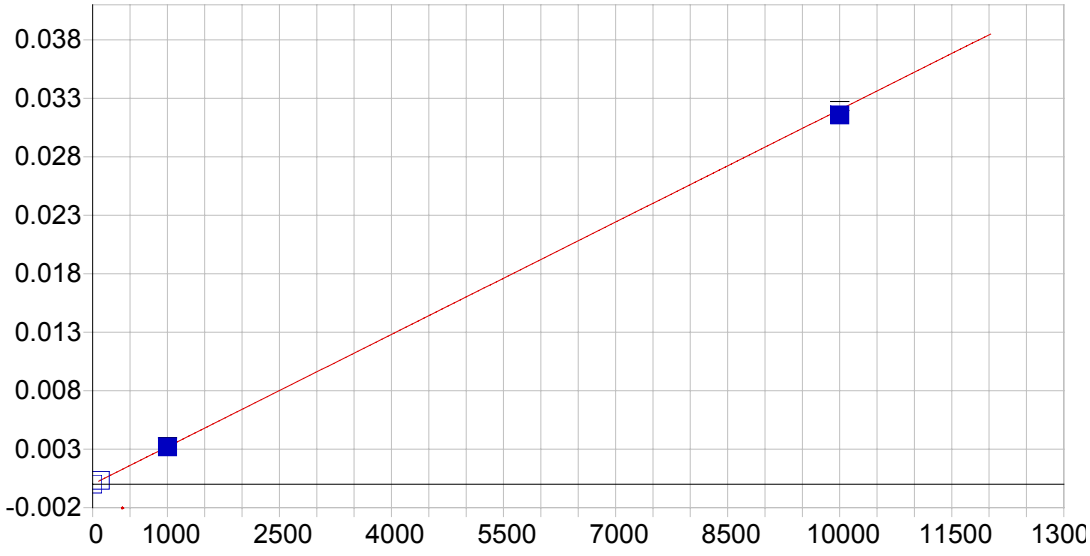


Co 228.616 {447}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000068	Re-Slope:	1.000000
A1 (Gain):	0.000267	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.225390		
Predicted MQL:	0.751301		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00042	.000	.000	-.00007	.000	1
CalStd7=50	50.000	52.114	2.11	4.23	.01383	.000	1
CalStd5=10	10.000	10.929	.929	9.29	.00285	.000	1
CalStd4=5	5.0000	5.2972	.297	5.94	.00135	.000	1
CalStd8=100	100.00	107.03	7.03	7.03	.02848	.000	1
CalStd9=100	1000.0	1023.7	23.7	2.37	.27300	.003	1
CalStd3=1	1.0000	1.1359	.136	13.6	.00024	.000	1
CalStd10=10	10000.	9965.8	-34.2	-.342	2.6583	.020	1

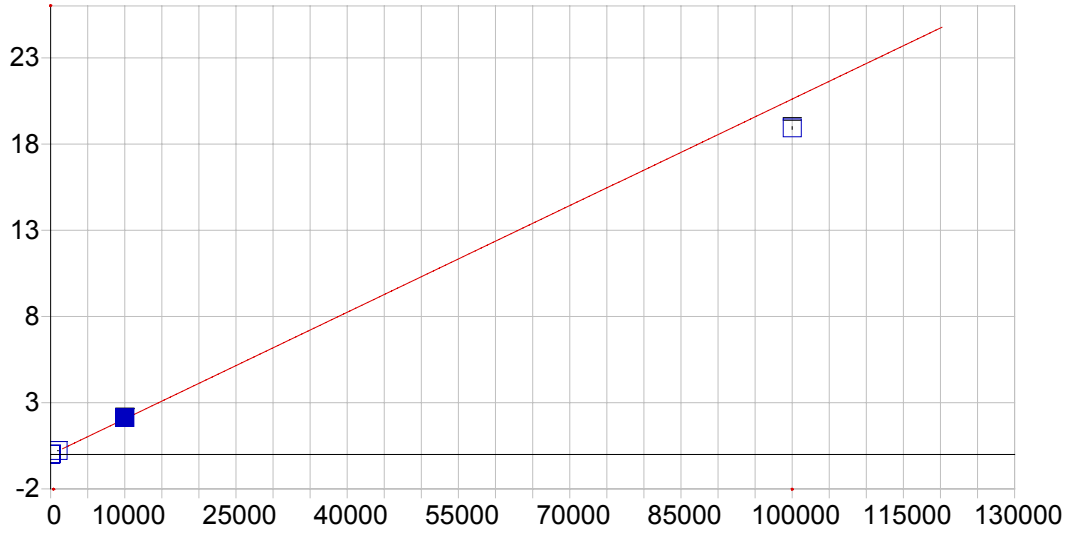


Co 238.892 {141}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999872	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.572862		
Predicted MQL:	1.909538		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.19010	-.190	.000	.00000	.000	1
CalStd9=100	1000.0	995.05	-4.95	-.495	.00319	.000	1
CalStd10=10	10000.	9855.6	-144.	-1.44	.03157	.000	1
CalStd8=100	100.00	103.53	3.53	3.53	.00033	.000	1

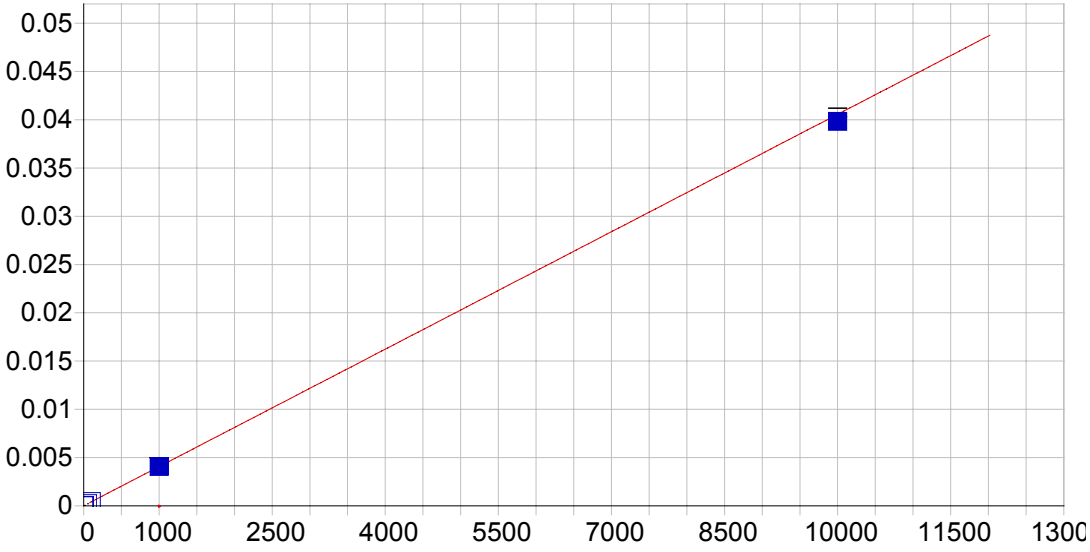


Cr 205.560 {464}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000166	Re-Slope:	1.000000
A1 (Gain):	0.000206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994956	Status:	OK.
Std Error of Est:	0.000305		
Predicted MDL:	0.184925		
Predicted MQL:	0.616418		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.2160	-1.22	.000	-.00008	.000	1
CalStd5=10	10.000	10.494	.494	4.94	.00233	.000	1
CalStd7=50	50.000	53.272	3.27	6.54	.01115	.000	1
CalStd9=100	1000.0	1079.9	79.9	7.99	.22277	.002	1
CalStd8=100	100.00	110.80	10.8	10.8	.02300	.000	1
CalStd4=5	5.0000	6.9327	1.93	38.7	.00160	.000	1
CalStd3=1	1.0000	.32741	-.673	-67.3	.00023	.000	1
CalStd11-100	100000.	91858.	-8140.	-8.14	18.934	.070	1
CalStd10=10	10000.	10354.	354.	3.54	2.1343	.014	1

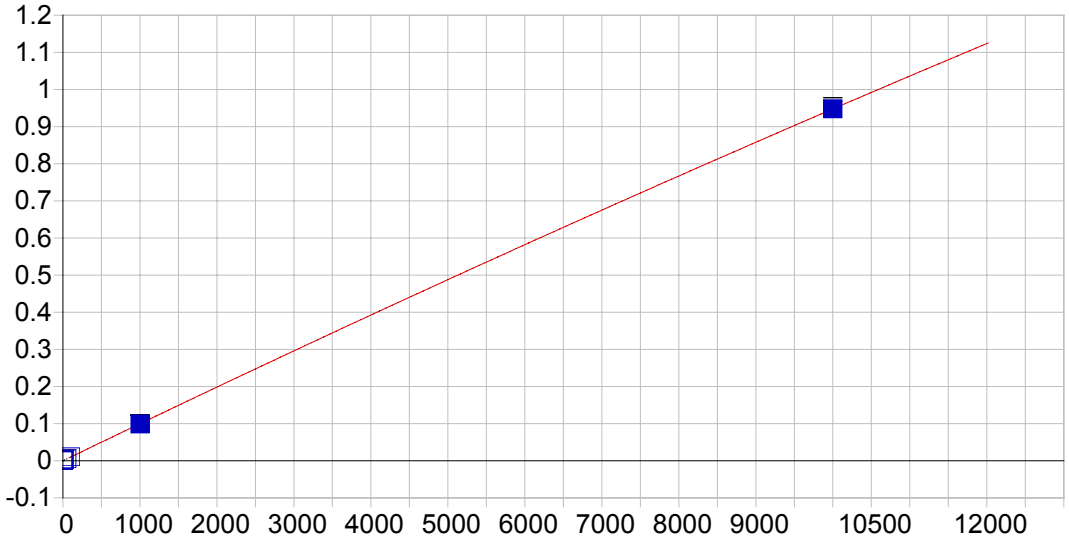


Cr 267.716 {126}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Linear Weighting: 1/Var

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999905	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.611573		
Predicted MQL:	2.038576		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.2124	-1.21	.000	.00000	.000	1
CalStd5=10	10.000	9.5373	-.463	-4.63	.00005	.000	1
CalStd7=50	50.000	50.382	.382	.763	.00021	.000	1
CalStd9=100	1000.0	998.27	-1.73	-.173	.00406	.000	1
CalStd8=100	100.00	103.19	3.19	3.19	.00043	.000	1
CalStd4=5	5.0000	5.7769	.777	15.5	.00003	.000	1
CalStd10=10	10000.	9815.3	-185.	-1.85	.03982	.000	1

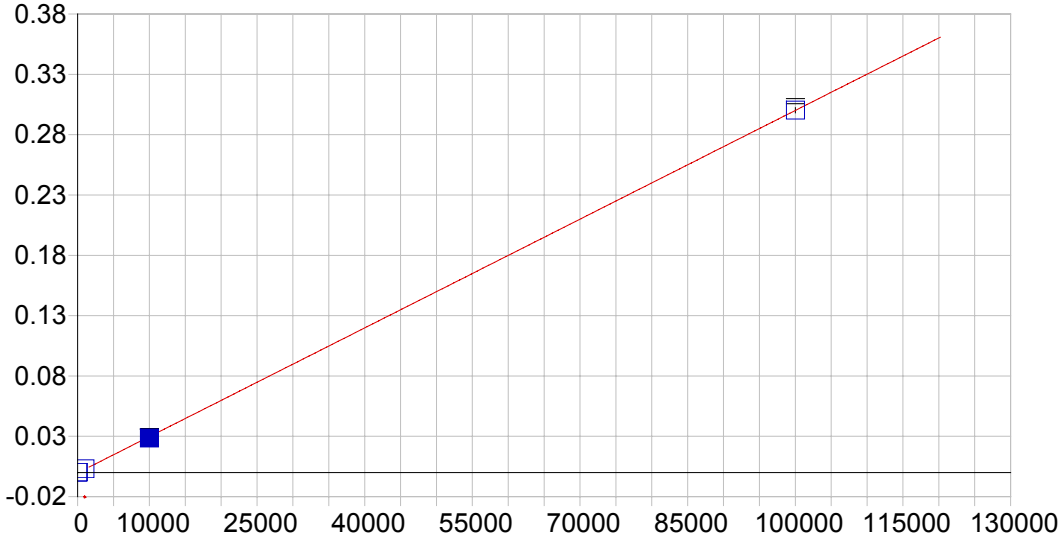


Cu 224.700 {450}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000100	Re-Slope:	1.000000
A1 (Gain):	0.000100	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999839	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.495011		
Predicted MQL:	1.650038		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00109	-.001	.000	-.00010	.000	1
CalStd9=100	1000.0	987.93	-12.1	-1.21	.09856	.001	1
CalStd7=50	50.000	49.709	-.291	-.583	.00489	.000	1
CalStd8=100	100.00	102.25	2.25	2.25	.01016	.000	1
CalStd5=10	10.000	10.814	.814	8.14	.00099	.000	1
CalStd10=10	10000.	10001.	1.31	.013	.94813	.005	1
CalStd4=5	5.0000	7.9874	2.99	59.7	.00070	.000	1
CalStd6=20	20.000	24.853	4.85	24.3	.00239	.000	1
CalStd3=1	1.0000	1.1658	.166	16.6	.00002	.000	1

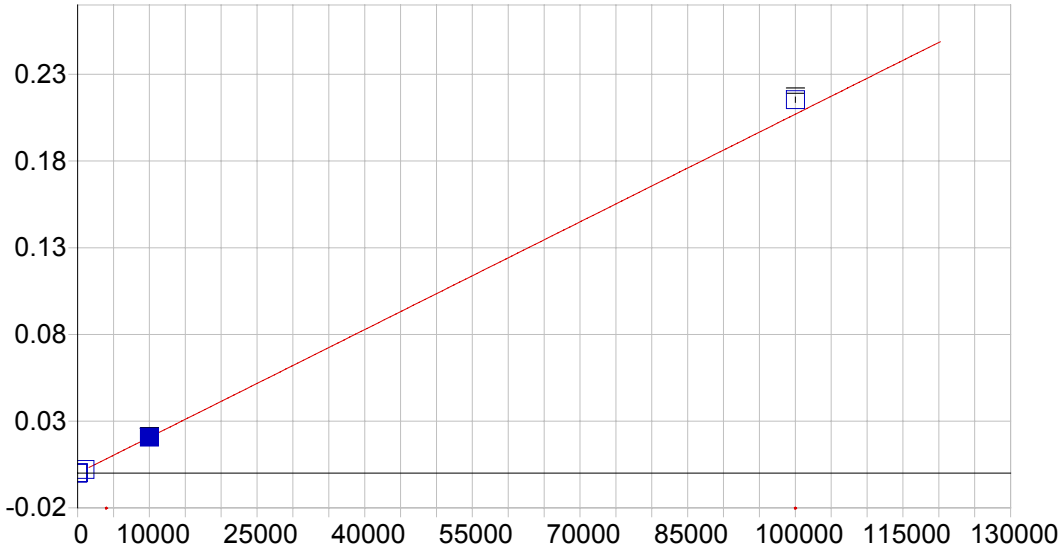


Cu 324.754 {104}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.000319	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000788		
Predicted MDL:	3.360030		
Predicted MQL:	11.200101		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	131.15	131.	.000	.00007	.000	1
CalStd9=100	1000.0	1098.0	98.0	9.80	.00298	.000	1
CalStd8=100	100.00	232.42	132.	132.	.00038	.000	1
CalStd10=10	10000.	9599.5	-400.	-4.00	.02852	.000	1
CalStd11-100	100000.	100040.	38.9	.039	.30020	.002	1

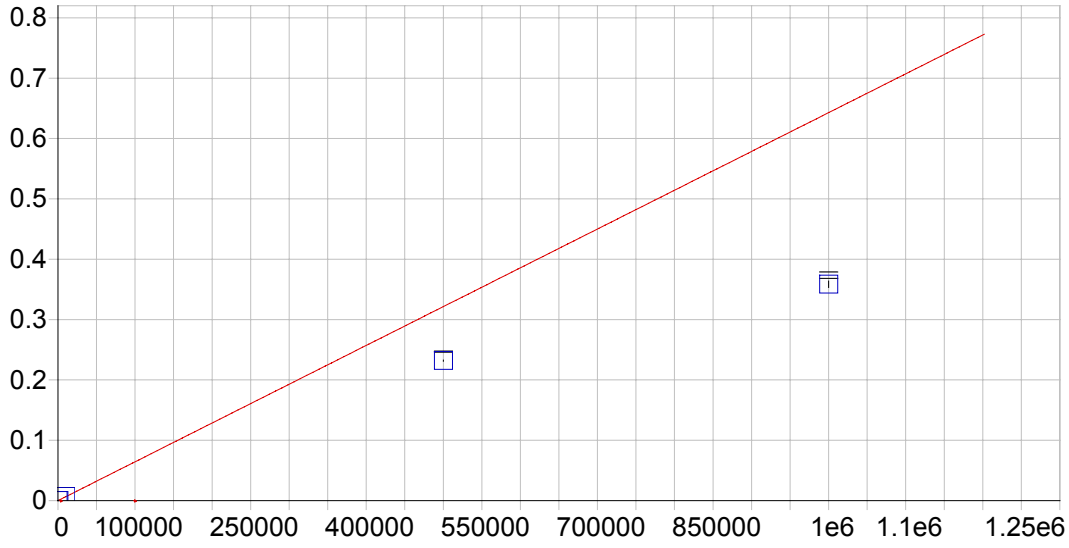


Cu 327.396 {103}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Curvilinear Weighting: 1/Conc

A0 (Offset):	-0.000028	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	5.768185		
Predicted MQL:	19.227283		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00922	-.009	.000	-.00003	.000	1
CalStd6=20	20.000	26.846	6.85	34.2	.00003	.000	1
CalStd7=50	50.000	51.989	1.99	3.98	.00008	.000	1
CalStd8=100	100.00	106.11	6.11	6.11	.00019	.000	1
CalStd9=100	1000.0	1022.6	22.6	2.26	.00209	.000	1
CalStd10=10	10000.	9999.3	-.711	-.007	.02067	.000	1
CalStd11-100	100000.	104040.	4040.	4.04	.21537	.001	1

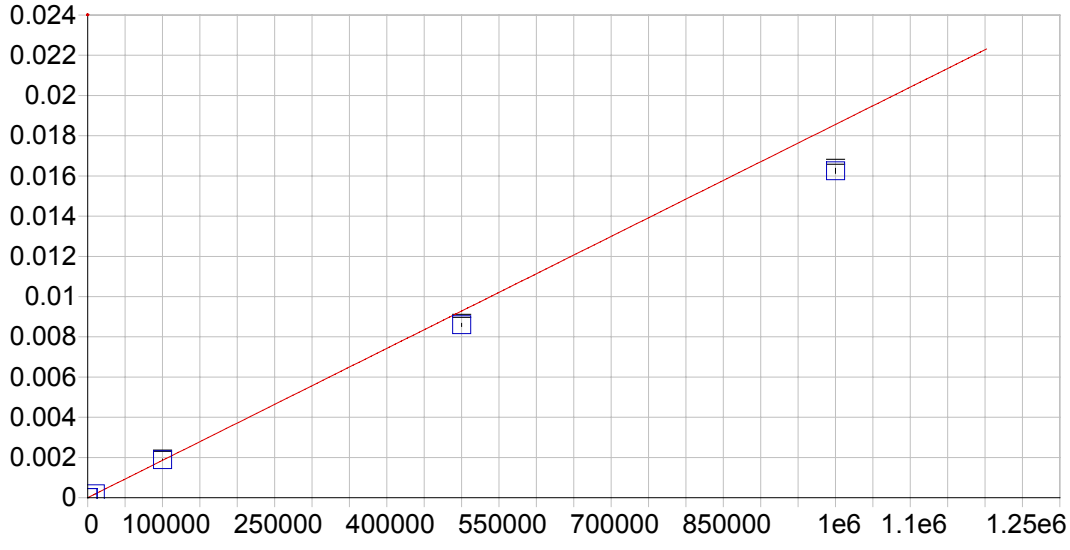


Fe 234.349 {144}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000021	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998828	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	1.329258		
Predicted MQL:	4.430860		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.95377	-.954	.000	.00002	.000	1
CalStd10=10	10000.	10505.	505.	5.05	.00677	.000	1
CalStd13=50	500000.	360850.	-139000.	-27.8	.23200	.001	1
CalStd14-100	1000000.	557620.	-442000.	-44.2	.35850	.005	1
CalStd9=100	1000.0	1063.7	63.7	6.37	.00070	.000	1

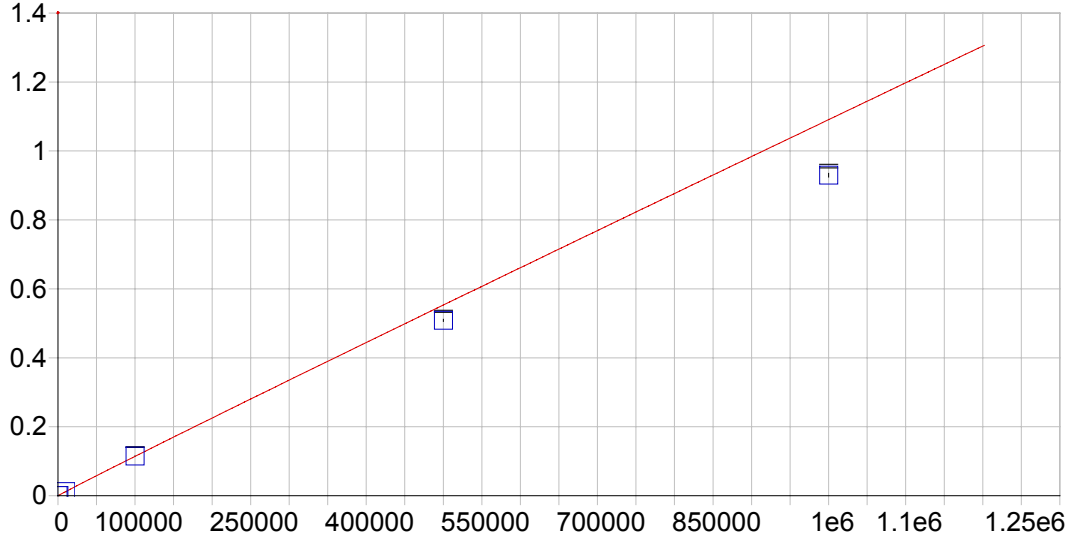


Fe 239.562 {140}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999944	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	23.361140		
Predicted MQL:	77.870468		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00129	-.001	.000	.00000	.000	1
CalStd10=10	10000.	10153.	153.	1.53	.00019	.000	1
CalStd13=50	500000.	462990.	-37000.	-7.40	.00859	.000	1
CalStd14-100	1000000.	875750.	-124000.	-12.4	.01625	.000	1
CalStd9=100	1000.0	964.58	-35.4	-3.54	.00002	.000	1
CalStd12-100	100000.	101560.	1560.	1.56	.00189	.000	1

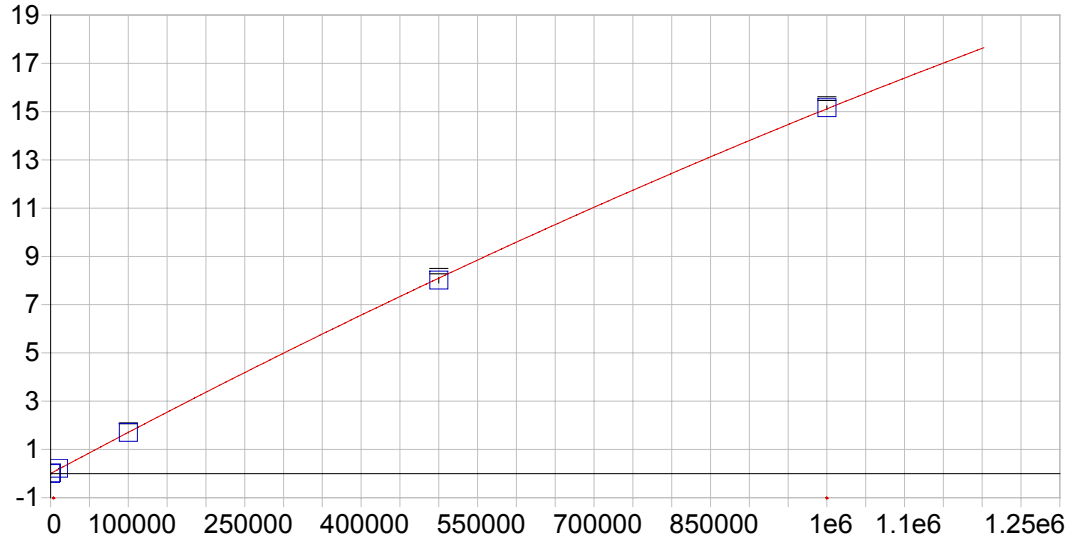


Fe 259.940 {129}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Full Fit	Weighting:	1/Conc

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	0.980000		
Correlation:	0.999975	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	4.618885		
Predicted MQL:	15.396282		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.06568	.066	.000	.00001	.000	1
CalStd10=10	10000.	9672.6	-327.	-3.27	.01158	.000	1
CalStd13=50	500000.	458950.	-41000.	-8.21	.50852	.003	1
CalStd14-100	1000000.	849410.	-151000.	-15.1	.92964	.005	1
CalStd9=100	1000.0	935.54	-64.5	-6.45	.00118	.000	1
CalStd12-100	100000.	100200.	196.	.196	.11445	.001	1

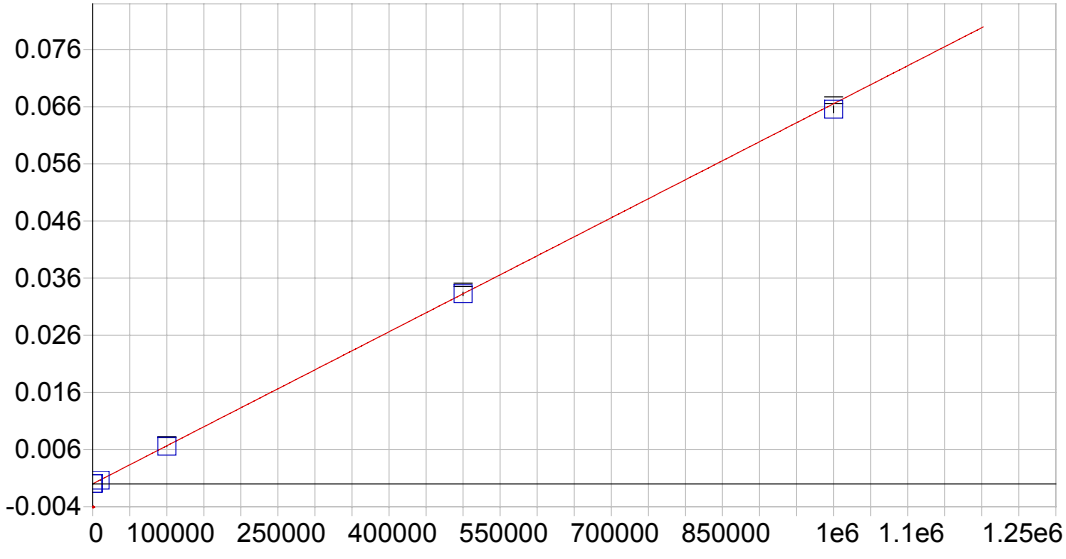


Mg 202.582 {466}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	-0.000096	Re-Slope:	1.000000
A1 (Gain):	0.000017	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999722	Status:	OK.
Std Error of Est:	0.000660		
Predicted MDL:	2.403645		
Predicted MQL:	8.012150		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.51349	-.513	.000	-.00010	.000	1
CalStd13=50	500000.	494310.	-5690.	-1.14	8.0123	.111	1
CalStd10=10	10000.	12450.	2450.	24.5	.21467	.001	1
CalStd14-100	1000000.	1003300.	3320.	.332	15.159	.076	1
CalStd12-100	100000.	99763.	-237.	-.237	1.7021	.015	1
CalStd9=100	1000.0	1279.1	279.	27.9	.02200	.000	1

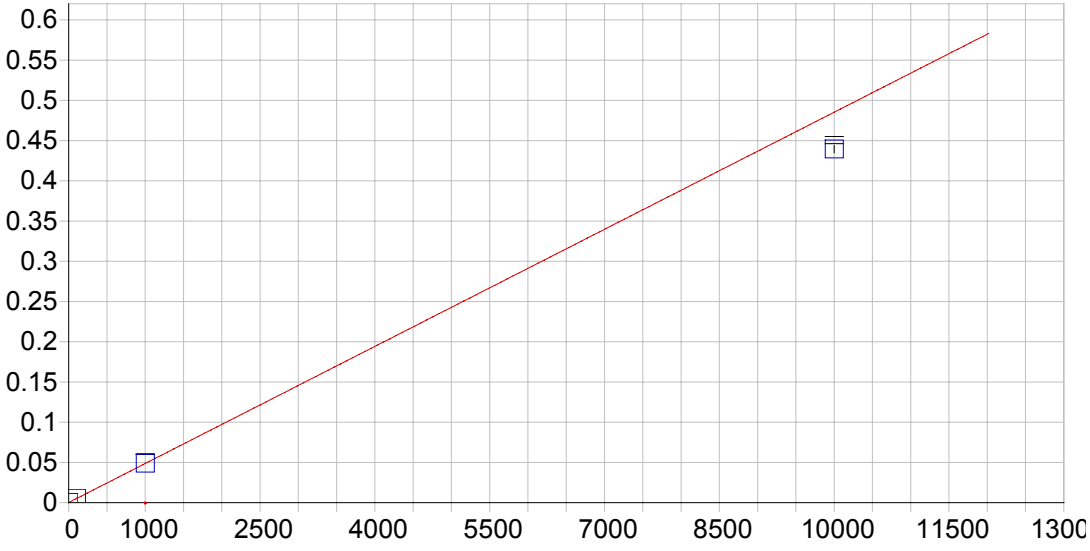


Mg 279.079 {121}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	60.170333		
Predicted MQL:	200.567776		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.16732	.167	.000	.00000	.000	1
CalStd13=50	500000.	499730.	-270.	-.054	.03324	.000	1
CalStd10=10	10000.	9504.6	-495.	-4.95	.00063	.000	1
CalStd14-100	1000000.	985350.	-14700.	-1.47	.06554	.001	1
CalStd12-100	100000.	98846.	-1150.	-1.15	.00658	.000	1
CalStd9=100	1000.0	887.62	-112.	-11.2	.00006	.000	1

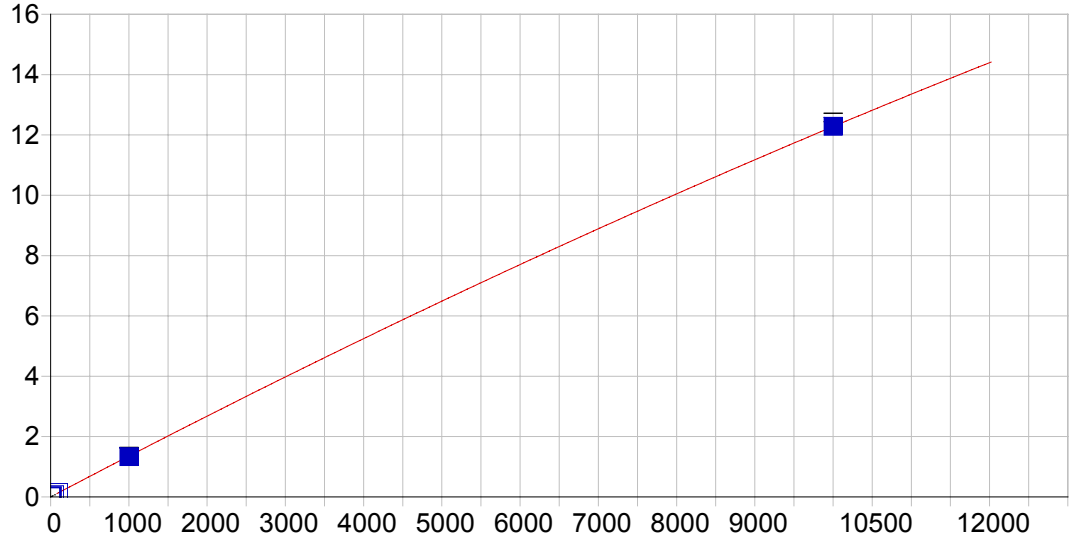


Mg 280.270 {120}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000168	Re-Slope:	1.000000
A1 (Gain):	0.000049	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998223	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.027014		
Predicted MQL:	0.090047		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.02145	-.021	.000	.00017	.000	1
CalStd9=100	1000.0	1006.7	6.74	.674	.04900	.000	1
CalStd10=10	10000.	9053.5	-946.	-9.46	.43935	.004	1
CalStd8=100	100.00	107.90	7.90	7.90	.00540	.000	1

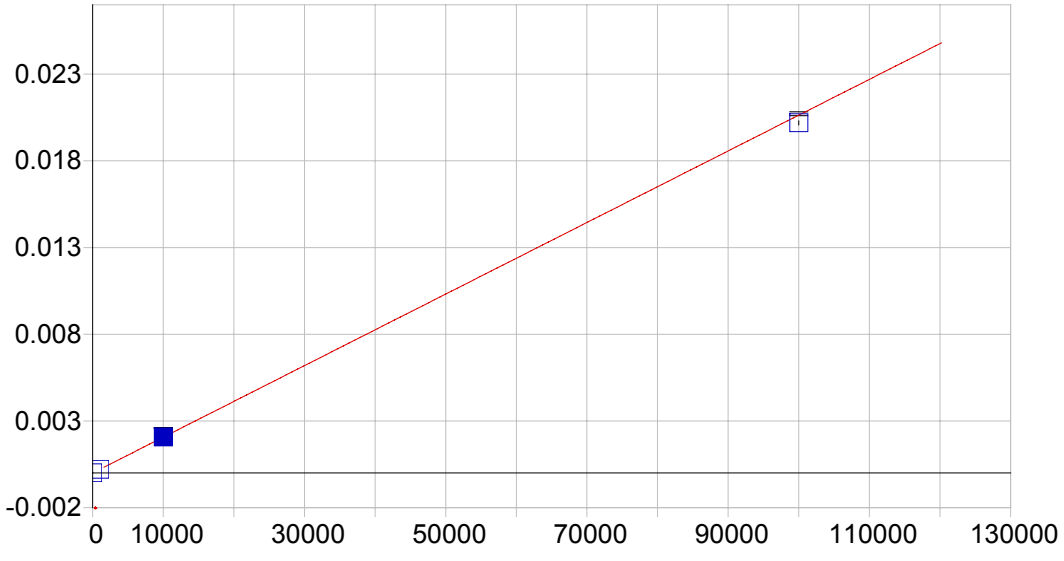


Mn 257.610 {131}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000166	Re-Slope:	1.000000
A1 (Gain):	0.001368	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999825	Status:	OK.
Std Error of Est:	0.000220		
Predicted MDL:	0.077052		
Predicted MQL:	0.256839		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00450	-.005	.000	.00016	.000	1
CalStd5=10	10.000	10.736	.736	7.36	.01485	.000	1
CalStd7=50	50.000	50.938	.938	1.88	.06981	.001	1
CalStd6=20	20.000	25.416	5.42	27.1	.03492	.000	1
CalStd8=100	100.00	103.89	3.89	3.89	.14212	.001	1
CalStd4=5	5.0000	7.5667	2.57	51.3	.01052	.000	1
CalStd9=100	1000.0	984.72	-15.3	-1.53	1.3337	.011	1
CalStd10=10	10000.	10002.	1.81	.018	12.280	.140	1

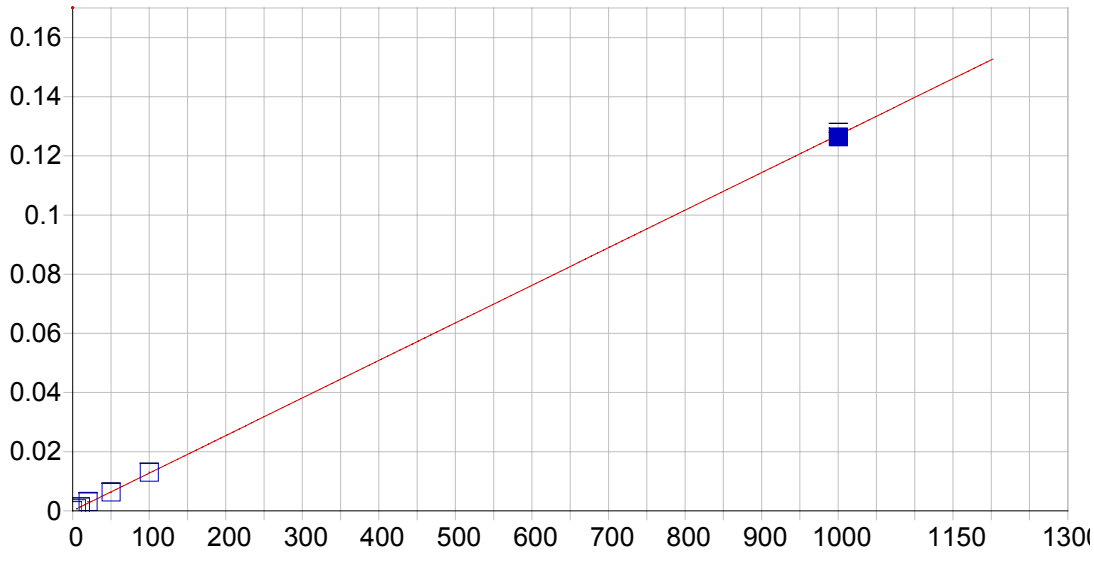


Mn 259.373 {130}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Var

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	2.432210		
Predicted MQL:	8.107368		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.13593	.136	.000	.00000	.000	1
CalStd10=10	10000.	10023.	22.8	.228	.00207	.000	1
CalStd11-100	100000.	97834.	-2170.	-2.17	.02019	.000	1
CalStd9=100	1000.0	995.92	-4.08	-.408	.00021	.000	1

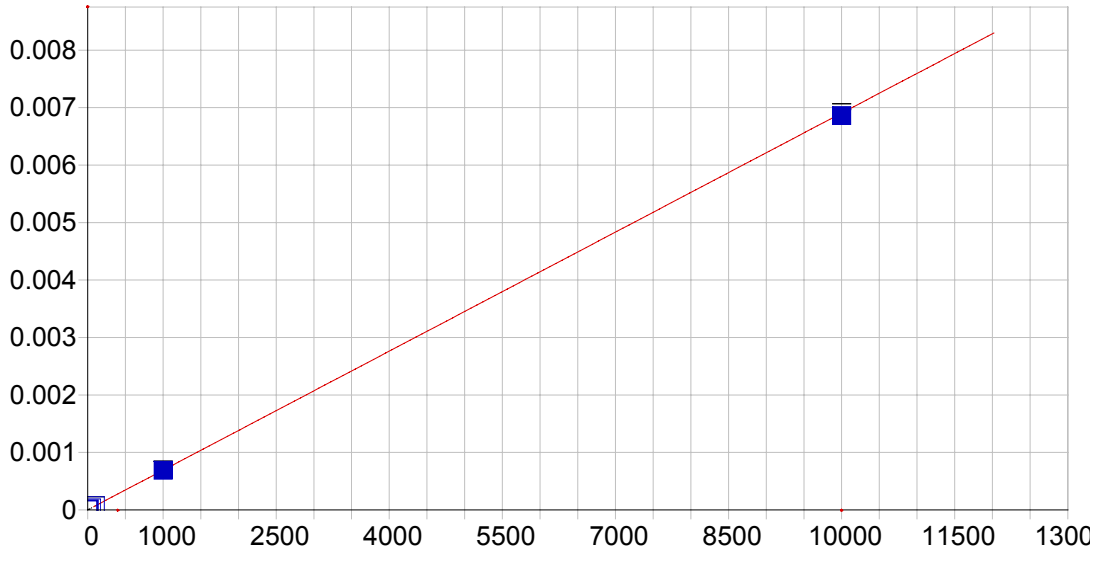


Mo 202.030 {466}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000051	Re-Slope:	1.000000
A1 (Gain):	0.000127	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999632	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.278969		
Predicted MQL:	0.929895		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00108	-.001	.000	.00005	.000	1
CalStd7=50	50.000	49.084	-.916	-1.83	.00628	.000	1
CalStd6=20	20.000	23.966	3.97	19.8	.00309	.000	1
CalStd5=10	10.000	10.047	.047	.466	.00133	.000	1
CalStd8=100	100.00	102.00	2.00	2.00	.01300	.000	1
CalStd4=5	5.0000	5.0796	.080	1.59	.00070	.000	1
CalStd9=100	1000.0	994.83	-5.17	-.517	.12639	.002	1

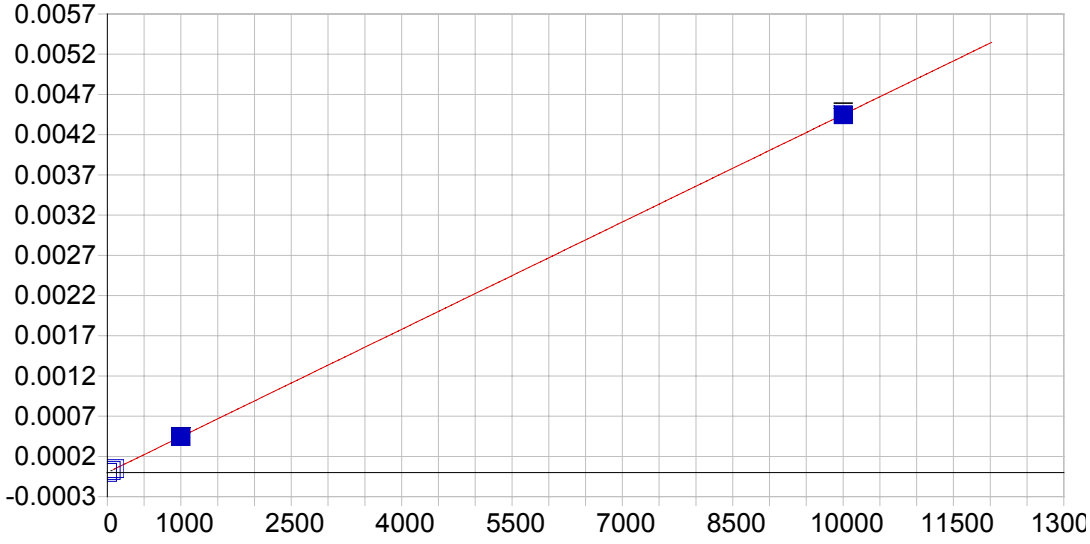


Mo 204.598 {464}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000001	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.580220		
Predicted MQL:	1.934068		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00001	.000	.000	.00000	.000	1
CalStd7=50	50.000	49.024	-.976	-1.95	.00003	.000	1
CalStd6=20	20.000	23.650	3.65	18.2	.00002	.000	1
CalStd5=10	10.000	9.4759	-.524	-5.24	.00001	.000	1
CalStd8=100	100.00	101.56	1.56	1.56	.00007	.000	1
CalStd4=5	5.0000	4.3933	-.607	-12.1	.00000	.000	1
CalStd9=100	1000.0	995.89	-4.11	-.411	.00069	.000	1
CalStd10=10	10000.	9933.3	-66.7	-.667	.00686	.000	1

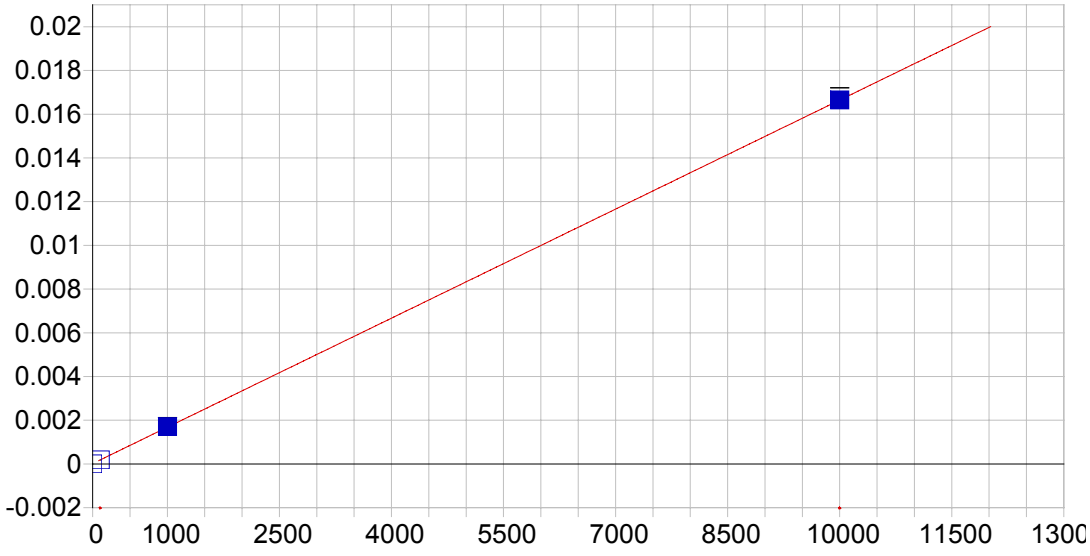


Mo 204.598 {465}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1.002515		
Predicted MQL:	3.341715		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00357	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	1000.7	.726	.073	.00045	.000	1
CalStd10=10	10000.	9993.5	-6.50	-.065	.00445	.000	1
CalStd7=50	50.000	51.357	1.36	2.71	.00002	.000	1
CalStd8=100	100.00	104.42	4.42	4.42	.00005	.000	1

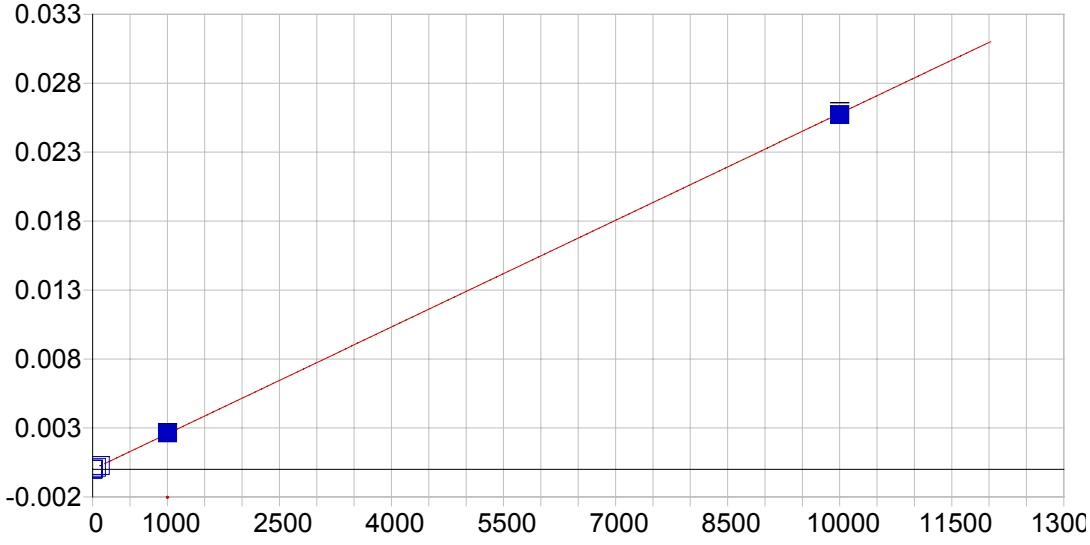


Ni 221.647 {452}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.507760		
Predicted MQL:	1.692533		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-10.199	-10.2	.000	.00000	.000	1
CalStd10=10	10000.	9998.7	-1.30	-.013	.01664	.000	1
CalStd8=100	100.00	98.323	-1.68	-1.68	.00018	.000	1
CalStd9=100	1000.0	1013.2	13.2	1.32	.00170	.000	1

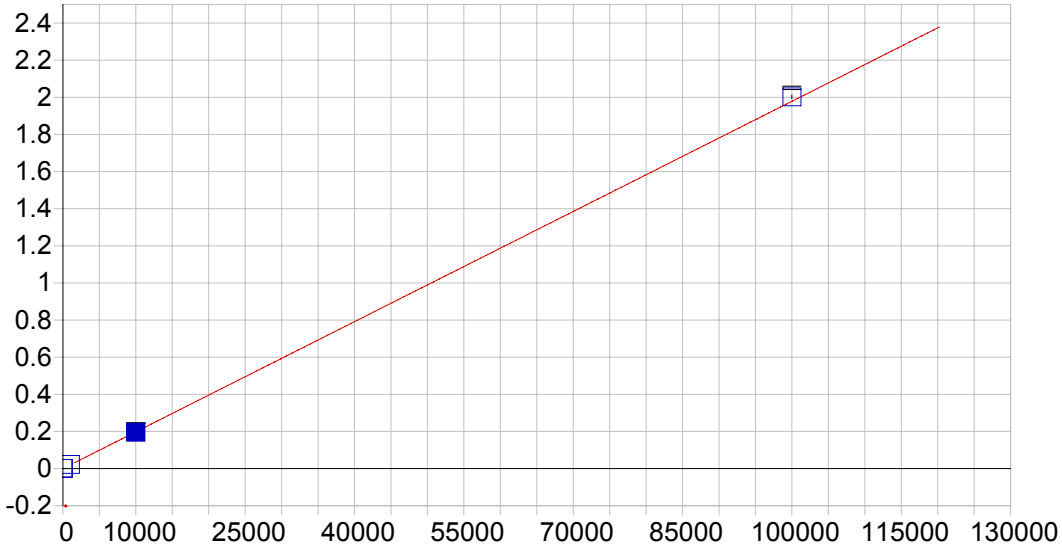


Ni 231.604 {445}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999952	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.323875		
Predicted MQL:	1.079584		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00047	.000	.000	.00000	.000	1
CalStd7=50	50.000	52.014	2.01	4.03	.00013	.000	1
CalStd5=10	10.000	10.525	.525	5.25	.00002	.000	1
CalStd8=100	100.00	105.60	5.60	5.60	.00027	.000	1
CalStd4=5	5.0000	5.4126	.413	8.25	.00001	.000	1
CalStd9=100	1000.0	1021.5	21.5	2.15	.00263	.000	1
CalStd3=1	1.0000	1.2229	.223	22.3	.00000	.000	1
CalStd10=10	10000.	9969.7	-30.3	-.303	.02572	.000	1

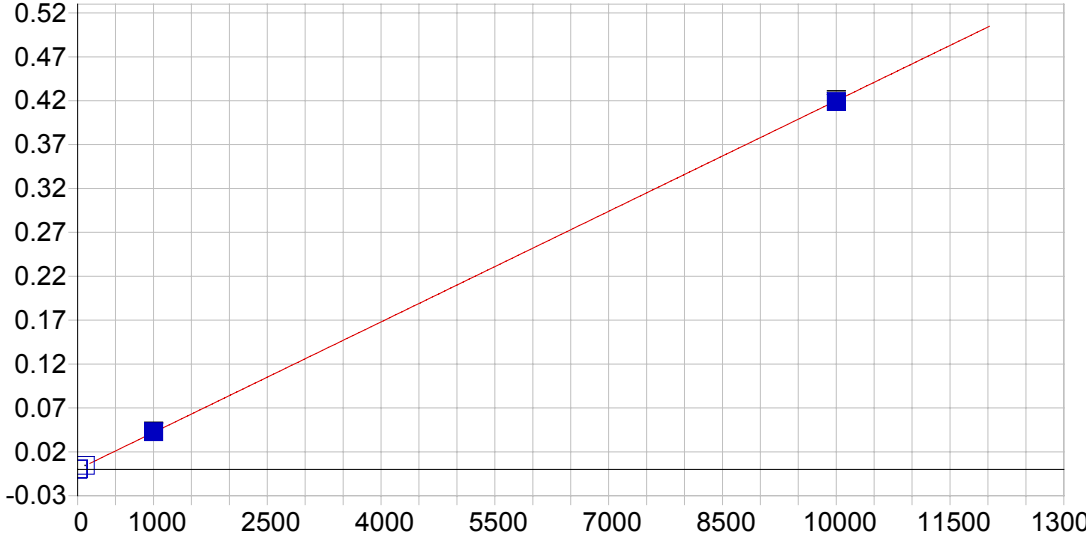


Pb 216.999 {455}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000022	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999805	Status:	OK.
Std Error of Est:	0.000173		
Predicted MDL:	2.876206		
Predicted MQL:	9.587353		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.6025	-1.60	.000	-.00001	.000	1
CalStd9=100	1000.0	1078.4	78.4	7.84	.02145	.000	1
CalStd10=10	10000.	9852.8	-147.	-1.47	.19594	.001	1
CalStd11-100	100000.	101190.	1190.	1.19	2.0018	.009	1
CalStd8=100	100.00	101.46	1.46	1.46	.00203	.000	1
CalStd5=10	10.000	8.5936	-1.41	-14.1	.00019	.000	1

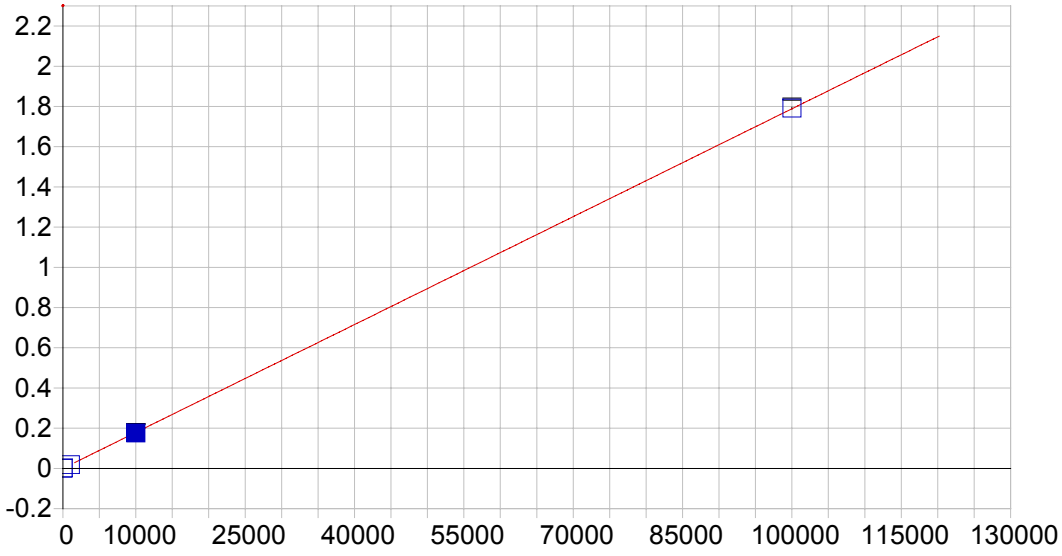


Pb 220.353 {453}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset):	0.000025	Re-Slope:	1.000000
A1 (Gain):	0.000042	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999887	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	1.719155		
Predicted MQL:	5.730517		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00336	-.003	.000	.00003	.000	1
CalStd5=10	10.000	9.9682	-.032	-.318	.00044	.000	1
CalStd8=100	100.00	105.72	5.72	5.72	.00446	.000	1
CalStd4=5	5.0000	8.0146	3.01	60.3	.00036	.000	1
CalStd9=100	1000.0	1017.2	17.2	1.72	.04274	.001	1
CalStd10=10	10000.	9974.1	-25.9	-.259	.41886	.002	1

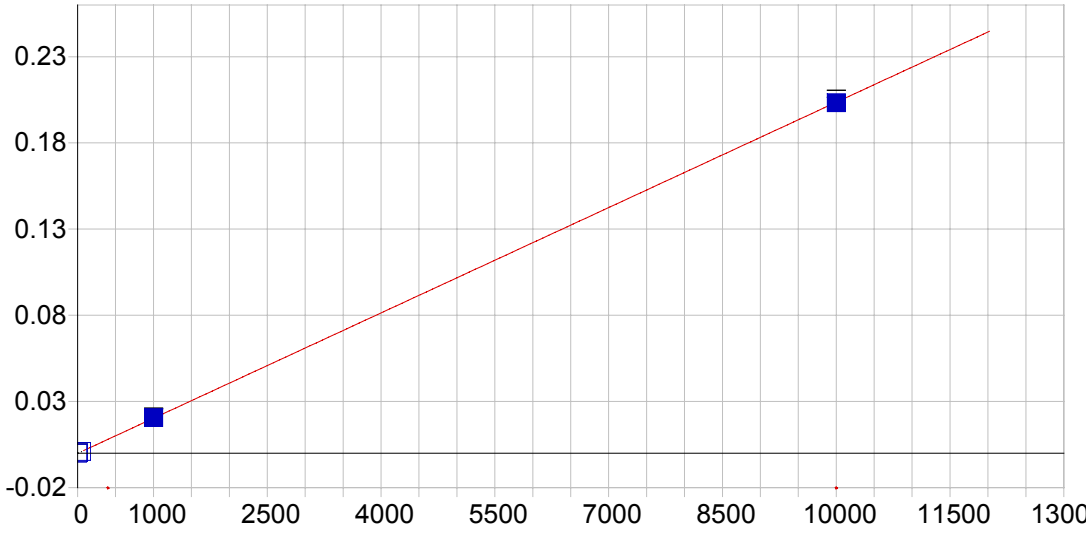


Pb 220.353 {153}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000055	Re-Slope:	1.000000
A1 (Gain):	0.000018	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	5.232753		
Predicted MQL:	17.442510		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00652	-.007	.000	.00006	.000	1
CalStd9=100	1000.0	1011.0	11.0	1.10	.01813	.000	1
CalStd10=10	10000.	9829.4	-171.	-1.71	.17582	.001	1
CalStd8=100	100.00	106.97	6.97	6.97	.00197	.000	1
CalStd11-100	100000.	100150.	153.	.153	1.7913	.005	1

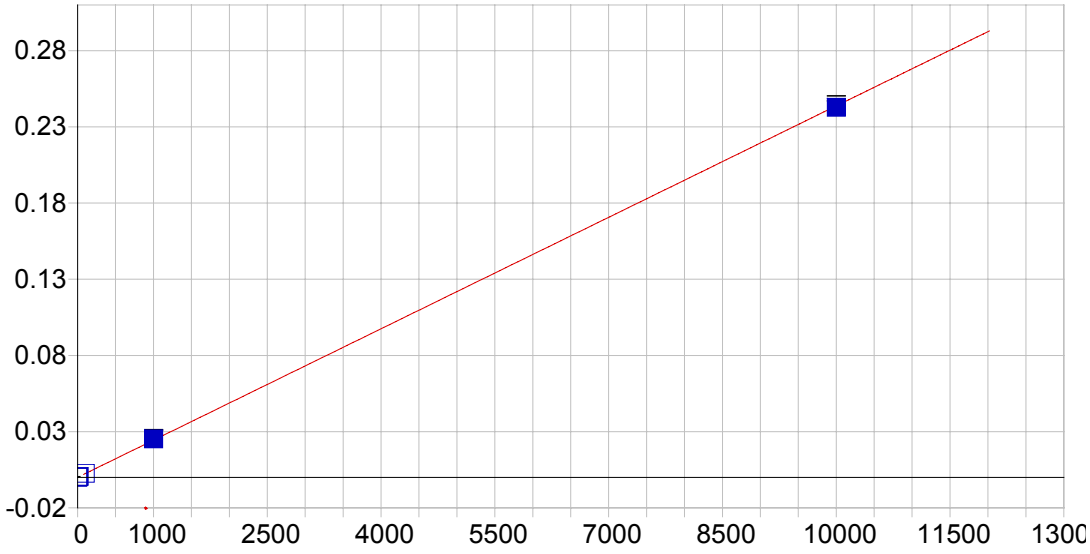


Sb 206.833 {463}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000121	Re-Slope:	1.000000
A1 (Gain):	0.000020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999975	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	2.198050		
Predicted MQL:	7.326832		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00130	-.001	.000	-.00012	.000	1
CalStd9=100	1000.0	1017.2	17.2	1.72	.02060	.000	1
CalStd5=10	10.000	11.412	1.41	14.1	.00011	.000	1
CalStd7=50	50.000	48.681	-1.32	-2.64	.00087	.000	1
CalStd10=10	10000.	9982.7	-17.3	-.173	.20324	.002	1

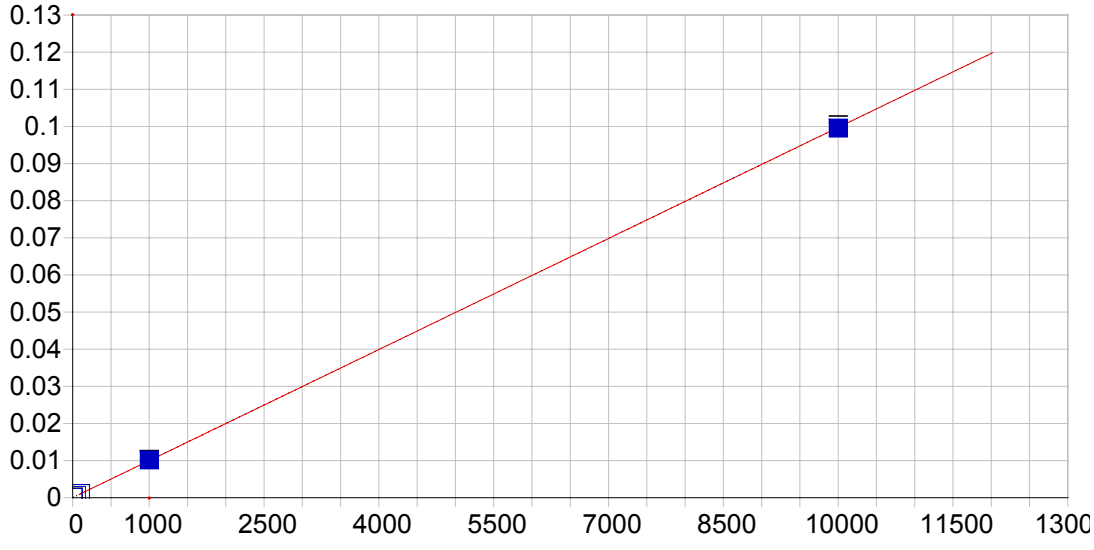


Sb 217.581 {455}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000018	Re-Slope:	1.000000
A1 (Gain):	0.000024	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999902	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	2.066060		
Predicted MQL:	6.886867		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00104	-.001	.000	.00002	.000	1
CalStd9=100	1000.0	1031.7	31.7	3.17	.02516	.000	1
CalStd6=20	20.000	23.560	3.56	17.8	.00059	.000	1
CalStd5=10	10.000	9.9869	-.013	-.131	.00026	.000	1
CalStd8=100	100.00	105.97	5.97	5.97	.00260	.000	1
CalStd4=5	5.0000	4.7154	-.285	-5.69	.00013	.000	1
CalStd10=10	10000.	9959.0	-41.0	-.410	.24272	.002	1

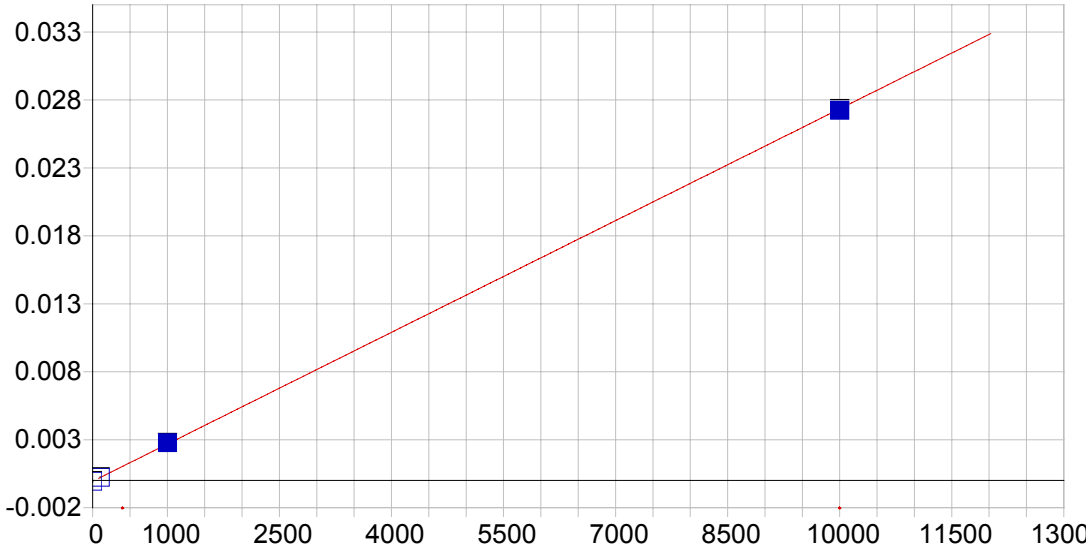


Se 196.090 {472}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000023	Re-Slope:	1.000000
A1 (Gain):	0.000010	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	3.605151		
Predicted MQL:	12.017170		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00296	-.003	.000	.00002	.000	1
CalStd7=50	50.000	52.037	2.04	4.07	.00054	.000	1
CalStd9=100	1000.0	1014.9	14.9	1.49	.01014	.000	1
CalStd5=10	10.000	11.957	1.96	19.6	.00014	.000	1
CalStd8=100	100.00	104.74	4.74	4.74	.00107	.000	1
CalStd10=10	10000.	9976.3	-23.7	-.237	.09948	.001	1

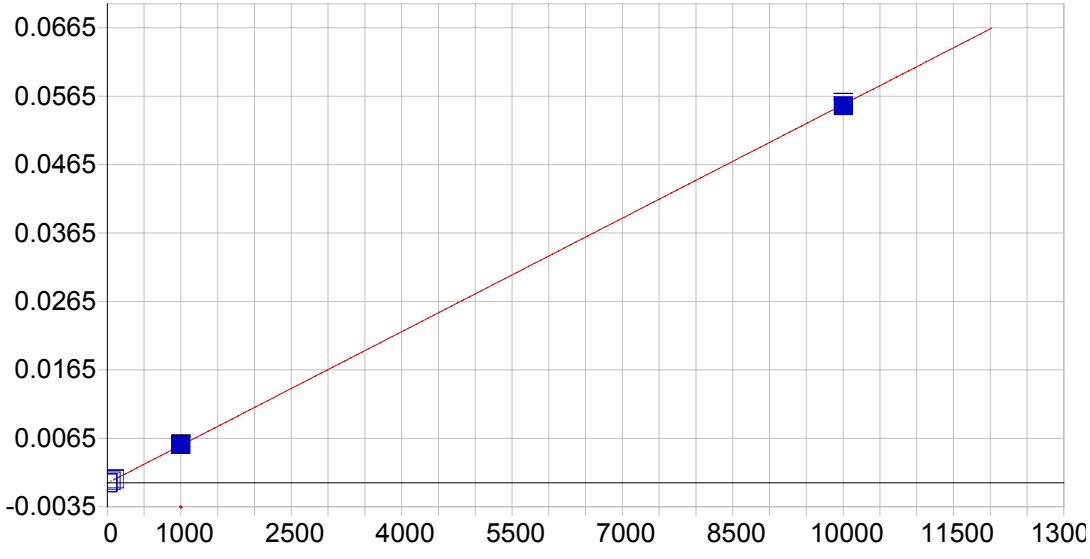


Se 206.279 {463}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000060	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999918	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	17.789619		
Predicted MQL:	59.298731		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01004	-.010	.000	-.00006	.000	1
CalStd9=100	1000.0	1034.2	34.2	3.42	.00278	.000	1
CalStd10=10	10000.	9958.8	-41.2	-.412	.02727	.000	1
CalStd8=100	100.00	107.04	7.04	7.04	.00023	.000	1

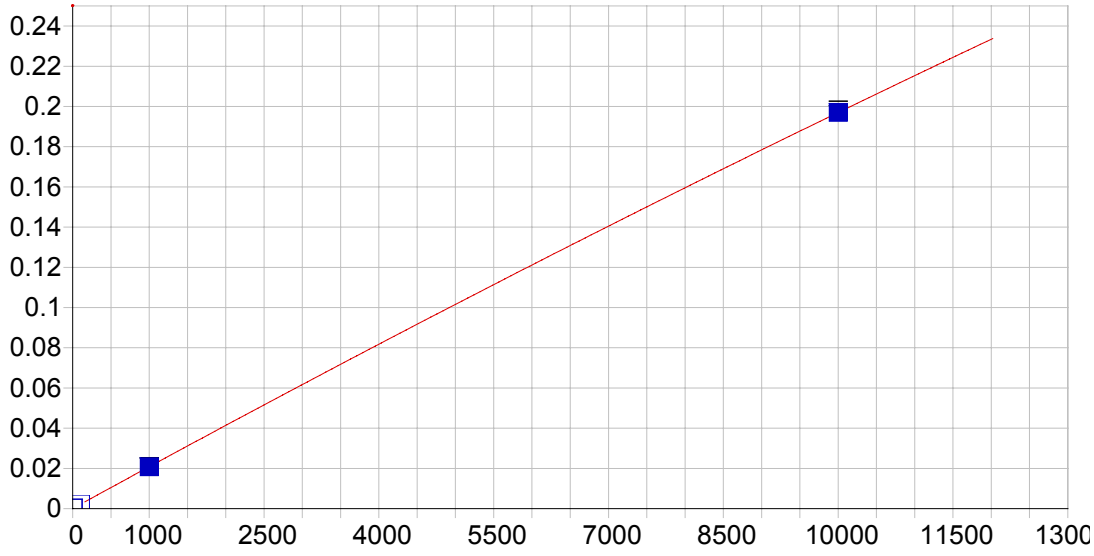


Se 196.090 {471}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000057	Re-Slope:	1.000000
A1 (Gain):	0.000006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999879	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	6.378297		
Predicted MQL:	21.260989		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00529	-.005	.000	-.00006	.000	1
CalStd7=50	50.000	56.457	6.46	12.9	.00026	.000	1
CalStd9=100	1000.0	1014.5	14.5	1.45	.00556	.000	1
CalStd5=10	10.000	13.129	3.13	31.3	.00002	.000	1
CalStd8=100	100.00	107.60	7.60	7.60	.00054	.000	1
CalStd10=10	10000.	9968.3	-31.7	-.317	.05509	.000	1

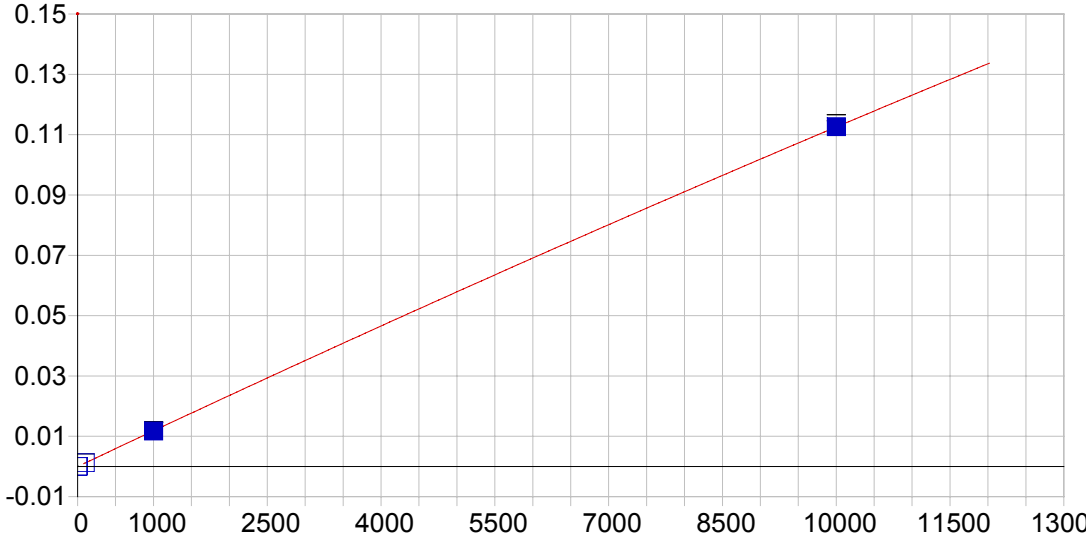


Tl 190.856 {476}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Curvilinear	Weighting:	1/Conc

A0 (Offset):	0.000050	Re-Slope:	1.000000
A1 (Gain):	0.000021	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	2.038796		
Predicted MQL:	6.795986		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00163	-.002	.000	.00005	.000	1
CalStd9=100	1000.0	995.24	-4.76	-.476	.02076	.000	1
CalStd8=100	100.00	102.87	2.87	2.87	.00220	.000	1
CalStd5=10	10.000	11.391	1.39	13.9	.00029	.000	1
CalStd10=10	10000.	10000.	.498	.005	.19708	.001	1

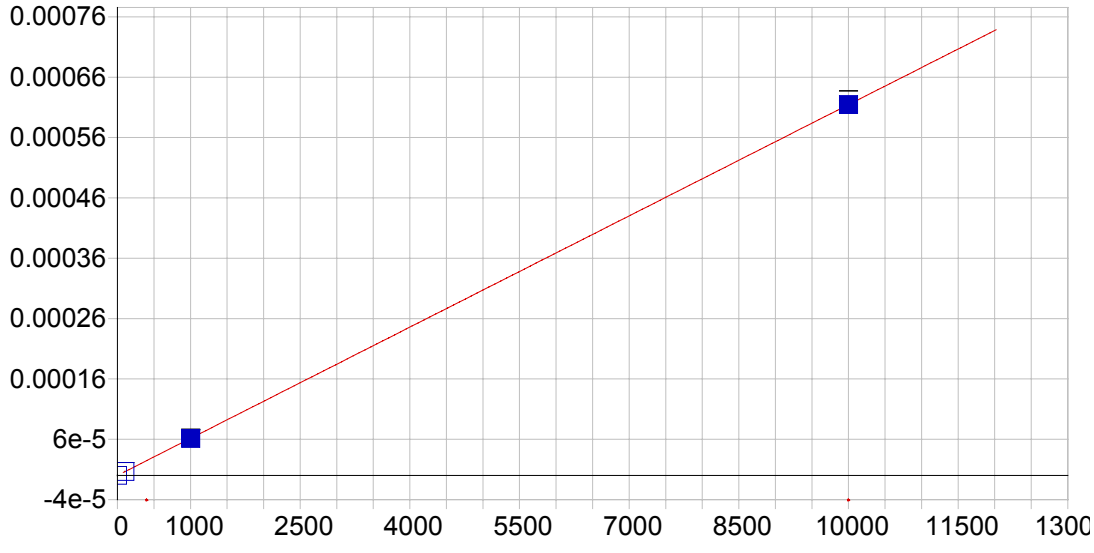


Tl 190.856 {477}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Curvilinear Weighting: 1/Var

A0 (Offset):	-0.000033	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	-0.000000		
n (Exponent):	1.000000		
Correlation:	0.999921	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	3.043191		
Predicted MQL:	10.143969		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-1.7053	-1.71	.000	-.00005	.000	1
CalStd9=100	1000.0	989.55	-10.4	-1.04	.01169	.000	1
CalStd8=100	100.00	102.47	2.47	2.47	.00119	.000	1
CalStd5=10	10.000	9.2682	-.732	-7.32	.00008	.000	1
CalStd10=10	10000.	10005.	5.44	.054	.11261	.001	1

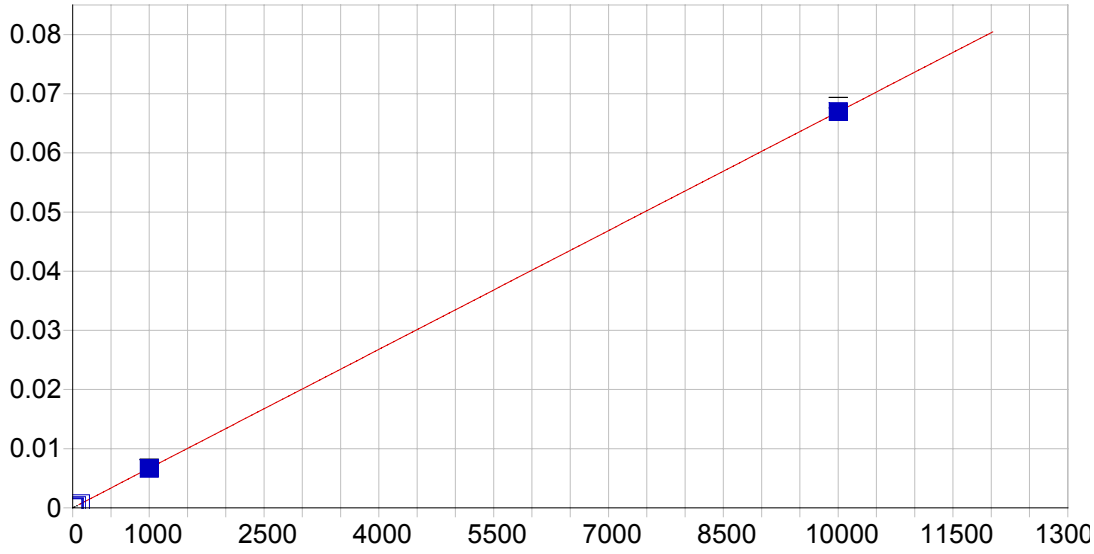


V 290.882 {116}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	9.950332		
Predicted MQL:	33.167774		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00427	-.004	.000	.00000	.000	1
CalStd9=100	1000.0	993.64	-6.36	-.636	.00006	.000	1
CalStd10=10	10000.	10001.	1.48	.015	.00061	.000	1
CalStd8=100	100.00	104.89	4.89	4.89	.00001	.000	1

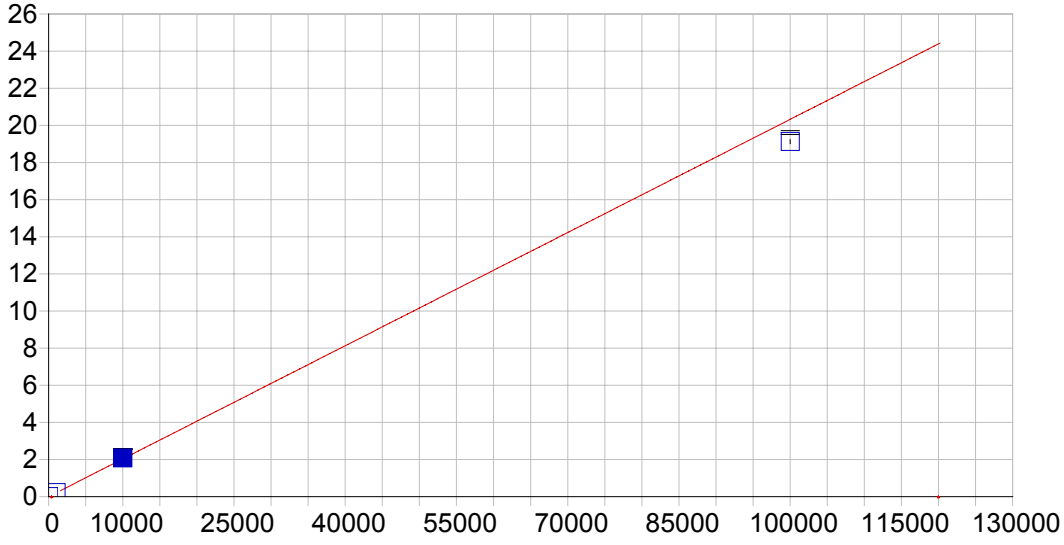


V 292.402 {115}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999952	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.439129		
Predicted MQL:	1.463765		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00268	-.003	.000	.00001	.000	1
CalStd7=50	50.000	49.998	-.002	-.005	.00034	.000	1
CalStd9=100	1000.0	991.03	-8.97	-.897	.00664	.000	1
CalStd6=20	20.000	24.334	4.33	21.7	.00017	.000	1
CalStd5=10	10.000	10.425	.425	4.25	.00008	.000	1
CalStd8=100	100.00	101.73	1.73	1.73	.00069	.000	1
CalStd10=10	10000.	10002.	2.47	.025	.06695	.001	1

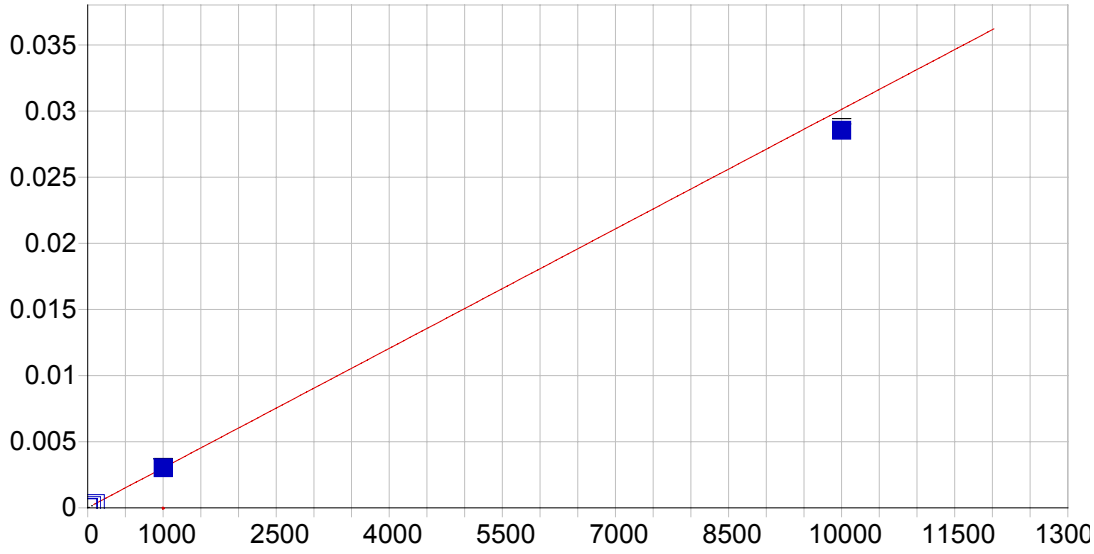


Zn 206.200 {463}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000085	Re-Slope:	1.000000
A1 (Gain):	0.000203	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999187	Status:	OK.
Std Error of Est:	0.000721		
Predicted MDL:	0.239235		
Predicted MQL:	0.797451		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CalStd10=10	10000.	10232.	232.	2.32	2.0799	.007	1
Blank	.00000	-.01797	-.018	.000	.00008	.000	1
CalStd9=100	1000.0	1061.8	61.8	6.18	.21590	.002	1
CalStd11-100	100000.	94079.	-5920.	-5.92	19.122	.104	1

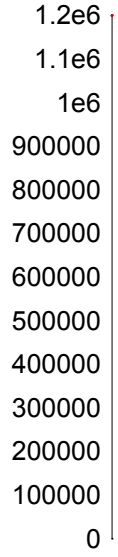


Zn 213.856 {458}

Date of Fit: 11/30/2016 12:03:54 Type of Fit: Linear Weighting: 1/Var

A0 (Offset):	0.000008	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996678	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.151765		
Predicted MQL:	0.505882		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-2.0156	-2.02	.000	.00000	.000	1
CalStd8=100	100.00	101.40	1.40	1.40	.00031	.000	1
CalStd7=50	50.000	49.897	-.103	-.206	.00016	.000	1
CalStd5=10	10.000	8.8179	-1.18	-11.8	.00003	.000	1
CalStd9=100	1000.0	1002.4	2.44	.244	.00303	.000	1
CalStd4=5	5.0000	5.7234	.723	14.5	.00003	.000	1
CalStd10=10	10000.	9473.0	-527.	-5.27	.02855	.000	1

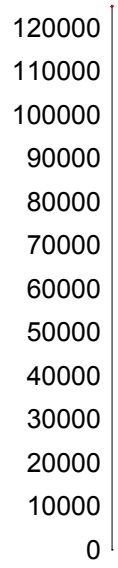


Y 324.228 {104}*

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	1064500.	1820.	1

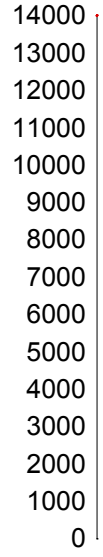


Y 371.030 { 91}*

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	80687.	36800.	1

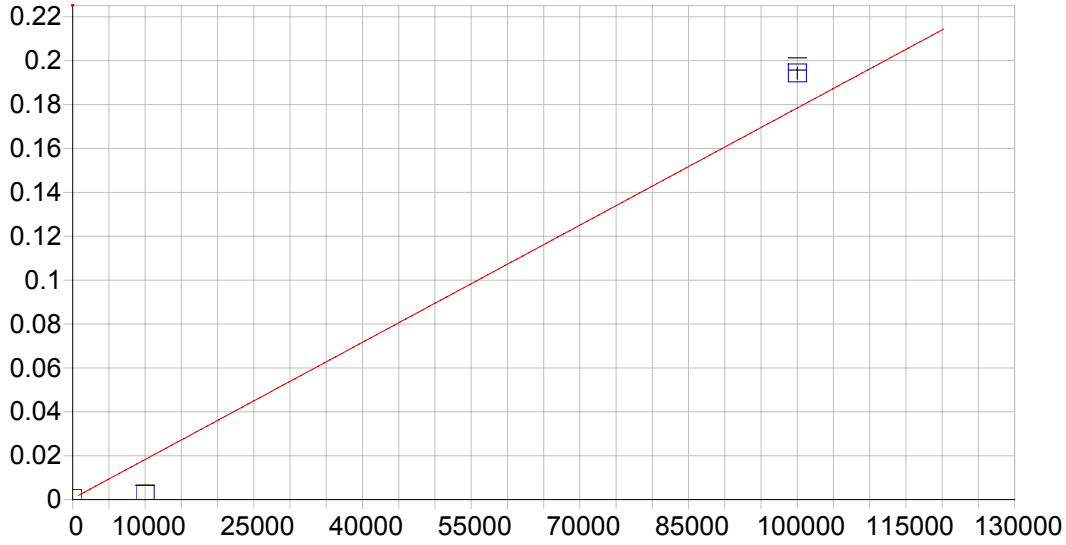


Y 224.306 {451}*

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.000000	Status:	Warning Zero Gain
Std Error of Est:	0.000000		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	12634.	42.4	1

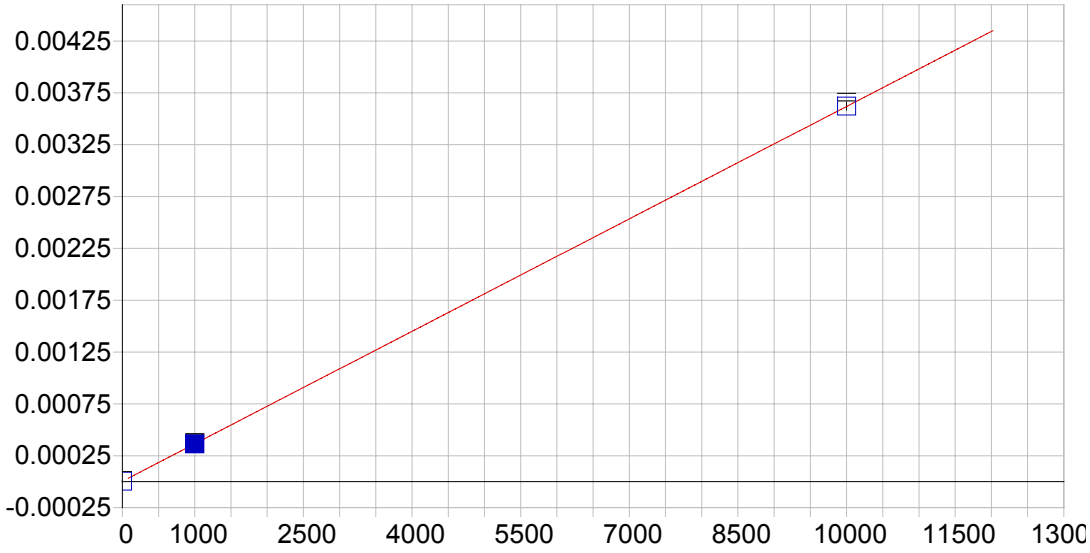


Na 588.995 { 57}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000489	Re-Slope:	1.000000
A1 (Gain):	0.000002	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.962136	Status:	OK.
Std Error of Est:	0.000915		
Predicted MDL:	3.002710		
Predicted MQL:	10.009035		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	8.0583	8.06	.000	.00050	.000	1
CalStd9=100	10000.	1046.4	-8950.	-89.5	.00235	.000	1
CalStd12-100	100000.	108950.	8950.	8.95	.19436	.003	1

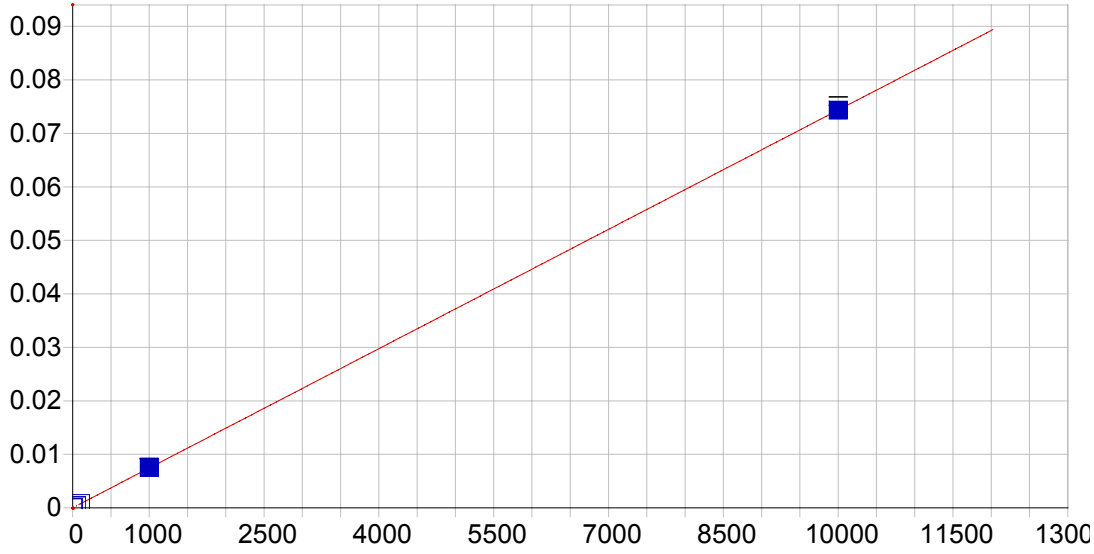


Si 251.611 {134}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000004	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	17.559718		
Predicted MQL:	58.532393		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00660	.007	.000	.00000	.000	1
CalStd9=100	1000.0	992.67	-7.33	-.733	.00036	.000	1
CalStd12-100	10000.	10007.	7.33	.073	.00362	.000	1

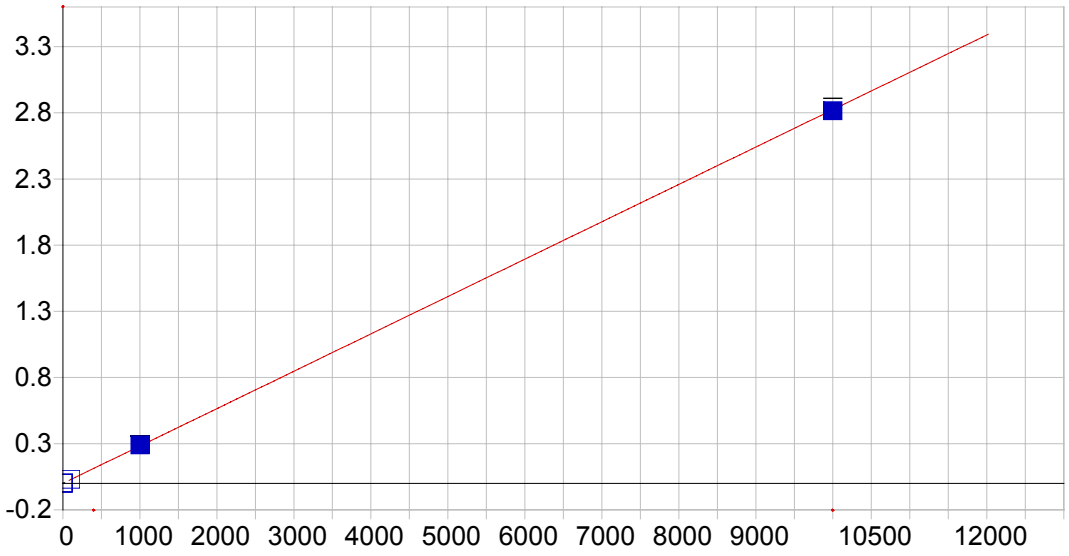


Ti 334.941 {101}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000007	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999945	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	1.284753		
Predicted MQL:	4.282510		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00257	.003	.000	.00001	.000	1
CalStd5=10	10.000	9.5727	-.427	-4.27	.00009	.000	1
CalStd8=100	100.00	101.36	1.36	1.36	.00077	.000	1
CalStd9=100	1000.0	1007.8	7.75	.775	.00751	.000	1
CalStd10=10	10000.	9994.6	-5.36	-.054	.07433	.001	1
CalStd7=50	50.000	49.041	-.959	-1.92	.00038	.000	1
CalStd4=5	5.0000	2.6338	-2.37	-47.3	.00003	.000	1

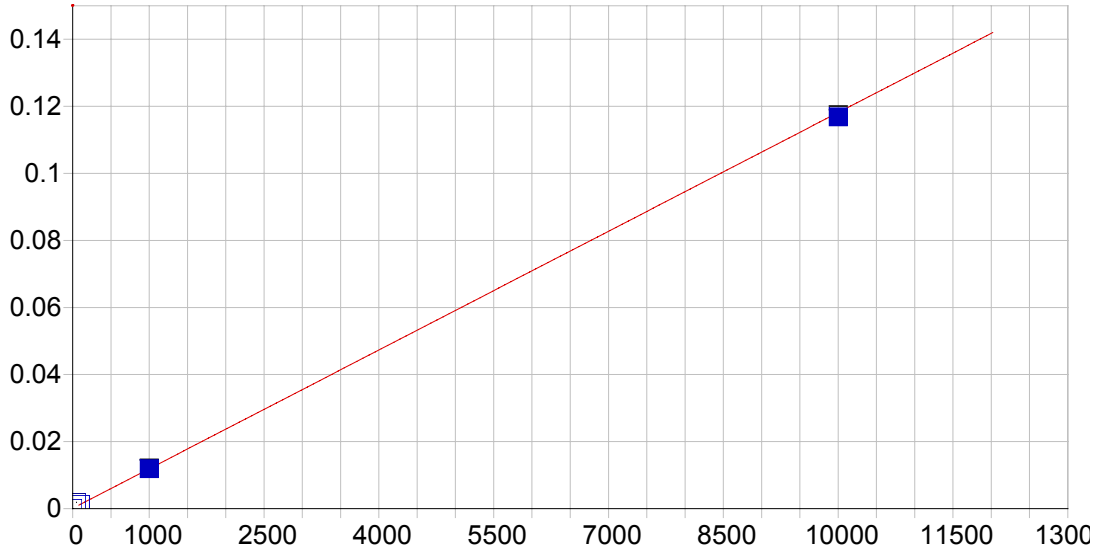


Sr 407.771 { 83}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000009	Re-Slope:	1.000000
A1 (Gain):	0.000282	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.062152		
Predicted MQL:	0.207173		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00022	.000	.000	-.00001	.000	1
CalStd3=1	1.0000	1.0613	.061	6.13	.00029	.000	1
CalStd4=5	5.0000	5.1490	.149	2.98	.00145	.000	1
CalStd5=10	10.000	10.417	.417	4.17	.00293	.000	1
CalStd8=100	100.00	106.15	6.15	6.15	.02997	.000	1
CalStd9=100	1000.0	1025.4	25.4	2.54	.28957	.002	1
CalStd10=10	10000.	9967.8	-32.2	-.322	2.8150	.027	1

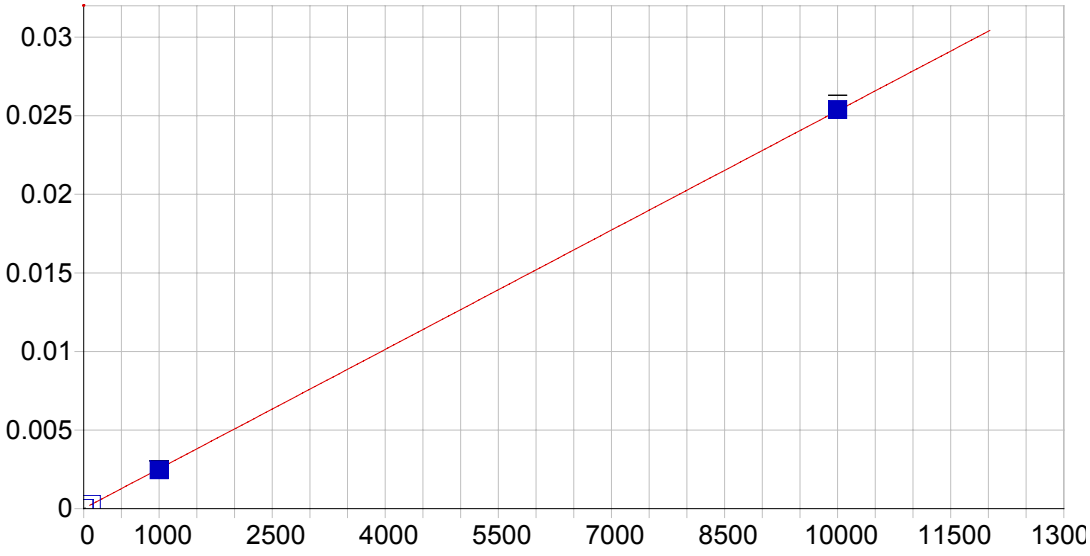


Sn 189.989 {478}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000087	Re-Slope:	1.000000
A1 (Gain):	0.000012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.986847	Status:	OK.
Std Error of Est:	0.000290		
Predicted MDL:	2.183641		
Predicted MQL:	7.278803		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-4.7471	-4.75	.000	.00003	.000	1
CalStd10=10	10000.	9887.8	-112.	-1.12	.11683	.001	1
CalStd9=100	1000.0	998.72	-1.28	-.128	.01188	.000	1
CalStd8=100	100.00	98.532	-1.47	-1.47	.00125	.000	1
CalStd7=50	50.000	152.62	103.	205.	.00189	.000	1

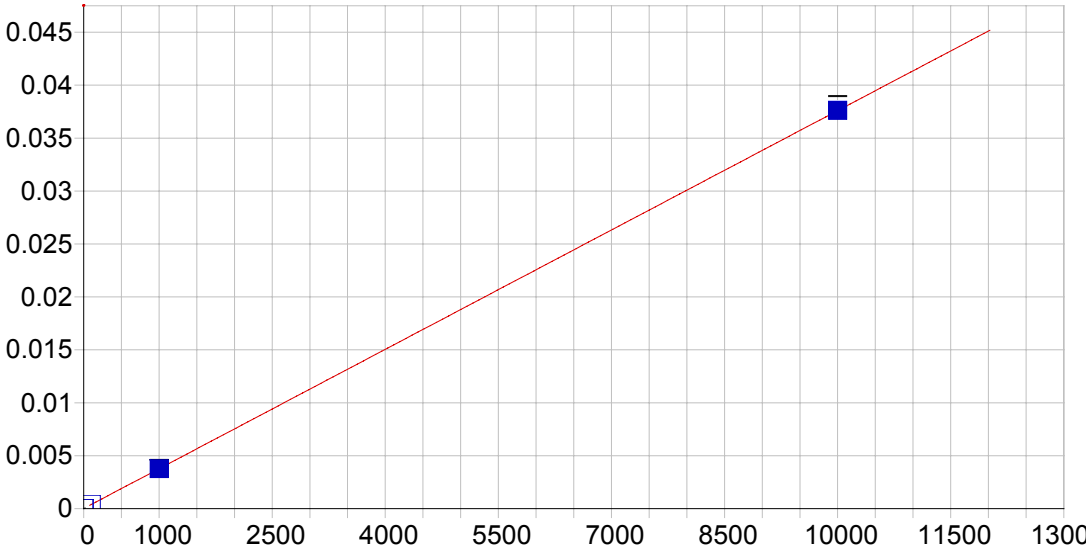


B 249.678 {135}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000006	Re-Slope:	1.000000
A1 (Gain):	0.000003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999952	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.895772		
Predicted MQL:	2.985907		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00091	.001	.000	.00001	.000	1
CalStd8=100	100.00	101.98	1.98	1.98	.00026	.000	1
CalStd5=10	10.000	9.1646	-.835	-8.35	.00003	.000	1
CalStd9=100	1000.0	970.28	-29.7	-2.97	.00246	.000	1
CalStd10=10	10000.	10029.	28.6	.286	.02539	.000	1

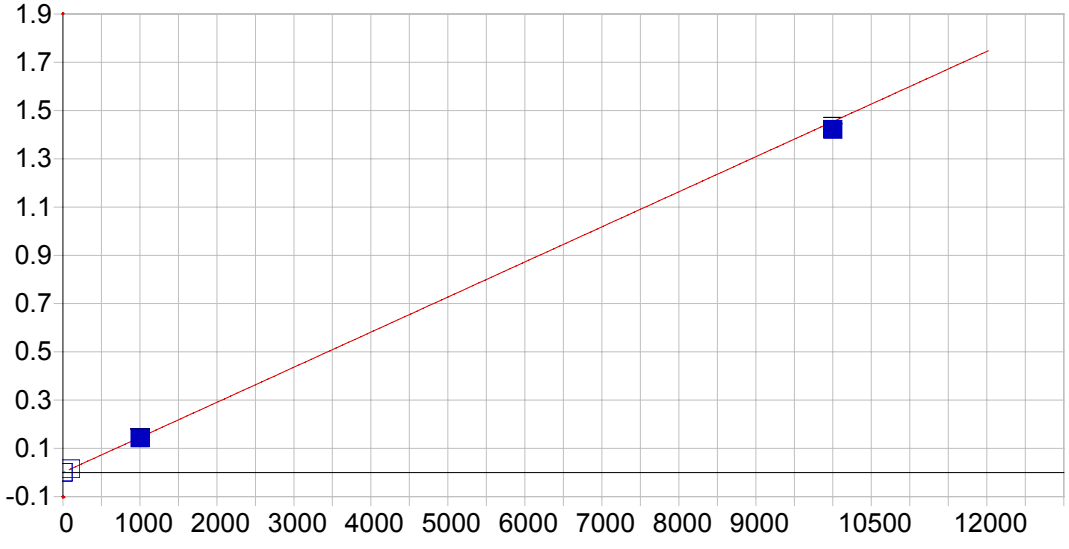


B 249.773 {135}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	0.577073		
Predicted MQL:	1.923576		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00128	.001	.000	.00001	.000	1
CalStd8=100	100.00	102.81	2.81	2.81	.00040	.000	1
CalStd5=10	10.000	8.4729	-1.53	-15.3	.00005	.000	1
CalStd9=100	1000.0	996.69	-3.31	-.331	.00377	.000	1
CalStd10=10	10000.	10002.	2.03	.020	.03769	.000	1

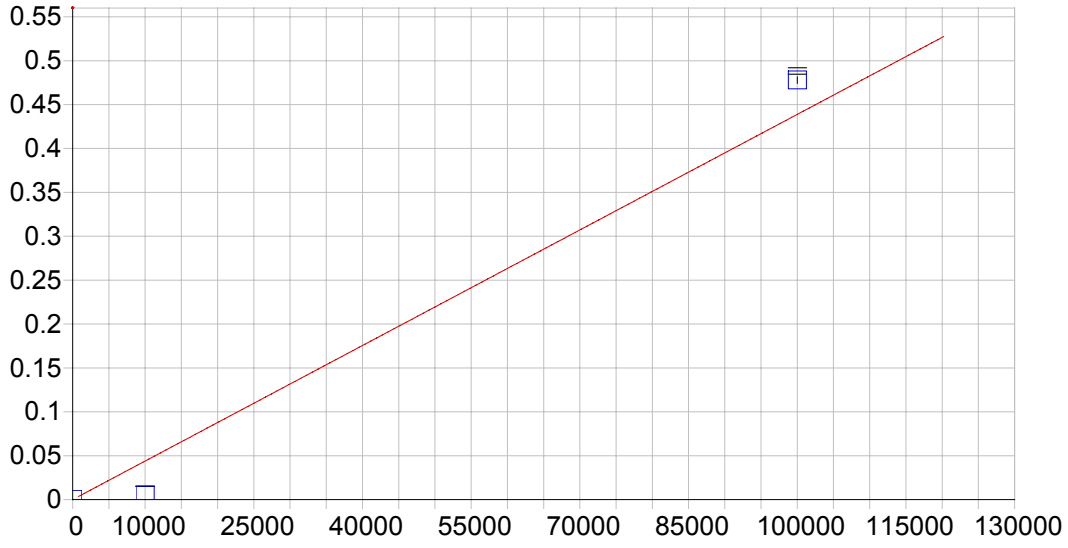


Li 670.784 { 50}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000045	Re-Slope:	1.000000
A1 (Gain):	0.000145	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999707	Status:	OK.
Std Error of Est:	0.000201		
Predicted MDL:	0.438744		
Predicted MQL:	1.462480		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.41701	-.417	.000	-.00002	.000	1
CalStd5=10	10.000	10.942	.942	9.42	.00164	.000	1
CalStd8=100	100.00	102.28	2.28	2.28	.01492	.000	1
CalStd9=100	1000.0	983.57	-16.4	-1.64	.14306	.001	1
CalStd10=10	10000.	9773.7	-226.	-2.26	1.4212	.013	1

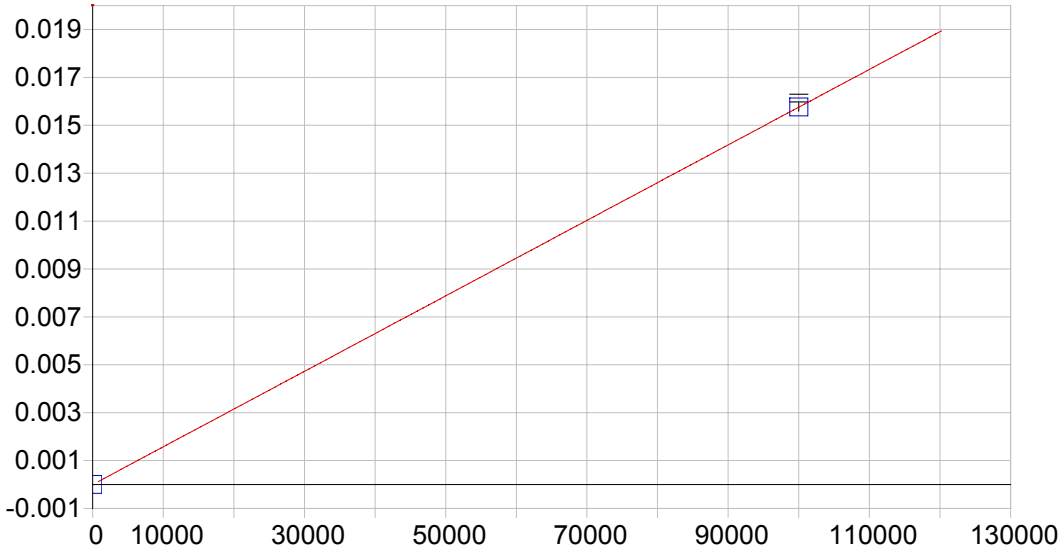


K 766.490 { 44}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000066	Re-Slope:	1.000000
A1 (Gain):	0.000004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.962452	Status:	OK.
Std Error of Est:	0.002246		
Predicted MDL:	15.370400		
Predicted MQL:	51.234666		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	8.0227	8.02	.000	.00010	.000	1
CalStd9=100	10000.	1086.0	-8910.	-89.1	.00483	.000	1
CalStd12-100	100000.	108910.	8910.	8.91	.47794	.004	1

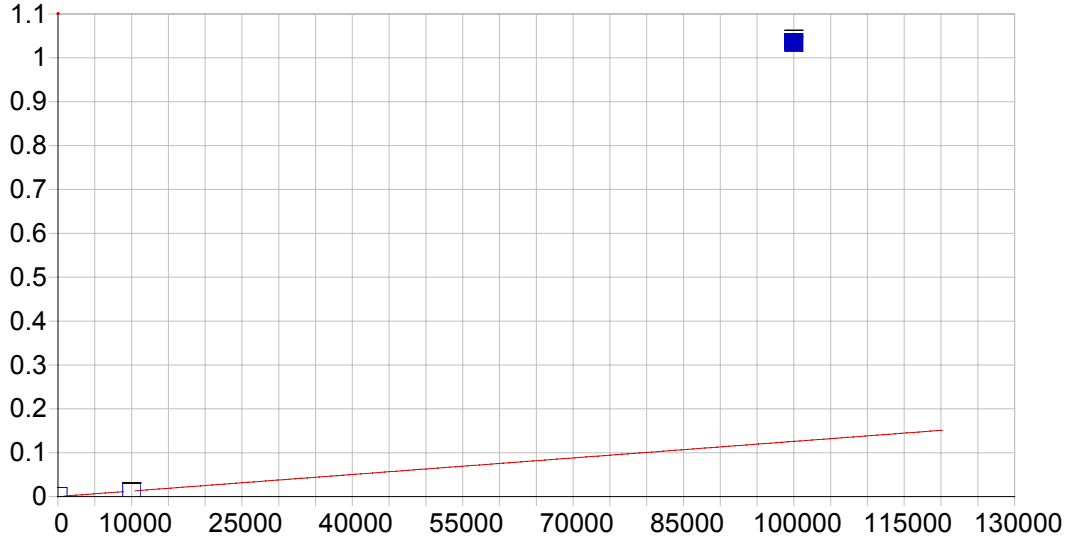


P 213.618 {457}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	3.788952		
Predicted MQL:	12.629841		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	.00000	.000	1
CalStd12-100	100000.	100000.	.000	.000	.01576	.000	1

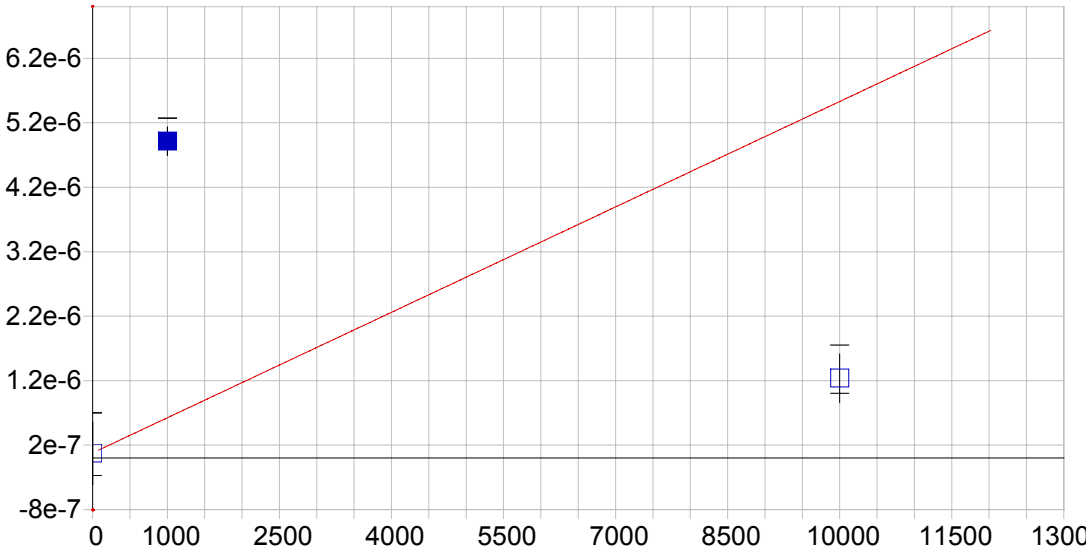


S 182.034 {485}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Var

A0 (Offset):	0.000068	Re-Slope:	1.000000
A1 (Gain):	0.000001	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.647193	Status:	OK.
Std Error of Est:	0.001726		
Predicted MDL:	26.760666		
Predicted MQL:	89.202220		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	7.6482	7.65	.000	.00008	.000	1
CalStd12-100	100000.	822780.	723000.	723.	1.0347	.008	1
CalStd9=100	10000.	8088.9	-1910.	-19.1	.01024	.000	1

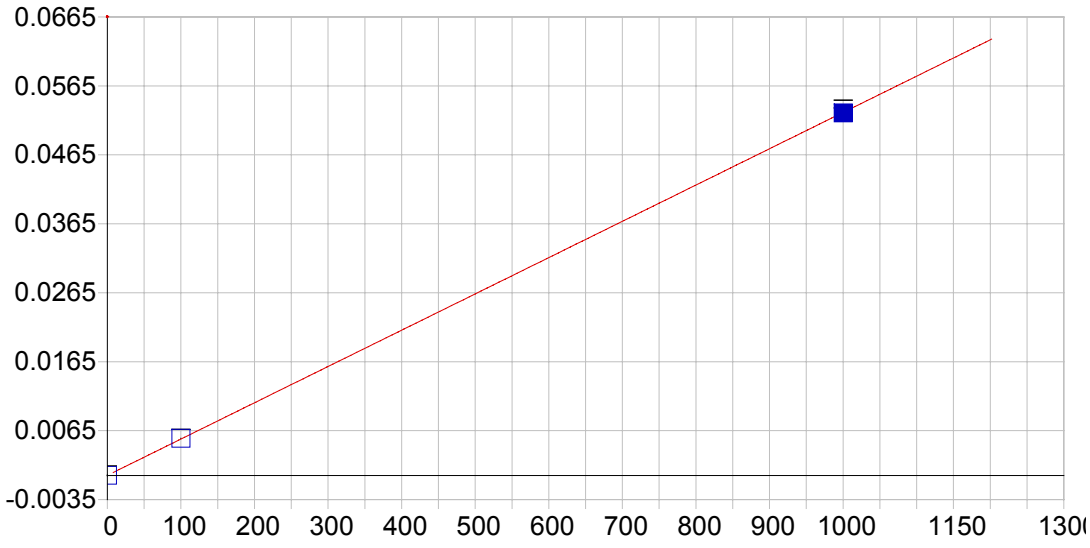


W 239.709 {140}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.372714	Status:	OK.
Std Error of Est:	0.000000		
Predicted MDL:	1002.756007		
Predicted MQL:	3342.520025		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-7.0814	-7.08	.000	.00000	.000	1
CalStd9=100	1000.0	8868.8	7870.	787.	.00000	.000	1
CalStd12-100	10000.	2126.0	-7870.	-78.7	.00000	.000	1

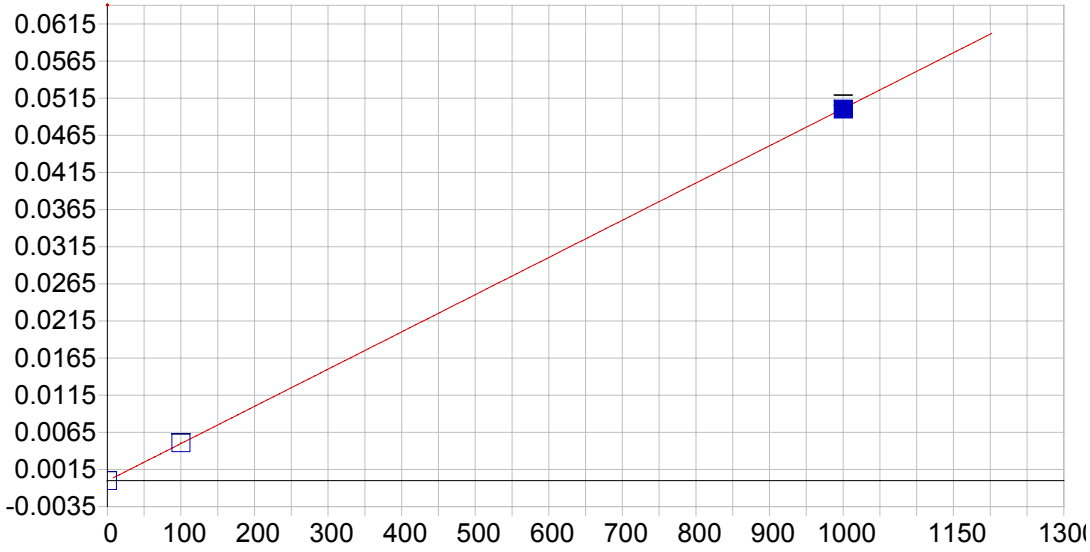


Hg 184.950 {482}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.000053	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.707918		
Predicted MQL:	2.359725		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00158	-.002	.000	.00001	.000	1
CalStd8=100	100.00	101.76	1.76	1.76	.00537	.000	1
CalStd9=100	1000.0	998.24	-1.76	-.176	.05256	.001	1



Hg 194.227 {473}

Date of Fit:	11/30/2016 12:03:54	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000031	Re-Slope:	1.000000
A1 (Gain):	0.000050	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.689827		
Predicted MQL:	2.299423		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00172	-.002	.000	-.00003	.000	1
CalStd8=100	100.00	101.92	1.92	1.92	.00508	.000	1
CalStd9=100	1000.0	998.08	-1.92	-.192	.05000	.001	1

Sample Name: Blank Acquired: 11/29/2016 11:52:19 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1890	Ba2335	Ba4934	Be3130	Ca3158	Ca3968	Cd2265	Co2286	Co2388
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000	.000	.000	.012	.000	.000	.002	.000	.000	.000
Stddev	.000	.00	.00	.000	.000	.005	.000	.000	.002	.00	.00	.000
%RSD	551.	42.3	7.54	83.9	36.8	36.4	3.31	26.8	81.1	175.	128.	106.

Elem	Cr2055	Cr2677	Cu2247	Fe2343	Fe2395	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Stddev	.00	.000	.00	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	14.9	87.1	60.1	3.44	32.4	41.5	189.	1.38	45.4	162.	39.8	39.9

Elem	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Stddev	.00	.00	.00	.000	.00	.000	.000	.00	.00	.000	.000	.000
%RSD	138.	42.1	422.	324.	20.9	178.	19.4	60.9	54.2	35.8	44.0	14.6

Elem	Sr4077	Sn1899	B_2497
Units	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000
Stddev	.00	.000	.000
%RSD	271.	23.5	12.7

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1064500.	80687.	12634.
Stddev	1823.	36787.	42.
%RSD	.17125	45.593	.33572

Sample Name: CalStd1=0.25 Acquired: 11/29/2016 11:59:22 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Be3130
Units	Cts/S
Avg	.000
Stddev	.000
%RSD	1.73

Int. Std.	Y_3242
Units	Cts/S
Avg	1041400.
Stddev	3031.
%RSD	.29109

Sample Name: CalStd2=0.5 Acquired: 11/29/2016 12:06:38 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Be3130	Cd2265
Units	Cts/S	Cts/S
Avg	.000	.000
Stddev	.000	.000
%RSD	2.42	9.04

Int. Std.	Y_3242	Y_2243
Units	Cts/S	Cts/S
Avg	1050300.	12489.
Stddev	2937.	61.
%RSD	.27960	.48756

Sample Name: CalStd3=1 Acquired: 11/29/2016 12:13:52 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Ba2335	Be3130	Cd2265	Co2286	Cr2055	Cu2247	Ni2316	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000	.000	.000	.000	.000	.000	.000
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	47.9	13.6	1.66	5.03	44.9	9.32	297.	65.5	6.54

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1053700.	51510.	12633.
Stddev	5784.	44.	25.
%RSD	.54895	.08446	.19461

Sample Name: CalStd4=5 Acquired: 11/29/2016 12:21:20 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	As1890	Ba2335	Be3130	Cd2265	Co2286	Cr2055	Cr2677	Cu2247	Mn2576	Mo2020	Mo2045	Ni2316
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.001	.000	.002	.001	.002	.000	.001	.011	.001	.000	.000
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	26.9	1.85	1.07	1.63	3.05	2.04	5.14	1.25	1.80	1.66	5.22	2.29

Elem	Pb2203	Sb2175	Zn2138	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000	.001
Stddev	.000	.000	.000	.000
%RSD	19.5	26.9	.547	.595

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1051600.	51283.	12534.
Stddev	4192.	122.	103.
%RSD	.39862	.23827	.82159

Sample Name: CalStd5=10 Acquired: 11/29/2016 12:28:35 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	As1937	Ba2335	Be3130	Cd2265	Co2286	Cr2055	Cr2677	Cu2247	Mn2576	Mo2020	Mo2045
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.002	.001	.003	.003	.002	.000	.001	.015	.001	.000
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.39	120.	2.38	.619	.553	1.11	.373	3.06	2.24	.526	.954	1.00

Elem	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	B_2497
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003	.000
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	3.38	20.6	12.4	61.2	7.47	27.3	21.7	3.69	1.30	1.70	3.32

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1058500.	51246.	12647.
Stddev	1096.	138.	89.
%RSD	.10352	.26907	.69996

Sample Name: CalStd6=20 Acquired: 11/29/2016 12:35:47 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ba2335	Cu2247	Mn2576	Mo2020	Mo2045	Sb2175	V_2924
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.004	.002	.035	.003	.000	.001	.000
Stddev	.000	.000	.000	.000	.000	.000	.000
%RSD	1.01	1.70	.606	1.85	1.52	6.29	2.74

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1053200.	51070.	12517.
Stddev	1620.	179.	67.
%RSD	.15379	.35053	.53401

Sample Name: CalStd7=50 Acquired: 11/29/2016 12:42:55 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	As1937	Ba2335	Cd2265	Co2286	Cr2055	Cr2677	Cu2247	Mn2576	Mo2020	Mo2045	Ni2316	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.001	.008	.015	.014	.011	.000	.005	.070	.006	.000	.000	.001
Stddev	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000
%RSD	1.83	.743	.830	.899	1.09	1.34	1.20	.998	1.16	.785	.948	5.46

Elem	Se1960	V_2924	Zn2138	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.001	.000	.000	.002
Stddev	.000	.000	.000	.000
%RSD	5.12	.281	.286	1.63

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1045400.	51613.	12526.
Stddev	2989.	73.	58.
%RSD	.28589	.14227	.45985

Sample Name: CalStd8=100 Acquired: 11/29/2016 12:50:01 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	As1937	As1890	Ba2335	Ba4934	Be3130	Ca3968	Cd2265	Co2286	Co2388	Cr2055	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.001	.000	.016	.034	.007	.023	.030	.028	.000	.023	.000
Stddev	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.756	1.95	3.23	.635	.222	.769	.508	.847	1.05	1.10	.635	.921

Elem	Cu2247	Mg2802	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2175	Se1960	Se2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.010	.005	.142	.013	.000	.000	.000	.002	.004	.003	.001	.000
Stddev	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
%RSD	.139	.826	.666	.644	.666	.981	.829	1.66	3.25	1.20	3.68	16.6

Elem	Tl1908	V_2924	Zn2138	Sr4077	Sn1899	B_2497
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.001	.001	.000	.030	.001	.000
Stddev	.000	.000	.000	.000	.000	.000
%RSD	1.84	1.43	1.01	.581	.737	1.54

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1049200.	51705.	12439.
Stddev	8160.	89.	39.
%RSD	.77778	.17292	.31754

Sample Name: CalStd9=1000 Acquired: 11/29/2016 12:57:03 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1937	As1890	Ba2335	Ba4934	Be3130	Ca3158	Ca3968	Cd2265	Co2286	Co2388	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.004	.014	.003	.153	.184	.067	.000	.200	.294	.273	.003	.223
Stddev	.000	.000	.000	.002	.001	.000	.000	.001	.003	.003	.000	.002
%RSD	.948	.851	.653	1.20	.772	.457	1.53	.731	1.15	1.05	.543	1.11

Elem	Cr2677	Cu2247	Fe2343	Fe2395	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.004	.099	.001	.000	.001	.000	.049	1.33	.000	.126	.001	.002
Stddev	.000	.001	.000	.000	.000	.000	.000	.01	.000	.002	.000	.000
%RSD	.285	1.24	.814	2.26	1.29	1.37	.600	.800	1.27	1.21	.425	.462

Elem	Ni2316	Pb2169	Pb2203	Sb2068	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.003	.021	.043	.021	.025	.010	.003	.012	.007	.216	.003	.290
Stddev	.000	.000	.001	.000	.000	.000	.000	.000	.000	.002	.000	.002
%RSD	.582	1.57	1.19	1.15	1.20	1.66	.628	1.18	.684	1.14	.632	.644

Elem	Sn1899	B_2497
Units	Cts/S	Cts/S
Avg	.012	.004
Stddev	.000	.000
%RSD	1.30	.562

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1045500.	52103.	12407.
Stddev	2098.	163.	101.
%RSD	.20070	.31318	.81282

Sample Name: CalStd10=10000 Acquired: 11/29/2016 13:03:31 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Al3961	As1937	As1890	Ba4934	Ca3158	Ca3968	Co2286	Co2388	Cr2055	Cr2677	Cu2247	Fe2343
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.034	.136	.025	1.66	.003	1.95	2.66	.032	2.13	.040	.948	.007
Stddev	.000	.001	.000	.02	.000	.02	.02	.000	.01	.000	.005	.000
%RSD	1.10	.698	.918	.940	1.23	.906	.748	1.22	.634	1.11	.564	1.29

Elem	Fe2395	Fe2599	Mg2790	Mg2802	Mn2576	Mn2593	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.000	.012	.001	.439	12.3	.002	.007	.017	.026	.196	.419	.203
Stddev	.000	.000	.000	.004	.1	.000	.000	.000	.000	.001	.002	.002
%RSD	1.55	1.06	1.27	1.02	1.14	1.29	.748	.906	.776	.421	.489	.986

Elem	Sb2175	Se1960	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Sr4077	Sn1899	B_2497
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.243	.099	.027	.113	.067	2.08	.029	2.82	.117	.038
Stddev	.002	.001	.000	.001	.001	.01	.000	.03	.001	.000
%RSD	.682	.864	.367	.882	1.33	.346	.706	.955	.478	1.24

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1006700.	51649.	12102.
Stddev	6863.	48.	62.
%RSD	.68167	.09351	.51231

Sample Name: CalStd11-100k Acquired: 11/29/2016 13:10:03 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Cr2055	Mn2593	Pb2169	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	18.9	.020	2.00	19.1
Stddev	.1	.000	.01	.1
%RSD	.369	.539	.467	.543

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1030800.	52263.	12219.
Stddev	4912.	106.	40.
%RSD	.47650	.20214	.32744

Sample Name: CalStd12-100000 Acquired: 11/29/2016 13:17:14 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2395	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.345	.033	.002	.114	.007
Stddev	.002	.000	.000	.001	.000
%RSD	.649	1.17	1.59	.848	1.18

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	983620.	51001.	11699.
Stddev	11950.	378.	55.
%RSD	1.2149	.74078	.47271

Sample Name: CalStd13=500000 Acquired: 11/29/2016 13:24:35 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.75	.165	.232	.009	.509	.033
Stddev	.01	.001	.001	.000	.003	.000
%RSD	.693	.702	.413	.884	.606	.884

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	923700.	49335.	10842.
Stddev	3177.	98.	99.
%RSD	.34392	.19896	.91271

Sample Name: CalStd14-1000k Acquired: 11/29/2016 13:32:20 Type: Cal
Method: DOD Calibration Updated 060614(v1743) Mode: IR Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Al3961	Ca3158	Fe2343	Fe2395	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.50	.311	.358	.016	.930	.066
Stddev	.03	.004	.005	.000	.005	.001
%RSD	.868	1.14	1.48	.770	.579	.910

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	851950.	46685.	9920.6
Stddev	5299.	117.	39.0
%RSD	.62194	.25113	.39266

Sample Name: icv Acquired: 11/29/2016 13:53:21 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1890	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Co2388	Cr2677	Cu2247	Fe2343
Avg	**48.5**	**11900.**	**2070.**	**2020.**	**48.3**	**10300.**	**48.0**	**522.**	**508.**	**200.**	**250.**	**5410.**
Stddev	.3	243.	16.	43.	.4	218.	.2	3.	2.	1.	2.	23.
%RSD	.700	2.05	.781	2.15	.863	2.12	.387	.623	.457	.656	.618	.434
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Fe2395	Fe2599	Mg2790	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068
Avg	**5050.**	**4920.**	**9910.**	**494.**	**486.**	**530.**	**531.**	**504.**	**518.**	**528.**	**519.**	**506.**
Stddev	109.	132.	219.	3.	6.	4.	2.	2.	3.	2.	3.	1.
%RSD	2.15	2.69	2.21	.667	1.24	.797	.424	.483	.593	.373	.507	.234
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Sb2175	Se2062	Tl1908	V_2924	Zn2062	Zn2138	Sr4077	Sn1899	B_2497
Avg	**520.**	**2120.**	**2010.**	**507.**	**545.**	**517.**	**531.**	**527.**	**513.**
Stddev	2.	30.	12.	4.	4.	3.	11.	4.	4.
%RSD	.340	1.40	.610	.845	.716	.499	2.10	.779	.856
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Sample Name: icv Acquired: 11/29/2016 13:53:21 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	**1052600.**	**52726.**	**12550.**
Stddev	3757.	345.	43.
%RSD	.35696	.65438	.34336

Sample Name: ICVLL Acquired: 11/29/2016 14:00:05 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Avg	F **39.9**	**1280.**	**64.7**	**32.1**	**13.7**	**1630.**	**16.1**	**32.4**	**30.7**	**31.9**	**952.**	**928.**
Stddev	.5	18.	3.1	.3	.1	27.	.2	.2	.2	.6	19.	8.
%RSD	1.35	1.42	4.77	1.01	.546	1.66	1.43	.676	.527	1.80	2.00	.853
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	60.0											
Range	-30.0%											

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Avg	**1520.**	**31.4**	**31.7**	**33.2**	**32.0**	**65.3**	**64.8**	**57.0**	**32.8**	**31.4**	**33.2**	**150.**
Stddev	19.	.2	.3	.3	1.5	1.6	2.0	1.2	.3	.3	.4	1.
%RSD	1.26	.587	.923	.866	4.70	2.43	3.09	2.05	.808	.804	1.24	.389
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	B_2497
Avg	**64.2**
Stddev	.9
%RSD	1.44
Check ?	Chk Pass
Value	
Range	

Sample Name: ICVLL Acquired: 11/29/2016 14:00:05 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	1054200.□	52690.□	12678.□
Stddev	2156.	188.	73.
%RSD	.20450	.35636	.57308

Sample Name: icb Acquired: 11/29/2016 14:14:23 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Avg	**-.132**	**-.696**	**-1.67**	**-.005**	**.044**	**-7.96**	**-.100**	**-.080**	**-1.65**	**.064**	**-8.75**	**.147**
Stddev	.447	7.88	2.49	.080	.018	.30	.049	.281	.36	.352	19.7	5.65
%RSD	338.	1130.	150.	1560.	40.3	3.74	49.2	352.	21.7	546.	225.	3840.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Avg	**.512**	**-.083**	**-.153**	**-.082**	**.443**	**-1.50**	**2.52**	**.023**	**-.010**	**-2.33**	**-.011**	**-7.77**
Stddev	.058	.036	.146	.306	.788	2.51	2.15	1.74	.217	.11	.024	1.77
%RSD	11.3	43.4	95.8	373.	178.	167.	85.1	7490.	2250.	4.72	223.	22.7
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497
Avg	**-.830**
Stddev	.373
%RSD	45.0
Check ?	None
Value	
Range	

Sample Name: icb Acquired: 11/29/2016 14:14:23 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	1060500.[]	53623.[]	12568.[]
Stddev	7901.	163.	72.
%RSD	.74503	.30379	.56992

Sample Name: MRL Acquired: 11/29/2016 14:21:38 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Avg	**14.4**	**403.**	**21.5**	**10.8**	**4.39**	**523.**	**5.04**	**10.4**	**8.42**	**10.1**	**305.**	**272.**
Stddev	.3	6.	2.4	.2	.02	4.	.10	.1	.35	.2	29.	9.
%RSD	1.94	1.46	11.1	1.39	.424	.713	1.88	1.24	4.21	1.56	9.42	3.21
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Avg	**516.**	**10.2**	**9.88**	**10.4**	**10.0**	**19.5**	**17.8**	**16.9**	**10.4**	**8.33**	**10.3**	**43.9**
Stddev	2.	.1	.08	.2	1.3	.7	2.9	3.0	.0	.07	.3	1.3
%RSD	.408	.971	.798	2.24	13.0	3.40	16.1	18.0	.457	.855	2.52	2.91
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497
Avg	**18.9**
Stddev	.5
%RSD	2.65
Check ?	None
Value	
Range	

Sample Name: MRL Acquired: 11/29/2016 14:21:38 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	1045000.[]	54358.[]	12478.[]
Stddev	2589.	123.	47.
%RSD	.24778	.22567	.37758

Sample Name: icsa Acquired: 11/29/2016 14:28:46 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2247	Fe2395
Avg	-.092	549000.	.002	.203	-.023	518000.	.001	-.626	-.451	-.167	501000.
Stddev	1.20	4430.	13.2	.494	.026	2760.	1.56	.173	1.34	3.11	8720.
%RSD	1310.	.807	658000.	243.	113.	.531	139000.	27.6	298.	1860.	1.74
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit											
Low Limit											

Elem	Fe2599	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138
Avg	462000.	529000.	-.007	-.182	-.108	-.121	.001	.001	-.321	-1.01	.224
Stddev	3940.	4080.	.129	.338	1.13	1.07	5.48	6.71	8.14	.38	.973
%RSD	.853	.772	1800.	186.	1050.	889.	649000.	633000.	2540.	37.8	434.
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit											
Low Limit											

Elem	Sr4077	Sn1899	B_2497
Avg	.217	-.508	.033
Stddev	.130	3.32	8.30
%RSD	59.9	654.	25500.
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Sample Name: icsa Acquired: 11/29/2016 14:28:46 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	903440.	50966.	10551.
Stddev	8419.	99.	48.
%RSD	.93191	.19475	.45873

Sample Name: icsab Acquired: 11/29/2016 14:36:17 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1890	Ba2335	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Co2388
Avg	**542.**	**508000.**	**543.**	**528.**	**497.**	**441.**	**475.**	**484000.**	**451.**	**479.**	**452.**
Stddev	5.	6880.	13.	8.	7.	6.	2.	7220.	7.	5.	4.
%RSD	.943	1.36	2.46	1.51	1.42	1.31	.343	1.49	1.50	1.05	.811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Cr2055	Cr2677	Cu2247	Fe2395	Fe2599	Mg2790	Mn2576	Mo2020	Mo2045	Ni2216	Ni2316
Avg	**534.**	**465.**	**465.**	**461000.**	**426000.**	**487000.**	**469.**	**505.**	**502.**	**450.**	**460.**
Stddev	6.	1.	6.	2210.	4100.	6440.	4.	6.	4.	3.	3.
%RSD	1.09	.314	1.35	.480	.964	1.32	.809	1.12	.886	.567	.692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Elem	Pb2203	Sb2068	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Sr4077	Sn1899	B_2497
Avg	**455.**	**518.**	**544.**	**504.**	**413.**	**496.**	**455.**	**516.**	**536.**	**489.**	**547.**
Stddev	4.	5.	6.	11.	11.	2.	6.	4.	6.	4.	20.
%RSD	.904	.882	1.16	2.12	2.59	.324	1.41	.735	1.21	.864	3.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value											
Range											

Sample Name: icsab Acquired: 11/29/2016 14:36:17 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	914010.	51494.	10636.
Stddev	4245.	265.	74.
%RSD	.46448	.51530	.69675

Sample Name: icvll ag Acquired: 11/29/2016 14:44:17 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**9.59**	**92.1**	**-1.56**	**-.072**	**.155**	**2.01**	**-.185**	**.069**	**-1.29**	**-.042**	**513.**	**483.**
Stddev	.18	97.1	2.26	.099	.018	4.54	.230	.213	.14	.605	623.	565.
%RSD	1.86	105.	145.	139.	11.5	226.	124.	308.	11.1	1430.	121.	117.

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**6.35**	**-.032**	**.098**	**-.350**	**-1.00**	**-.405**	**1.26**	**-2.19**	**.238**	**-1.39**	**.035**	**-5.18**
Stddev	.34	.029	.308	.231	.99	1.93	3.30	1.25	.380	.17	.042	1.25
%RSD	5.28	90.9	313.	65.9	98.7	477.	262.	57.0	160.	12.2	120.	24.1

Elem	B_2497
Units	ug/L
Avg	**-1.82**
Stddev	1.73
%RSD	94.6

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	**1063300.**	**56032.**	**12580.**
Stddev	8336.	173.	57.
%RSD	.78397	.30872	.45642

Sample Name: lcsw60373 Acquired: 11/29/2016 14:51:31 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1890	Ba4934	Be3130	Ca3968	Cd2265	Co2388	Cr2055	Cr2677	Cu2247	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**93.3**	**3830.**	**3790.**	**3860.**	**90.8**	**15.0**	**93.5**	**998.**	**415.**	**367.**	**496.**	**1880.**
Stddev	.9	46.	12.	51.	.6	.7	.1	2.	1.	3.	1.	9.
%RSD	.968	1.19	.323	1.32	.649	4.35	.144	.157	.271	.772	.288	.490

Elem	Fe2599	Mg2802	Mn2576	Mn2593	Mo2020	Ni2216	Pb2169	Pb2203	Sb2068	Se2062	Tl1908	V_2924
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1690.**	**7.30**	**940.**	**904.**	**-.240**	**941.**	**999.**	**1010.**	**967.**	**4250.**	**3870.**	**968.**
Stddev	25.	.11	4.	8.	.132	3.	2.	3.	4.	21.	5.	4.
%RSD	1.46	1.54	.417	.881	55.0	.346	.220	.312	.406	.495	.136	.386

Elem	Zn2062	Sr4077	Sn1899	B_2497
Units	ug/L	ug/L	ug/L	ug/L
Avg	**1080.**	**.014**	**-7.13**	**-.466**
Stddev	3.	.096	1.26	.535
%RSD	.249	677.	17.7	115.

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	**1072800.**	**56387.**	**12683.**
Stddev	2248.	152.	39.
%RSD	.20951	.26933	.31018

Sample Name: mbw60373 Acquired: 11/29/2016 14:58:08 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	-.036	4.79	-.532	.027	.140	-1.70	-.135	.002	-1.44	.028	-22.3	9.67
Stddev	.193	3.66	1.23	.148	.043	.35	.057	.237	.23	.144	31.8	4.93
%RSD	542.	76.5	231.	559.	30.9	20.4	42.0	13900.	16.3	508.	143.	51.0

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	1.00	.168	-.256	-.092	.111	.451	2.01	-.902	.008	-1.57	.011	-7.86
Stddev	.03	.057	.260	.321	1.44	1.59	1.84	1.78	.323	.05	.015	1.80
%RSD	3.05	33.9	102.	351.	1300.	351.	91.5	197.	4210.	3.11	140.	22.9

Elem	B_2497
Units	ug/L
Avg	-1.29
Stddev	.45
%RSD	34.6

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1085700.	56747.	12737.
Stddev	8111.	193.	46.
%RSD	.74710	.34034	.35864

Sample Name: 809338 Acquired: 11/29/2016 15:05:20 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	.078	171.	13.4	90.9	.378	16500.	.339	4.86	-.135	5.17	335.	262.
Stddev	.727	192.	3.5	.5	.015	122.	.096	.36	.494	.20	27.	5.
%RSD	937.	112.	26.1	.527	4.02	.740	28.3	7.46	367.	3.84	7.90	1.77

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Sr4077
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	1340.	207.	.026	4.30	14.7	-2.59	-8.32	-13.6	.351	893.	884.	59.8
Stddev	72.	2.	.185	.36	1.6	2.85	1.39	1.8	.304	5.	8.	.3
%RSD	5.40	.821	706.	8.36	10.8	110.	16.7	13.2	86.8	.610	.853	.560

Elem	Sn1899	B_2497
Units	ug/L	ug/L
Avg	5.22	287.
Stddev	1.50	3.
%RSD	28.8	.977

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	936560.	54277.	10933.
Stddev	6805.	353.	63.
%RSD	.72661	.64979	.57877

Sample Name: I809338 Acquired: 11/29/2016 15:12:49 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	.080	89.4	4.29	17.4	.204	4700.	.057	.820	-1.34	.906	66.6	69.0
Stddev	.560	6.1	3.27	1.7	.021	182.	.046	.061	.51	.302	16.5	6.3
%RSD	702.	6.81	76.2	9.76	10.4	3.88	81.9	7.41	38.4	33.4	24.7	9.14

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	374.	50.7	-.361	.953	1.84	-.946	-3.29	-2.39	.366	173.	16.4	-7.14
Stddev	16.	2.6	.205	.195	.68	.581	2.10	2.34	.497	17.	.7	3.92
%RSD	4.26	5.06	56.7	20.5	36.9	61.4	63.9	98.0	136.	9.61	4.11	55.0

Elem	B_2497
Units	ug/L
Avg	70.0
Stddev	2.9
%RSD	4.12

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	1031900.	56638.	12387.
Stddev	2192.	85.	114.
%RSD	.21240	.14999	.92420

Sample Name: dup809338 Acquired: 11/29/2016 15:20:05 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**-.074**	**174.**	**12.3**	**87.9**	**.358**	**16200.**	**.278**	**4.81**	**-.055**	**5.45**	**323.**	**255.**
Stddev	.476	195.	1.7	1.6	.012	64.	.155	.31	.495	.29	13.	4.
%RSD	643.	112.	14.1	1.76	3.27	.397	55.9	6.51	904.	5.32	4.13	1.44

Elem	Mg2790	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2062	Zn2138	Sr4077
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1350.**	**203.**	**-.108**	**4.01**	**13.4**	**-2.64**	**-5.57**	**-13.9**	**.509**	**847.**	**864.**	**60.3**
Stddev	110.	2.	.422	.41	1.4	1.20	3.64	4.7	.582	22.	9.	.3
%RSD	8.09	1.14	389.	10.1	10.3	45.5	65.4	34.1	114.	2.59	1.07	.560

Elem	Sn1899	B_2497
Units	ug/L	ug/L
Avg	**6.08**	**290.**
Stddev	2.13	4.
%RSD	35.0	1.45

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	**924890.**	**54693.**	**10931.**
Stddev	9789.	432.	131.
%RSD	1.0584	.79037	1.1942

Sample Name: msw809338 Acquired: 11/29/2016 15:27:33 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1890	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Co2388	Cr2677	Cu2247	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**94.4**	**3460.**	**4250.**	**3740.**	**86.7**	**15700.**	**82.0**	**891.**	**863.**	**343.**	**423.**	**2260.**
Stddev	.5	361.	9.	46.	.3	256.	.4	5.	1.	3.	2.	43.
%RSD	.506	10.4	.218	1.23	.313	1.63	.500	.573	.075	.904	.470	1.89

Elem	Fe2599	Mg2790	Mn2576	Mn2593	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Se2062	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1800.**	**1270.**	**1050.**	**1150.**	**.040**	**833.**	**864.**	**953.**	**853.**	**973.**	**4740.**	**2960.**
Stddev	15.	12.	6.	10.	.193	9.	7.	6.	6.	8.	37.	14.
%RSD	.825	.953	.559	.891	482.	1.05	.762	.667	.730	.800	.782	.483

Elem	V_2924	Zn2062	Sr4077	Sn1899	B_2497
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**917.**	**1810.**	**58.8**	**7.28**	**289.**
Stddev	3.	14.	.8	1.89	1.
%RSD	.369	.757	1.38	26.0	.388

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	**922370.**	**54988.**	**10859.**
Stddev	1365.	305.	52.
%RSD	.14802	.55396	.47976

Sample Name: msdw809338 Acquired: 11/29/2016 15:34:33 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1890	Ba4934	Be3130	Ca3158	Cd2265	Co2286	Co2388	Cr2677	Cu2247	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**92.8**	**3490.**	**4260.**	**3770.**	**85.4**	**15800.**	**81.7**	**889.**	**845.**	**338.**	**421.**	**2230.**
Stddev	.4	323.	44.	8.	.6	120.	.5	6.	6.	3.	3.	43.
%RSD	.391	9.27	1.03	.217	.674	.759	.615	.680	.735	.786	.815	1.91

Elem	Fe2599	Mg2790	Mn2576	Mn2593	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Se2062	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1820.**	**1350.**	**1050.**	**1160.**	**.137**	**821.**	**851.**	**948.**	**847.**	**979.**	**4730.**	**2950.**
Stddev	19.	104.	6.	3.	.280	6.	6.	11.	6.	9.	55.	26.
%RSD	1.05	7.69	.572	.252	205.	.691	.743	1.15	.709	.873	1.16	.869

Elem	V_2924	Zn2062	Sr4077	Sn1899	B_2497
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**903.**	**1790.**	**59.2**	**6.26**	**285.**
Stddev	6.	9.	.2	1.54	3.
%RSD	.662	.526	.393	24.6	1.07

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	**932280.**	**54505.**	**10858.**
Stddev	7518.	458.	81.
%RSD	.80644	.84025	.74677

Sample Name: pdsw809338 Acquired: 11/29/2016 15:41:33 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1890	Ba4934	Be3130	Ca3158	Cd2265	Co2388	Cr2055	Cr2677	Cu2247	Fe2395
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**97.8**	**3530.**	**4490.**	**3950.**	**90.9**	**15700.**	**86.0**	**902.**	**407.**	**360.**	**444.**	**2360.**
Stddev	1.1	16.	30.	9.	1.0	195.	.4	12.	2.	5.	2.	44.
%RSD	1.09	.446	.672	.229	1.10	1.25	.464	1.30	.513	1.40	.452	1.84

Elem	Fe2599	Mg2790	Mn2576	Mn2593	Mo2020	Ni2216	Ni2316	Pb2169	Pb2203	Sb2068	Se2062	Tl1908
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**1920.**	**1330.**	**1100.**	**1200.**	**-.203**	**876.**	**901.**	**1000.**	**895.**	**1030.**	**4940.**	**3130.**
Stddev	22.	85.	9.	10.	.179	8.	3.	8.	6.	3.	30.	14.
%RSD	1.14	6.34	.835	.812	88.2	.873	.379	.779	.676	.319	.607	.464

Elem	V_2924	Zn2062	Sr4077	Sn1899	B_2497
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	**957.**	**1840.**	**58.5**	**7.82**	**284.**
Stddev	10.	6.	.3	1.29	3.
%RSD	1.03	.346	.519	16.5	1.22

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	**934340.**	**54649.**	**10920.**
Stddev	4310.	169.	53.
%RSD	.46130	.30973	.48694

Sample Name: 809341 Acquired: 11/29/2016 15:48:30 Type: Unk
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3158	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	.408	154.	14.2	61.6	.322	2610.	-.106	-.933	-1.24	3.34	281.	230.
Stddev	.433	7.	3.0	.5	.055	20.	.192	.148	.29	.27	16.	9.
%RSD	106.	4.78	21.3	.767	17.2	.763	181.	15.9	23.6	8.18	5.57	3.95

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avg	531.	31.3	.078	6.59	5.74	-2.10	-6.54	-12.8	.379	57.3	7.25	-2.26
Stddev	6.	.3	.159	.21	.73	2.16	2.27	3.3	.399	.2	.14	2.50
%RSD	1.17	.827	204.	3.17	12.7	103.	34.7	26.2	105.	.355	1.91	111.

Elem	B_2497
Units	ug/L
Avg	159.
Stddev	3.
%RSD	1.63

Int. Std.	Y_3242	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S
Avg	930340.	54788.	10756.
Stddev	7788.	265.	71.
%RSD	.83712	.48312	.65838

Sample Name: ccv1 Acquired: 11/29/2016 15:55:48 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1890	Ba4934	Be3130	Ca3158	Cd2265	Co2388	Cr2055	Cu2247	Fe2343	Fe2395
Avg	**461.▯**	**4610.▯**	**4660.▯**	**4650.▯**	F **446.▯**	F **4330.▯**	**458.▯**	**4580.▯**	**4950.▯**	**4770.▯**	**4890.▯**	**4530.▯**
Stddev	2.	39.	54.	43.	2.	29.	4.	18.	45.	40.	18.	60.
%RSD	.479	.844	1.16	.917	.549	.676	.845	.383	.905	.840	.361	1.31
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					500.	5000.						
Range					-10.4%	-10.4%						

Elem	Mg2790	Mn2576	Mo2020	Ni2216	Pb2169	Pb2203	Sb2068	Se2062	Tl1908	V_2924	Zn2062	Sr4077
Avg	F **4130.▯**	**4590.▯**	**4670.▯**	F **4450.▯**	**4800.▯**	**4750.▯**	**4740.▯**	**4990.▯**	**4660.▯**	**4560.▯**	**4830.▯**	**4720.▯**
Stddev	24.	34.	46.	23.	36.	45.	45.	47.	37.	14.	49.	44.
%RSD	.589	.745	.979	.524	.739	.955	.938	.939	.794	.306	1.02	.925
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value	5000.			5000.								
Range	-10.4%			-10.4%								

Elem	Sn1899	B_2497
Avg	**4690.▯**	**4570.▯**
Stddev	35.	17.
%RSD	.755	.378
Check ?	None	Chk Pass
Value		
Range		

Sample Name: ccv1 Acquired: 11/29/2016 15:55:48 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	1055000.[]	57274.[]	12201.[]
Stddev	4817.	187.	41.
%RSD	.45660	.32588	.33445

Sample Name: ccv2 Acquired: 11/29/2016 16:02:06 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	As1890	Ba2335	Ba4934	Be3130	Ca3968	Cd2265	Co2286	Co2388	Cr2055
Avg	**50.1**	**491.**	**494.**	**486.**	**483.**	**471.**	**48.7**	**488.**	**49.9**	**494.**	**483.**	**522.**
Stddev	1.1	7.	6.	11.	5.	5.	.2	5.	.6	5.	1.	6.
%RSD	2.19	1.52	1.13	2.22	1.08	.961	.379	.976	1.19	1.000	.284	1.20
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Cr2677	Cu2247	Fe2395	Mg2802	Mn2576	Mn2593	Mo2020	Mo2045	Ni2216	Ni2316	Pb2169	Pb2203
Avg	**461.**	**497.**	**461.**	**473.**	**477.**	**462.**	**491.**	**476.**	**460.**	**492.**	**506.**	**502.**
Stddev	2.	6.	19.	2.	2.	9.	5.	4.	3.	4.	5.	6.
%RSD	.528	1.16	4.01	.481	.408	1.97	.947	.882	.755	.804	.914	1.17
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899	B_2497
Avg	**496.**	**501.**	**480.**	**477.**	**479.**	**496.**	**491.**	**485.**
Stddev	6.	6.	6.	4.	5.	5.	5.	3.
%RSD	1.30	1.29	1.34	.792	1.01	.966	1.05	.597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ccv2 Acquired: 11/29/2016 16:02:06 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	1057000.[]	57052.[]	12223.[]
Stddev	6385.	200.	53.
%RSD	.60408	.35011	.43533

Sample Name: ccb Acquired: 11/29/2016 16:08:48 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Avg	**.032**	**-.502**	**-.070**	**-.104**	**.138**	**-8.29**	**-.105**	**.022**	**-1.33**	**.088**	**-10.3**	**2.79**
Stddev	.241	3.38	2.93	.145	.035	.39	.140	.178	.34	.317	26.1	4.18
%RSD	753.	673.	4180.	139.	25.7	4.68	133.	802.	25.7	358.	253.	150.
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Avg	**-.491**	**-.074**	**.470**	**-.041**	**-1.01**	**-1.15**	**1.51**	**-2.55**	**.073**	**-2.30**	**.240**	**-6.95**
Stddev	.014	.039	.229	.255	1.43	.37	1.56	1.57	.275	.09	.272	1.10
%RSD	2.94	52.7	48.7	617.	142.	32.3	103.	61.3	378.	3.85	113.	15.8
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497
Avg	**3.16**
Stddev	.13
%RSD	4.11
Check ?	None
Value	
Range	

Sample Name: ccb Acquired: 11/29/2016 16:08:48 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	1062900.▯	56581.▯	12398.▯
Stddev	3723.	211.	109.
%RSD	.35024	.37308	.87597

Sample Name: MRL Acquired: 11/30/2016 05:10:54 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Elem	Ag3280	Al3961	As1937	Ba2335	Be3130	Ca3968	Cd2265	Co2286	Cr2677	Cu2247	Fe2395	Fe2599
Avg	**14.3**	**399.**	**22.2**	**11.0**	**4.37**	**573.**	**5.08**	**10.7**	**8.63**	**10.8**	**259.**	**312.**
Stddev	.3	3.	1.8	.2	.03	84.	.10	.2	.67	.2	26.	9.
%RSD	1.89	.757	7.94	1.73	.580	14.7	1.95	1.73	7.80	1.88	9.85	3.01
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

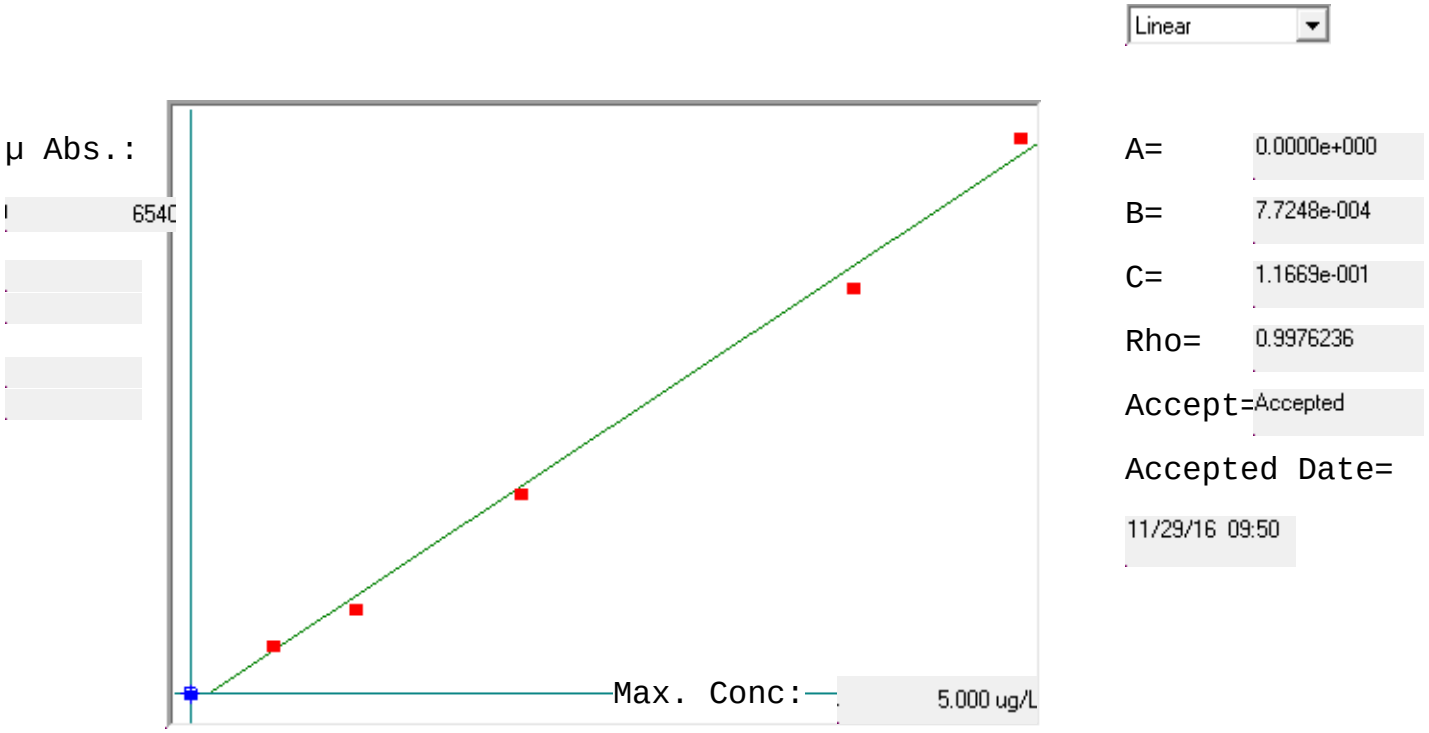
Elem	Mg2802	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960	Tl1908	V_2924	Zn2138	Sr4077	Sn1899
Avg	**512.**	**10.4**	**10.2**	**10.7**	**9.70**	**21.1**	**22.8**	**17.9**	**10.1**	**8.28**	**9.86**	**47.0**
Stddev	2.	.1	.1	.1	2.38	1.4	4.1	1.5	.3	.27	.08	2.5
%RSD	.406	.706	1.24	1.16	24.5	6.44	17.9	8.39	2.54	3.29	.780	5.22
Check ?	None	None	None	None	None	None	None	None	None	None	None	None
Value												
Range												

Elem	B_2497
Avg	**19.1**
Stddev	.5
%RSD	2.74
Check ?	None
Value	
Range	

Sample Name: MRL Acquired: 11/30/2016 05:10:54 Type: QC
Method: DOD Calibration Updated 060614(v1743) Mode: CONC Corr. Factor: 1.000000
User: NAH ICAP6500: Prep Batch: Post Digestion dilution: 1
Comment:

Int. Std.	Y_3242	Y_3710	Y_2243
Avg	1065000.□	47677.□	12358.□
Stddev	6046.	94.	35.
%RSD	.56774	.19753	.28037

CVAA water



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
Calibration Blank	0.000	0.125	0.125	10	7.726	14	0	8	21	
0.5	0.500	0.555	0.055	568	1.8 %	552	569	571	580	
1.0	1.000	0.896	-0.104	1008	3.2 %	965	996	1021	1052	
2.0	2.000	1.941	-0.059	2362	3.4 %	2251	2333	2399	2466	
4.0	4.000	3.814	-0.186	4786	2.7 %	4585	4768	4853	4939	
5.0	5.000	5.168	0.168	6539	3.6 %	6219	6436	6654	6849	

112916WA PDF

Method: CVAA water Operator: Admin Date of Analysis: 28 Nov 2016 12:38:59

Sample ID	Date	Element	Units	Extended ID	LT Mean Conc
Calibration Blank	29 Nov 2016 07:08:33	Hg	ug/L		-305.500
0.5	29 Nov 2016 07:10:42	Hg	ug/L		906.250
1.0	29 Nov 2016 07:12:53	Hg	ug/L		1579.750
2.0	29 Nov 2016 07:15:04	Hg	ug/L		3394.250
4.0	29 Nov 2016 07:17:15	Hg	ug/L		7037.500
5.0	29 Nov 2016 07:19:26	Hg	ug/L		8971.000
ICV	29 Nov 2016 07:21:37	Hg	ug/L		2.902
ICB	29 Nov 2016 07:23:48	Hg	ug/L		-0.206
81066 MBW60356	29 Nov 2016 07:30:17	Hg	ug/L		-0.238
806415	29 Nov 2016 07:32:27	Hg	ug/L		0.055
MSW806415	29 Nov 2016 07:34:37	Hg	ug/L		3.185
MSDW806415	29 Nov 2016 07:36:46	Hg	ug/L		2.870
PDSW806415	29 Nov 2016 07:38:56	Hg	ug/L		4.304
806725	29 Nov 2016 07:41:08	Hg	ug/L		-0.279
811112 LCSW60365	29 Nov 2016 07:43:19	Hg	ug/L		3.674
811111 MBW60365	29 Nov 2016 07:45:30	Hg	ug/L		-0.209
CCV	29 Nov 2016 07:47:42	Hg	ug/L		3.140
CCB	29 Nov 2016 07:49:51	Hg	ug/L		-0.123
809338	29 Nov 2016 07:52:01	Hg	ug/L		0.111
DUP809338	29 Nov 2016 07:54:12	Hg	ug/L		0.119
MSW809338	29 Nov 2016 07:56:23	Hg	ug/L		3.840
MSDW809338	29 Nov 2016 07:58:33	Hg	ug/L		3.552
809341	29 Nov 2016 08:00:44	Hg	ug/L		-0.219
811074 MBW60358	29 Nov 2016 08:05:05	Hg	ug/L		-0.259
805688	29 Nov 2016 08:07:16	Hg	ug/L		0.061
805712	29 Nov 2016 08:09:26	Hg	ug/L		0.092
DUP805712	29 Nov 2016 08:11:36	Hg	ug/L		0.092
CCV	29 Nov 2016 08:13:47	Hg	ug/L		3.006
CCB	29 Nov 2016 08:15:56	Hg	ug/L		-0.077
MSW805712	29 Nov 2016 08:18:06	Hg	ug/L		4.026
MSDW805712	29 Nov 2016 08:20:16	Hg	ug/L		3.278
811092 LCSW60361	29 Nov 2016 08:22:28	Hg	ug/L		3.592
811091 MBW60361	29 Nov 2016 08:24:41	Hg	ug/L		-0.193
803376	29 Nov 2016 08:26:53	Hg	ug/L		0.096
MSW803376	29 Nov 2016 08:29:03	Hg	ug/L		3.454
PDSW803376	29 Nov 2016 08:31:13	Hg	ug/L		4.575
806573	29 Nov 2016 08:33:23	Hg	ug/L		-0.274
806712	29 Nov 2016 08:35:34	Hg	ug/L		0.079
MSW806712	29 Nov 2016 08:37:44	Hg	ug/L		3.652
CCV	29 Nov 2016 08:39:53	Hg	ug/L		2.614
CCB	29 Nov 2016 08:42:03	Hg	ug/L		-0.111
MSDW806712	29 Nov 2016 08:44:13	Hg	ug/L		3.717
PDSW806712	29 Nov 2016 08:46:23	Hg	ug/L		4.433
807032	29 Nov 2016 08:48:34	Hg	ug/L		0.113
CCV	29 Nov 2016 08:52:39	Hg	ug/L		2.738
CCB	29 Nov 2016 08:54:47	Hg	ug/L		-0.049
Calibration Blank	29 Nov 2016 09:37:36	Hg	ug/L		10.750
0.5	29 Nov 2016 09:39:45	Hg	ug/L		568.000
1.0	29 Nov 2016 09:41:56	Hg	ug/L		1008.500
2.0	29 Nov 2016 09:44:07	Hg	ug/L		2362.250
4.0	29 Nov 2016 09:46:18	Hg	ug/L		4786.250
5.0	29 Nov 2016 09:48:29	Hg	ug/L		6539.500
ICV	29 Nov 2016 09:50:40	Hg	ug/L		4.573
ICB	29 Nov 2016 09:52:50	Hg	ug/L		0.117
ICV	29 Nov 2016 09:53:24	Hg	ug/L		3.115
ICB	29 Nov 2016 09:55:33	Hg	ug/L		-0.106
MSDW806712	29 Nov 2016 09:57:42	Hg	ug/L		0.146
PDSW806712	29 Nov 2016 09:59:52	Hg	ug/L		0.158
807032	29 Nov 2016 10:02:02	Hg	ug/L		0.145
807046	29 Nov 2016 10:04:13	Hg	ug/L		0.118
807047	29 Nov 2016 10:06:24	Hg	ug/L		0.133
807594	29 Nov 2016 10:08:36	Hg	ug/L		0.125
808263	29 Nov 2016 10:10:47	Hg	ug/L		0.118
808264	29 Nov 2016 10:12:56	Hg	ug/L		0.114
808265	29 Nov 2016 10:15:06	Hg	ug/L		0.109
808266	29 Nov 2016 10:17:16	Hg	ug/L		0.123
CCV	29 Nov 2016 10:19:26	Hg	ug/L		3.106
CCB	29 Nov 2016 10:21:35	Hg	ug/L		-0.072
808267	29 Nov 2016 10:23:44	Hg	ug/L		0.099
808268	29 Nov 2016 10:25:54	Hg	ug/L		0.087
808269	29 Nov 2016 10:28:04	Hg	ug/L		0.093

Method: CVAA water Operator: Admin Date of Analysis: 28 Nov 2016 12:38:59

Sample ID	Date	Element	Units	Extended ID	LT Mean Conc
808270	29 Nov 2016 10:30:14	Hg	ug/L		0.093
808271	29 Nov 2016 10:32:25	Hg	ug/L		0.105
MSW808271	29 Nov 2016 10:34:35	Hg	ug/L		5.262
MSDW808271	29 Nov 2016 10:36:46	Hg	ug/L		4.855
PDSW808271	29 Nov 2016 10:38:58	Hg	ug/L		6.580
808272	29 Nov 2016 10:41:11	Hg	ug/L		-0.215
CCV	29 Nov 2016 10:48:45	Hg	ug/L		3.053
CCB	29 Nov 2016 10:50:53	Hg	ug/L		-0.064
807718	29 Nov 2016 10:55:13	Hg	ug/L		0.285
MSW807718	29 Nov 2016 10:57:23	Hg	ug/L		5.620
MSDW807718	29 Nov 2016 10:59:33	Hg	ug/L		5.478
PDSW807718	29 Nov 2016 11:01:43	Hg	ug/L		7.079
811025 LCSW60351	29 Nov 2016 11:03:54	Hg	ug/L		5.485
811024 MBW60351	29 Nov 2016 11:06:06	Hg	ug/L		-0.240
807696	29 Nov 2016 11:08:18	Hg	ug/L		0.082
DUP807696	29 Nov 2016 11:10:29	Hg	ug/L		0.093
MSW807696	29 Nov 2016 11:12:40	Hg	ug/L		5.280
CCV	29 Nov 2016 11:18:33	Hg	ug/L		3.161
CCB	29 Nov 2016 11:20:42	Hg	ug/L		-0.089
MSDW807696	29 Nov 2016 11:22:51	Hg	ug/L		5.080
808426	29 Nov 2016 11:25:01	Hg	ug/L		-0.165
808434	29 Nov 2016 11:27:12	Hg	ug/L		0.096
808797	29 Nov 2016 11:29:23	Hg	ug/L		0.095
808798	29 Nov 2016 11:31:33	Hg	ug/L		0.143
811020 LCSW60350	29 Nov 2016 11:33:44	Hg	ug/L		3.009
811019 MBW60350	29 Nov 2016 11:35:53	Hg	ug/L		-0.013
804532	29 Nov 2016 11:38:04	Hg	ug/L		0.138
804535	29 Nov 2016 11:40:14	Hg	ug/L		0.136
DUP804535	29 Nov 2016 11:42:25	Hg	ug/L		0.166
CCV	29 Nov 2016 11:44:35	Hg	ug/L		3.128
CCB	29 Nov 2016 11:46:44	Hg	ug/L		-0.051
MSW804535	29 Nov 2016 11:48:53	Hg	ug/L		5.154
MSDW804535	29 Nov 2016 11:51:05	Hg	ug/L		4.737
804566	29 Nov 2016 11:53:17	Hg	ug/L		-0.121
804567	29 Nov 2016 11:55:28	Hg	ug/L		0.107
811124 LCSW60367	29 Nov 2016 11:57:39	Hg	ug/L		7.645
811123 MBW603697	29 Nov 2016 11:59:49	Hg	ug/L		-0.279
804577	29 Nov 2016 12:02:01	Hg	ug/L		0.148
DUP804577	29 Nov 2016 12:04:12	Hg	ug/L		0.154
MSW804577	29 Nov 2016 12:06:22	Hg	ug/L		5.082
MSDW804577	29 Nov 2016 12:08:33	Hg	ug/L		4.574
CCV	29 Nov 2016 12:14:23	Hg	ug/L		3.098
CCB	29 Nov 2016 12:16:31	Hg	ug/L		-0.085
811037 LCSW60356	29 Nov 2016 12:23:02	Hg	ug/L		2.356
811112 LCSW60365	29 Nov 2016 12:25:13	Hg	ug/L		2.459
811075 LCSW60358	29 Nov 2016 12:27:24	Hg	ug/L		2.340
811092 LCSW60361	29 Nov 2016 12:29:35	Hg	ug/L		2.927
MSW808271	29 Nov 2016 12:31:46	Hg	ug/L	10	0.432
PDSW808271	29 Nov 2016 12:33:56	Hg	ug/L	10	0.768
811071 LCSW60357	29 Nov 2016 12:36:07	Hg	ug/L		3.086
811070 MBW60357	29 Nov 2016 12:38:17	Hg	ug/L		-0.020
CCV	29 Nov 2016 12:40:28	Hg	ug/L		3.180
CCB	29 Nov 2016 12:42:37	Hg	ug/L		-0.030
MSW807718	29 Nov 2016 12:44:46	Hg	ug/L	10	0.667
MSDW807718	29 Nov 2016 12:46:57	Hg	ug/L	10	0.647
MSW807696	29 Nov 2016 12:51:18	Hg	ug/L	10	0.628
MSDW807696	29 Nov 2016 12:53:29	Hg	ug/L	10	0.572
MSW804535	29 Nov 2016 12:55:40	Hg	ug/L	10	0.561
811124 LCSW60367	29 Nov 2016 12:57:51	Hg	ug/L		3.135
MSW804577	29 Nov 2016 13:00:02	Hg	ug/L	10	0.422
811037 LCSW60356	29 Nov 2016 13:02:13	Hg	ug/L		2.980
811075 LCSW603358	29 Nov 2016 13:04:24	Hg	ug/L		2.843
CCV	29 Nov 2016 13:06:34	Hg	ug/L		2.823
CCB	29 Nov 2016 13:08:43	Hg	ug/L		-0.072
811025 LCSW60351	29 Nov 2016 13:17:26	Hg	ug/L		4.626
CCV	29 Nov 2016 13:19:37	Hg	ug/L		2.949
CCB	29 Nov 2016 13:21:46	Hg	ug/L		-0.024

METALS
LOGBOOK
DOCUMENTS

MICP QSM TCLP/HARDNESS Analytical Run
133097 on 12/02/2016

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	812573							MICP QSM TCLP/HARDNESS				
				ICV					0			
	812574							MICP QSM TCLP/HARDNESS				
				ICVLL					0			
	812575							MICP QSM TCLP/HARDNESS				
				ICB					0			
	812576							MICP QSM TCLP/HARDNESS				
				MRL					0			
	812577							MICP QSM TCLP/HARDNESS				
				ICSA					0			
	812578							MICP QSM TCLP/HARDNESS				
				ICSAB					0			
	812579							MICP QSM TCLP/HARDNESS				
				ICVLL					0			
	811166							ICP QSM TCLP 5.0				
				LCSW					60373			
	811165							ICP QSM TCLP 5.0				
				MBW					60373			
123805	809338		11/18/2016 1337			ERT	RVAAP FY16	ICP QSM TCLP 5.0		M	**4**	Y
		RVAAP-50-RT							60373			
	812580							ICP QSM TCLP 5.0				
				L	809338				0			
	811167		11/18/2016 1337					ICP QSM TCLP 5.0				
		RVAAP-50-RT		DUP	809338				60373			
	811168		11/18/2016 1337					ICP QSM TCLP 5.0				
		RVAAP-50-RT		MSW	809338				60373			
	811169		11/18/2016 1337					ICP QSM TCLP 5.0				
		RVAAP-50-RT		MSDW	811168				60373			
	812581							ICP QSM TCLP 5.0				
				PDSW	809338				0			
123805	809341		11/18/2016 1345			ERT	RVAAP FY16	ICP QSM TCLP 5.0		M	**4**	Y
		RVAAP-50-TD							60373			
	812582							MICP QSM TCLP/HARDNESS				
				CCV1					0			
	812583							MICP QSM TCLP/HARDNESS				
				CCV2					0			
	812584							MICP QSM TCLP/HARDNESS				
				CCB					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MICP QSM TCLP/HARDNESS Analytical Run
133097 on 12/02/2016

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	812585						MICP QSM TCLP/HARDNESS				
				MRL				0			

20 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MERCURY QSM TCLP 5.0 Analytical Run
133090 on 12/02/2016

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)		CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
	811813							MERCURY QSM TCLP 5.0				
				ICV					0			
	811814							MERCURY QSM TCLP 5.0				
				ICB					0			
	811111							MERCURY QSM TCLP 5.0				
				MBW					60365			
	811893							MERCURY QSM TCLP 5.0				
				CCV					0			
	811894							MERCURY QSM TCLP 5.0				
				CCB					0			
123805	809338		11/18/2016 1337			ERT	RVAAP FY16	MERCURY QSM TCLP 5.0		M	**4**	Y
		RVAAP-50-RT							60365			
	811113		11/18/2016 1337					MERCURY QSM TCLP 5.0				
		RVAAP-50-RT		DUP	809338				60365			
	811114		11/18/2016 1337					MERCURY QSM TCLP 5.0				
		RVAAP-50-RT		MSW	809338				60365			
	811115		11/18/2016 1337					MERCURY QSM TCLP 5.0				
		RVAAP-50-RT		MSDW	811114				60365			
123805	809341		11/18/2016 1345			ERT	RVAAP FY16	MERCURY QSM TCLP 5.0		M	**4**	Y
		RVAAP-50-TD							60365			
	811895							MERCURY QSM TCLP 5.0				
				CCV					0			
	811896							MERCURY QSM TCLP 5.0				
				CCB					0			
	811903							MERCURY QSM TCLP 5.0				
				ICV					0			
	811904							MERCURY QSM TCLP 5.0				
				ICB					0			
	811913							MERCURY QSM TCLP 5.0				
				CCV					0			
	811914							MERCURY QSM TCLP 5.0				
				CCB					0			
	811112							MERCURY QSM TCLP 5.0				
				LCSW					60365			
	811911							MERCURY QSM TCLP 5.0				
				CCV					0			
	811912							MERCURY QSM TCLP 5.0				
				CCB					0			

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

MERCURY QSM TCLP 5.0 Analytical Run
133090 on 12/02/2016

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

19 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

TCLP/SPLP/ASTM Extraction Summary

Batch: 2715 **Date:** 11/22/16 **Analyst (set up):** LSF **Analyst (take down):** LSF

Sample #	Parameter	Test			Vessel / ZHE	Buffer Determination			Sample wt.	**Free Liquids Present (Y/N)	Vol. Ext. Fluid	Initial pH	ZHE Initial Press	Time In	Date / Time Out	Ext. Time	End pH	ZHE End Press	Date / Time Filtered	Volume Filtered
	(M / SV / V / WC)	TCLP	SPLP	ASTM	#	Initial pH	End pH	*Ext. Fluid	(g)		(mL)		(psi)			(hrs)		(psi)		(mL)
BLK	M,SV	✓			10G	—	—	1	—	—	2000	4.91	—	15:30	11/23/16 / 09:30	18	4.92	—	11/23/16 / 10:00	2000
803376	M	✓			18P	4.39	—	1	1000	—	2000	4.58	—	15:30	11/23/16 / 09:30	18	4.65	—	11/23/16 / 10:15	560
804535	M,SV	✓			T3	4.86	—	1	1000	—	2000	4.58	—	15:30	11/23/16 / 09:30	18	4.72	—	11/23/16 / 10:35	2000
804567	M,SV	✓		11/22/16 LSF	T4	6.85	1.54	1	1000	—	2000	4.64	—	15:30	11/23/16 / 09:30	18	4.89	—	11/23/16 / 10:50	2000
805712	M,SV	✓			9G	4.83	—	1	1000	—	2000	4.59	—	15:30	11/23/16 / 09:30	18	4.68	—	11/23/16 / 11:00	2000
808426	M,SV	✓			7G	5.30	1.72	1	1000	—	2000	4.62	—	15:30	11/23/16 / 09:30	18	5.00	—	11/23/16 / 11:20	2000
808434	M,SV	✓			8G	5.29	1.67	1	1000	—	2000	4.59	—	15:30	11/23/16 / 09:30	18	5.11	—	11/23/16 / 11:45	2000
808777	M 11/22/16 LSF	✓			25P	5.33	1.75	1	1000	—	2000	4.58	—	15:30	11/23/16 / 09:30	18	5.19	—	11/23/16 / 12:00	500
808796	MS	✓			33P	5.29	1.69	1	1000	—	2000	4.63	—	15:30	11/23/16 / 09:30	18	5.17	—	11/23/16 / 12:30	560
809338	M,SV	✓			1G	4.08	—	1	1000	—	2000	4.58	—	15:30	11/23/16 / 09:30	18	4.63	—	11/23/16 / 13:00	2000
809341	M,SV	✓			5G	6.46	1.78	1	1000	—	2000	4.57	—	15:30	11/23/16 / 09:30	18	4.59	—	11/23/16 / 13:30	2000

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***Extraction Fluid Used:** TCLP#1 **Ext. Fluid ID #:** M12968 **Ext. Fluid pH:** 4.91 **Ext. Start Temp (°C):** 21.0

Ext. End Temp(°C): 20.8 *(min:* 20.8 */ max:* 21.1) **Filter Manufacturer:** EnVi Express **Filter Lot #:** 103720-6069

Balance: WC303 **pH Meter:** Corning 450 **1N HCL:** M12475 **Tumbler Unit #(s):** 1, 3

Acceptable rotation rate: 30 ±2 rpm **Verified Rotation rate:** 31 rpm

M=Metals, SV=Semi Volatiles, V=Volatiles, WC=Wet Chemistry

% Solids Calculation Worksheet

Tare weights (g) *Transfer weights (g)* *Separation weights (g)* *% Solids Calculations*

Sample #	A Filter wt.	B Filtrate Vessel wt.	C Transfer Vessel wt.	D Sample + Transfer Vessel	E Sample wt {D - C}	F Vessel wt. Post Transfer	G Residue wt. {F – C}	H Total Waste Amount {E – G}	I Filtrate Vessel + Filtrate	J Liquid Phase of Sample {I – B}	K Solid Phase of Sample {H – J}	L. % Solids (**) (K/H*100)	M Waste + Filter (Dry) wt. (g)	% Solids (Dry) ({M – A}/H)*100
								11/22/16 LSF						

(**) If Solids = <0.5%, treat filtrate as TCLP extract, if free liquid present use % Solids Calculation Worksheet

Reviewed By/Date: _____

PREP WORKSHEET
on 12/02/2016

Prep Batch **60,373** Date Prepped: 11/28/2016 Prepped By NAH

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	811165	MBW		ICP QSM TCLP 5.0	LIQUID	50		50.0		
	811166	LCSW		ICP QSM TCLP 5.0	LIQUID	50		50.0		
123805	809338			ICP QSM TCLP 5.0	TCLP	50		50.0	4	
	809341			ICP QSM TCLP 5.0	TCLP	50		50.0	4	
	811167	DUP	809338	ICP QSM TCLP 5.0	TCLP	50		50.0		
	811168	MSW	809338	ICP QSM TCLP 5.0	TCLP	50		50.0		
	811169	MSDW	811168	ICP QSM TCLP 5.0	TCLP	50		50.0		

Notes:_____

PREP WORKSHEET
on 12/02/2016

Prep Batch **60,365** Date Prepped: 11/28/2016 Prepped By LJF

Folder #	Order	QC Type	Link	Test	Matrix	Volume	Weight	Initial Volume	SDG Level	Notes
	811111	MBW		MERCURY QSM TCLP	LIQUID	25		25.0		
	811112	LCSW		MERCURY QSM TCLP	LIQUID	25		25.0		
123805	809338			MERCURY QSM TCLP	TCLP	25		25.0	4	
	809341			MERCURY QSM TCLP	TCLP	25		25.0	4	
	811113	DUP	809338	MERCURY QSM TCLP	TCLP	25		25.0		
	811114	MSW	809338	MERCURY QSM TCLP	TCLP	25		25.0		
	811115	MSDW	811114	MERCURY QSM TCLP	TCLP	25		25.0		

Notes:_____

Metals Digestion Bench Sheet

(Prep Methods 3010, 3020, 3005, & 3050)

Program: QSM

*Matrix: liquid

3010= ICP Liquids
3020= GFAA Liquids
3005= Sb Liquids
3050= ICP/GFAA Solids
7060/7740= GFAA, As & Se Liquids

Prep Batch #:	60373
Prep Method:	3010
Analyst:	NAH
Date:	11/28/2016
Start Time:	15:00

Prep Analyst: NAH

Balance ID:

End Date: 11/28/2016

End Time: 20:00

Digestion Tube Lot #: 252532-0026

Block Used: A

Cell Position for Temp. Check: F1

Initial-DigestionTemp (ºC): 93

Final-Digestion Temp (ºC): 93

Reagent:	Ref. #
Nitric Acid:	AB.626
Hydrochloric Acid:	AB.679
Hydrogen Peroxide:	AB.616

Sample			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
811165	(MB)			50.0	50
811166	(LCS)			50.0	50
809338				50.0	50
809341				50.0	50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
					50
811167	(DUP) if applicable			50.0	50
811168	(MS)	Parent Sample		50.0	50
811169	(MSD)	809338		50.0	50
	(DUP) if applicable				50
	(MS)	Parent Sample			50
	(MSD)				50
Leave >>	(DUP) if applicable				50
blank	(MS)	Parent Sample			50
if N/A	(MSD)				50

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate

*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

MS/MSD Spike Amount (ml)	Spike Ref. #
1	M12977

LCS Spike Amount (ml)	Spike Ref. #
1	M12977

Reviewed By/Date:

FMT12-03

Mercury Digestion Bench Sheet

(Prep Methods 7470A & 7471A)

CCV ID: M13006
ICV/LCSW ID: M13005

*Matrix: TCLP
Balance ID:

7470A= Hg Liquids
7471A= Hg Solids

Prep Batch #:	60365
Prep Method:	7470A
Analyst:	LJF
Date:	11/28/2016
Start Time:	09:35

End Date: 11/28/2016
End Time: 11:35

Digestion Tube Lot #: 6416053
Block Used: A
Cell Position for Temp. Check: D-5
Initial-DigestionTemp (ºC): 94.3
Final-Digestion Temp (ºC): 94.3
Additional KMnO4 added (ml):
Aqua Regia added (ml)
Calibration Stds: M13003

Reagent:	Ref. #
HNO3:	AB.628
H2SO4:	AB.605
NaCl/Hydrox.SO4:	M12858
KMnO4:	M12979
K2S2O8:	M12830
Aqua-Regia:	

	Sample ID			(Solids) Sample Weight (g)	(Liquids) Sample Volume (ml)	Final Volume (ml)
	811111	(MB)			25.0	25
	811112	(LCS)			25.0	25
	809338				25.0	25
	809341	**Comments:**			25.0	25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
						25
	811113	(DUP)			25.0	25
	811114	(MS)	Parent Sample		25.0	25
	811115	(MSD)	809338		25.0	25
Leave >>		(DUP)				25
blank		(MS)	Parent Sample			25
		(MSD)				25
		(DUP)				25
		(MS)	Parent Sample			25
if N/A		(MSD)				25

MB=Method Blank, LCS=Laboratory Control Sample, DUP=Duplicate, MS=Matrix Spike & MSD=Matrix Spike Duplicate
*Matrix: Soil, Sludge, Waste, GW=Groundwater, WW=Wastewater, Tissue, TLCP, SPLP, ASTM or other.

A: Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #
0.5	100ug/L	M13004

B: Spike Amount (ml)	Spike Conc. (ug/L)	Spike Ref. #

Reviewed By/Date:

iCAP 6000 / 6500 Data Review Checklist	Analysis Date: 11-29-16		Data File: DO Wes-005	Date of review: 11/30/16
Cal Std ID: MS3017 LIMS # : 133097	Analyst: [illegible]	Reviewer: MMS	Approved? (Yes) No	
Is Audit Trail turned on or Manual Manipulations addressed? (Yes) / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)				

QC Parameters : 6010 / 200.7 (QSM) Other	YES	NO	YES	NO	Comments:
1) Calibration linearity: (r ≥ 0.995) / r > 0.998	✓		✓		
2) ICV: (90-110%) / ~~95-105%~~	✓		✓		
2) ICVLL: 70-130% / (80-120%)	✓		✓		
3) ICB: < 3X IDL / (<LOD) <LOQ	✓		✓		
4) ICSA: < ABS LOD	✓		✓		
5) ICSAB: 80-120%	✓		✓		
6) MRL: (70-130% / 80-120%			✓		
7) MDL Check: >LOD					
8) CCV1/CCB1 (CCV: 90-110%)	✓		✓		
9) CCV2/CCB2 (CCB: < 3X IDL / <LOD / <LOQ)					
10) CCV3/CCB3					
11) CCV4/CCB4					
12) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	
Prep Batch ID#: 160373 Dig. Meth. 3050	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD or ≤ ½ RL	✓		✓		
Spiked samples in batch:					
a) 809338 matrix = M	✓	✓	✓	✓	L Dup invalid MS, MSD for Dues.
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: a	✓		✓		PDS See "M"
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					
Prep Batch ID#: _____ Dig. Meth. _____					
LCS - generated limits or project specific limits					
MB - <LOD or ≤ ½ RL					
Spiked samples in batch:					
a) _____ matrix = _____					
b) _____ matrix = _____					
c) _____ matrix = _____					
PDS: ±15% / 20% / 25% Sample#: _____					

GFAA / FLAA / CVAA Data Review checklist		Method: 200.9	7000 series AA	245.1 & 245.2	245.7	7470a / 7471a
Instrumentation:	THERMO M SERIES AA			CETAC Hg ANALYZER		
Analysis Date: 11/29/16	Data File: 11291 6wa		Date Review: 11-30-16	Analyte: Hg		
Cal Std ID: M13003	LIMS # : 133090	Analyst: SF	Reviewer: [illegible]	Approved? Yes No		
Is Audit Trail turned on or Manual Manipulations addressed? Yes / No (If no, any manual manipulations must be initialed, dated, and reason(s) stated for change)						

Calibration Parameters -	YES	NO	YES	NO	Comments:
1) Calibration linearity - r > 0.995	✓		✓		
2) ICV: 90-110% 95-105%	✓		✓		
2) ICVLL: 70-130% 80-120%					
3) ICB: <IDL / <LOD / <LOQ / <½ RL	✓		✓		
6) MRL: 70-130%					
7) CCV1/CCB1- (CCV: 90-110% / 80-120%)	✓		✓		
8) CCV2/CCB2 (CCB: <IDL / <LOD / <LOQ / <½ RL)					
9) CCV3/CCB3					
10) CCV4/CCB4					
11) CCV5/CCB5					

Preparation Batch Parameters	YES	NO	YES	NO	
Prep Batch ID#: 60365 Dig. Meth. 7470A	✓		✓		
LCS - generated limits or project specific limits	✓		✓		
MB - <LOD / <2.2X LOD / ≤ ½RL	✓		✓		
Spiked samples in batch:					
a) 809338 matrix = TCLP	✓	✓	✓	✓	"M"
b)____ matrix = ____					
c)____ matrix = ____					
d)____ matrix = ____					
e)____ matrix = ____					
PDS: ±15% / 20% / 25% Sample#____					
MSA Performed? Yes No					
Prep Batch ID#:____ Dig. Meth.____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)____ matrix = ____					
b)____ matrix = ____					
c)____ matrix = ____					
d)____ matrix = ____					
e)____ matrix = ____					
PDS: ±15% / 20% / 25% Sample#____					
MSA Performed? Yes No					
Prep Batch ID#:____ Dig. Meth.____					
LCS - generated limits or project specific limits					
MB - <LOD / <2.2X LOD / ≤ ½RL					
Spiked samples in batch:					
a)____ matrix = ____					
b)____ matrix = ____					
c)____ matrix = ____					
d)____ matrix = ____					
e)____ matrix = ____					
PDS: ±15% / 20% / 25% Sample#____					
MSA Performed? Yes No					

CT Laboratories, LLC

ICP-6500 Instrument Run Logbook

Date	Time: Start / End	Analyst	Analytes / Sequence I.D.	Method	LIMS # or Sample Description	Nebulizer Pressure (kpa)	Calib. Std ID	Version V1742	Comments
11.28.16	1303 / 1055		D112816B	DODcalu	133084 133071 133041 133072 133070 133032	350	M13017	V1740 V1739 V1741	
11.29.16	1152 / 0531		D112916	DODcalu	133002 133032 133103 133072 133002 133100 133104 133034 133098 133105 133070 133154 133100 133128 133151 133031	320	M13017	V1743	
11.30.16	0932 / 2056		D113016	DODcalu		320	M13017	V1744	
12-1-16	/		D120116	DODcalu		320	M13017		
	/								
	/								
	/								
	/								
	/								
	/								
	/								
	/								

Comments: _____

_____

Checked By / Date: _____

CT Laboratories

Mercury Analyzer Instrument Run Log

Instrument ID: ~~Cetac M-6000A~~ Teledyne Hydra II
c9/19/16 LSF

Analysis Date	Start Time	End Time	Analyst	LIMS Run # (s)	Method File ID #	Cal. Std. ID #	Lamp Current (mA)	Analysis Tube Lot #	Comments
10/25/16	09:14	13:00	LSF	131661, 131659 10/25/16 LSF 131569, 131660, ~~131662~~, 131663	1025 16wa	M12969	22.86	250298	SnCl2: M12975
10/26/16	08:51	10:32	LSF	131662, 131857, 131855, 131856	10 26/16 wa	M13003	22.86	256764	SnCl2: M13008
10/26/16	11:06	12:55	LSF	131868, 131869, 131870	1026/1650	M13003	22.86	256764	SnCl2: M13008
~~11/03/16~~ 11/03/16 LSF	07:18	15:16	LSF	132105, 132104, 132103, 132106	1108/1650	M13003	22.86	256764	SnCl2: M13008
11/03/16 11/07/16	09:47	12:59	LSF	132337, 132332, 132335, 132334 132336, 132335, 132338	1107/16wa	M13003	22.86	256764	SnCl2: M13008
11/08/16	06:35	10:06	LSF	132335 132354, 132353, 132352	1108/16wa	M13003	22.80	256764	SnCl2: M13008
~~11/09/16~~	~~11/11/16~~	~~SF~~	~~LSF~~	132451, 132450, 132449, 132448 132455, 132456, 132453, 132452	~~1109/16wa~~	M13003		256764	~~SnCl2: M13008~~ 11/11/16 LSF
11/10/16	09:18	12:16	LSF	132501, 132502	1110/1650	M13003	22.86	256764	SnCl2: M13008
11/11/16	07:18	14:06	LSF	132500 132497, 132503, 132499, 132498	1111/1650	M13003	22.86	256764	SnCl2: M13008
11/14/16	0700	1400	~~LSF~~ LA	132449, 132451, 132455 132453, 132454, 132448	1114/16 wa	M13003	22.86	256764	$SnCl_2$: M13008
11/17/16			~~LA~~						AF
11/18/16	12:59	16:01	LSF	132868, 132867, 132866	1118/1650	M13003	22.86	256764	SnCl2: M13008
11/21/16	09:43	11:56	LSF	132854 132853, 132851, 132852	1121/16wa	M13003	22.86	256764	SnCl2: M13008
11/23/16	08:14	10:26	LSF	133024 133027, 133026, 133025	1123/16wa	M13003	22.86	256764	SnCl2: M13008
11/23/16	10:42	13:11	LSF	133043, 133038	1123/1650	M13003	22.86	256764	SnCl2: M13008
11/29/16	09:08	13:21	LSF	133087, 133086, 133085, 133084 133091, 133090, 133089, 133088	1129/16wa	M13003	22.86	256764	SnCl2: M13008
11/30/16	10:21	14:53	LSF	133131, 133129, 133132, 133130	1130/1650	M13003	22.86	256764	SnCl2: M13008

Reviewed By/Date:_____

Type	Date/Time	Message	User name	Application	Sequence Name
	11/29/2016 07:35:11	Running 807806 (102)	NAH	Analyst	S_DOD Calibration
	11/29/2016 07:42:30	Running 807807 (103)	NAH	Analyst	S_DOD Calibration
	11/29/2016 07:49:53	Running 807808 (104)	NAH	Analyst	S_DOD Calibration
	11/29/2016 07:57:00	Running 807809 (105)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:04:24	Running 807810 (106)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:11:35	Running 807811 (107)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:18:52	Running 807812 (108)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:26:08	Running 807813 (109)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:33:10	Running 807814 (110)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:40:31	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:46:52	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/29/2016 08:54:14	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:01:30	Running 807815 (111)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:08:51	Running 807816 (112)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:15:45	Running 807818 (113)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:23:07	Running 807820 (114)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:30:07	Running lcswtclp (115)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:37:20	Running mbwtclp1 (116)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:44:41	Running 803376 (117)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:51:42	Running msw803376 (118)	NAH	Analyst	S_DOD Calibration
	11/29/2016 09:59:12	Running 803376 (119)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:06:34	Running msw803376 (120)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:13:33	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:20:03	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:26:46	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:33:59	Running MRL (24)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:41:24	Running ccv1 (31)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:48:18	Running ccv2 (29)	NAH	Analyst	S_DOD Calibration
	11/29/2016 10:55:02	Running ccb (30)	NAH	Analyst	S_DOD Calibration
	11/29/2016 11:02:13	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	11/29/2016 11:51:58	Sequence Started	NAH	Analyst	S_DOD Calibration
	11/29/2016 11:51:58	Autosampler Run Started	NAH	Analyst	
	11/29/2016 11:52:19	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	11/29/2016 11:59:22	Running CalStd1=0.25 (2)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:06:38	Running CalStd2=0.5 (3)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:13:52	Running CalStd3=1 (4)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:21:20	Running CalStd4=5 (5)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:28:35	Running CalStd5=10 (6)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:28:37	Closing will close the method and all associated samples.	NAH	Analyst	
	11/29/2016 12:35:47	Running CalStd6=20 (7)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:42:55	Running CalStd7=50 (8)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:50:00	Running CalStd8=100 (9)	NAH	Analyst	S_DOD Calibration
	11/29/2016 12:57:03	Running CalStd9=1000 (10)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:03:31	Running CalStd10=10000 (11)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:09:37	Closing will close the method and all associated samples.	NAH	Analyst	
	11/29/2016 13:10:03	Running CalStd11-100k (12)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:17:14	Running CalStd12-100000 (13)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:24:35	Running CalStd13=500000 (14)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:32:20	Running CalStd14-1000k (15)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:40:24	Running blkrinse (22)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:52:09	Closing will close the method and all associated samples.	NAH	Analyst	
	11/29/2016 13:53:21	Running icv (16)	NAH	Analyst	S_DOD Calibration
	11/29/2016 13:55:01	Unable to Set Check Table,	NAH	Analyst	

Type	Date/Time	Message	User name	Application	Sequence Name
	11/29/2016 13:56:18	Unable to Set Check Table,	NAH	Analyst	
	11/29/2016 14:00:05	Running ICVLL (25)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:07:10	Running icb (17)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:14:23	Running icb (17)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:21:38	Running MRL (24)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:28:46	Running icsa (20)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:36:17	Running icsab (21)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:44:17	Running icvll ag (1)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:51:31	Running lcsw60373 (2)	NAH	Analyst	S_DOD Calibration
	11/29/2016 14:58:08	Running mbw60373 (3)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:05:20	Running 809338 (4)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:12:49	Running l809338 (5)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:20:05	Running dup809338 (6)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:27:33	Running msw809338 (7)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:34:33	Running msdw809338 (8)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:41:33	Running pdsw809338 (9)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:48:30	Running 809341 (10)	NAH	Analyst	S_DOD Calibration
	11/29/2016 15:55:48	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:02:06	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:08:48	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:16:02	Running 804689 (79)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:23:21	Running msw804689 (80)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:30:27	Running 804690 (81)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:37:29	Running 804691 (82)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:44:26	Running 804619 (83)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:51:42	Running 804624 (84)	NAH	Analyst	S_DOD Calibration
	11/29/2016 16:59:02	Running 804626 (85)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:06:13	Running 807803 (86)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:13:26	Running 807805 (87)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:20:53	Running 807807 (88)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:28:10	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:34:27	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:41:09	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:48:23	Running 807083 (89)	NAH	Analyst	S_DOD Calibration
	11/29/2016 17:55:24	Running 807086 (90)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:02:26	Running 807087 (91)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:09:26	Running lcsw60381 (11)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:16:42	Running mbw60381 (12)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:23:52	Running 809337 (13)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:31:42	Running l809337 (14)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:38:50	Running dup809337 (15)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:46:18	Running msw809337 (16)	NAH	Analyst	S_DOD Calibration
	11/29/2016 18:53:31	Running msdw809337 (17)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:00:45	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:07:01	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:13:43	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:20:56	Running pdsw809337 (18)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:27:55	Running lcsw60363 (19)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:34:29	Running mbw60363 (20)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:41:43	Running 804535 (21)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:49:25	Running l804535 (22)	NAH	Analyst	S_DOD Calibration
	11/29/2016 19:57:13	Running dup804535 (23)	NAH	Analyst	S_DOD Calibration
	11/29/2016 20:04:56	Running msw804535 (24)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	11/29/2016 20:12:12	Running msdw804535 (25)	NAH	Analyst	S_DOD Calibration
	11/29/2016 20:19:26	Running pdsw804535 (26)	NAH	Analyst	S_DOD Calibration
	11/29/2016 20:26:40	Running 804567 (27)	NAH	Analyst	S_DOD Calibration
	11/29/2016 20:34:23	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/29/2016 20:40:41	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/29/2016 20:47:23	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/29/2016 20:54:36	Running lcsw60364 (28)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:01:15	Running mbw60364 (29)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:08:28	Running 805712 (30)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:16:17	Running l805712 (31)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:23:33	Running dup805712 (32)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:31:19	Running msw805712 (33)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:38:36	Running msdw805712 (34)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:45:53	Running pdsw805712 (35)	NAH	Analyst	S_DOD Calibration
	11/29/2016 21:53:02	Running 810628 (36)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:00:19	Running lcsw60362 (37)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:06:56	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:13:13	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:19:54	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:27:08	Running mbw60362 (38)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:34:22	Running 808797 (39)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:41:58	Running 808798 (40)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:49:33	Running l808798 (41)	NAH	Analyst	S_DOD Calibration
	11/29/2016 22:57:20	Running dup808798 (42)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:04:56	Running msw808798 (43)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:12:07	Running msdw808798 (44)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:19:17	Running pdsw808798 (45)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:26:27	Running lcsw60360 (46)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:33:05	Running mbw60360 (47)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:40:18	Running ccv1 (23)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:46:36	Running ccv2 (18)	NAH	Analyst	S_DOD Calibration
	11/29/2016 23:53:18	Running ccb (19)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:00:33	Running 808426 (48)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:08:00	Running l808426 (49)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:15:40	Running dup808426 (50)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:23:09	Running msw808426 (51)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:30:19	Running msdw808426 (52)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:37:28	Running pdsw808426 (53)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:44:37	Running 808434 (54)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:52:07	Running lcsw60359 (55)	NAH	Analyst	S_DOD Calibration
	11/30/2016 00:58:45	Running mbw60359 (56)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:05:59	Running 807696 (57)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:13:33	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:19:51	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:26:33	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:33:48	Running l807696 (58)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:41:05	Running dup807696 (59)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:48:38	Running msw807696 (60)	NAH	Analyst	S_DOD Calibration
	11/30/2016 01:55:39	Running msdw807696 (61)	NAH	Analyst	S_DOD Calibration
	11/30/2016 02:02:43	Running pdsw807696 (62)	NAH	Analyst	S_DOD Calibration
	11/30/2016 02:09:44	Running lcsw60355 (63)	NAH	Analyst	S_DOD Calibration
	11/30/2016 02:17:10	Running mbw60355 (64)	NAH	Analyst	S_DOD Calibration
	11/30/2016 02:24:23	Running 809493 (65)	NAH	Analyst	S_DOD Calibration

Type	Date/Time	Message	User name	Application	Sequence Name
	11/30/2016 02:31:59	Running 809494 (66)	NAH	Analyst	S_DOD Calibration
	11/30/2016 02:39:34	Running 809495 (67)	NAH	Analyst	S_DOD Calibration
	11/30/2016 02:47:10	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/30/2016 02:53:29	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:00:13	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:07:28	Running 809496 (68)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:15:03	Running 809497 (69)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:22:39	Running 809498 (70)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:30:14	Running 809499 (71)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:37:50	Running 809500 (72)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:45:25	Running msw809500 (73)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:52:42	Running msdw809500 (74)	NAH	Analyst	S_DOD Calibration
	11/30/2016 03:59:58	Running pdsw809500 (75)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:06:57	Running 809501 (76)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:14:33	Running 809502 (77)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:22:10	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:28:27	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:35:10	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:42:25	Running 809503 (78)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:50:02	Running lcsw60332 (92)	NAH	Analyst	S_DOD Calibration
	11/30/2016 04:56:59	Running lcsw60333 (93)	NAH	Analyst	S_DOD Calibration
	11/30/2016 05:03:58	Running lcsw60366 (94)	NAH	Analyst	S_DOD Calibration
	11/30/2016 05:10:54	Running MRL (24)	NAH	Analyst	S_DOD Calibration
	11/30/2016 05:18:03	Running ccv1 (28)	NAH	Analyst	S_DOD Calibration
	11/30/2016 05:24:22	Running ccv2 (26)	NAH	Analyst	S_DOD Calibration
	11/30/2016 05:31:05	Running ccb (27)	NAH	Analyst	S_DOD Calibration
	11/30/2016 05:38:20	Plasma off	NAH	iTEVA Control Center	
	11/30/2016 05:38:20	Plasma extinguished successfully	NAH	Analyst	
	11/30/2016 05:38:22	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	11/30/2016 06:48:42	Plasma On	NAH	iTEVA Control Center	
	11/30/2016 06:48:48	Plasma ignition successful	NAH	Analyst	
	11/30/2016 06:49:35	D33534 - Debug:Wavelength check : x = 2.001, y =2.332	NAH	Analyst	
	11/30/2016 08:51:49	Autosampler Run Started	NAH	Analyst	
	11/30/2016 08:51:49	Sequence Started	NAH	Analyst	S_DOD Calibration
	11/30/2016 08:52:12	Unable to Set Check Table,	NAH	Analyst	
	11/30/2016 08:52:17	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	11/30/2016 08:52:39	Unable to Set Check Table,	NAH	Analyst	
	11/30/2016 08:53:38	Autosampler Run Completed	NAH	Analyst	S_DOD Calibration
	11/30/2016 09:31:42	Autosampler Run Started	NAH	Analyst	
	11/30/2016 09:31:42	Sequence Started	NAH	Analyst	S_DOD Calibration
	11/30/2016 09:32:03	Running Blank (1)	NAH	Analyst	S_DOD Calibration
	11/30/2016 09:39:11	Running CalStd1=0.25 (2)	NAH	Analyst	S_DOD Calibration
	11/30/2016 09:44:40	Unable to Set Check Table,	NAH	Analyst	
	11/30/2016 09:46:35	Running CalStd2=0.5 (3)	NAH	Analyst	S_DOD Calibration
	11/30/2016 09:49:24	Closing will close the method and all associated samples.	NAH	Analyst	
	11/30/2016 09:49:33	Closing will close the method and all associated samples.	NAH	Analyst	
	11/30/2016 09:53:49	Running CalStd3=1 (4)	NAH	Analyst	S_DOD Calibration
	11/30/2016 10:01:03	Running CalStd4=5 (5)	NAH	Analyst	S_DOD Calibration
	11/30/2016 10:08:17	Running CalStd5=10 (6)	NAH	Analyst	S_DOD Calibration
	11/30/2016 10:15:32	Running CalStd6=20 (7)	NAH	Analyst	S_DOD Calibration
	11/30/2016 10:18:56	Unable to Set Check Table,	NAH	Analyst	
	11/30/2016 10:19:39	Unable to Set Check Table,	NAH	Analyst	
	11/30/2016 10:22:43	Running CalStd7=50 (8)	NAH	Analyst	S_DOD Calibration

		Instrument:	CETAC
Standard Log #:	M13042	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/29/2016	Expiration Date:	11/29/2016
Prep:	Carefully mixed **3** parts HCl AB.631 with **1** part HNO_3 AB.633 in a hood.		

Standard ID#:	M13043	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	11/29/2016	Lot #:	166218
Expiration Date (if any):		Catalog #:	S271-500

Standard ID#:	M13040	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Interference A
Date Received:	11/18/2016	Lot #:	2-124MKBX
Expiration Date (if any):	11/30/2017	Catalog #:	INT-A1

Standard ID#:	M13041	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	11/18/2016	Lot #:	39-200CR
Expiration Date (if any):	11/30/2017	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M13037	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/17/2016	Expiration Date:	11/17/2017
Prep:	Carefully mixed **3** parts HCl AB.631 with **1** part HNO_3 AB.628 in a hood.		

Standard Log #:	M13038	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	11/18/2016	Expiration Date:	05/18/2017
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M13039	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	11/18/2016	Expiration Date:	05/18/2017
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12629 and **60 g** hydroxylamine sulfate M12843 and brought up to volume.		

Standard ID#:	M13036	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	11/10/2016	Lot #:	138905AH
Expiration Date (if any):	05/31/2018	Catalog #:	39043

Standard ID#:	M13031	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	11/09/2016	Lot #:	16I168
Expiration Date (if any):	05/03/2018	Catalog #:	4400-10M311

Standard ID#:	M13032	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	11/09/2016	Lot #:	16I091
Expiration Date (if any):	05/03/2018	Catalog #:	4400-10M91

Standard ID#:	M13033	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	11/09/2016	Lot #:	16I080
Expiration Date (if any):	05/03/2018	Catalog #:	4400-10M261

Standard ID#:	M13034	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	11/09/2016	Lot #:	16F134
Expiration Date (if any):	05/03/2018	Catalog #:	4400-10M11

Standard ID#:	M13035	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	11/09/2018	Lot #:	16I165
Expiration Date (if any):	05/03/2018	Catalog #:	4400-10m411

		Instrument:	CETAC
Standard Log #:	M13027	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	11/09/2016	Expiration Date:	11/09/2016
Prep:	Carefully mixed **3** parts HCl AB.631 with **1** part HNO_3 AB.628 in a hood.		

Standard ID#:	M13028	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	11/09/2016	Lot #:	1623223
Expiration Date (if any):	05/04/2018	Catalog #:	HP10M67-1

Standard ID#:	M13029	Vendor:	CPI
Analyst:	NAH	Chemical:	Barium 1000 mg/L
Date Received:	11/09/2016	Lot #:	16H058
Expiration Date (if any):	05/03/2018	Catalog #:	S4400-100041

Standard ID#:	M13030	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 mg/L
Date Received:	11/09/2016	Lot #:	16I092
Expiration Date (if any):	05/03/2018	Catalog #:	4400-10M671

Standard Log #:	M13025	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	11/07/2016	Expiration Date:	11/07/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.630 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard ID#:	M13026	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurrance Standard
Date Received:	11/07/2016	Lot #:	2-150MKB
Expiration Date (if any):	11/30/2017	Catalog #:	XCTIWI-5-500

Standard ID#:	M13024	Vendor:	METTLER TOLEDO
Analyst:	LJF	Chemical:	FRISCOLYT
Date Received:	11/01/2016	Lot #:	1B167D
Expiration Date (if any):		Catalog #:	51340053

MRL BASE STD M13023

Analyst NAH

Prep Date 11/01/2016

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M12599	1000	1	02/10/2017
Al	400	M12948	10000	2	01/29/2018
Ba	10	M12473	1000	0.5	10/16/2016
Be	4	M12667	1000	0.2	04/15/2017
Cd	5	M12674	1000	0.25	04/15/2017
Co	10	M12678	1000	0.5	04/15/2017
Cr	10	M12941	10000	0.05	01/29/2018
Cu	10	M12945	10000	0.05	01/29/2018
Mg	500	M12947	10000	2.5	01/29/2018
Mn	10	M12944	10000	0.05	01/29/2018
Mo	10	M12677	1000	0.5	04/15/2017
Ni	10	M12681	1000	0.5	04/15/2017
Pb	10	M12861	10000	0.05	11/11/2017
Sb	20	M12602	1000	1	02/10/2017
V	10	M12676	1000	0.5	04/15/2017
Zn	10	M12989	10000	0.05	04/07/2018
K	1000	M12946	10000	5	01/29/2018
Na	1000	M12679	10000	5	04/15/2017
As	20	M12958	1000	1	02/23/2018
Ca	500	M12942	10000	2.5	01/29/2018
Fe	300	M12949	10000	1.5	01/29/2018
Se	20	M12600	1000	1	02/10/2017
Tl	20	M12668	1000	1	04/15/2017
Si	100	M12943	1000	5	01/29/2018
B	20	M12957	1000	1	02/23/2018
Li	20	M12672	1000	1	04/15/2017
W	50	M12673	1000	2.5	04/15/2017
Ti	10	M12671	1000	0.5	04/15/2017
Sr	10	M12670	1000	0.5	04/15/2017
Sn	50	M12669	1000	2.5	04/15/2017
S	300	M12872	10000	1.5	11/30/2017

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

		Instrument:	ICP 6500
Standard Log #:	M13021	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	11/01/2016	Expiration Date:	06/30/2017
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12910 and **15 mL** Fe (10000 mg/L) M12992 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13022	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	11/01/2016	Expiration Date:	
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M12977, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12910, **0.5 mL** Mo (1000 mg/L) M12677, **0.5 mL** B (1000 mg/L) M12957, **0.5 mL** Sr (1000 mg/L) M12670, **0.5 mL** Li (1000 mg/L) M12672, **0.5 mL** Sn (1000 mg/L) M12669 and **0.5 mL** Ti (1000 mg/L) M12671.		

		Instrument:	ICP 6500
Standard Log #:	M13018	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	11/01/2016	Expiration Date:	06/30/2017
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12964 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M12882 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13019	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	11/01/2016	Expiration Date:	06/30/2017
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12964 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M12882 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13020	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	11/01/2016	Expiration Date:	6/30/2017
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12910 , **15 mL** Fe (10,000 mg/L) M12992 , **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M12964 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12882 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M13017	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	11/01/2016	Expiration Date:	06/30/2017
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12964, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M12882 and **1 mL** of Si (1000 mg/L) M12943. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M12946. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M12945, **10 mL** of Mn (10,000 mg/L) M12944, **10 mL** of Cr (10,000 mg/L) M12944, **10 mL** Pb (10,000 mg/L) M12861, **10 mL** of Zn (10,000 mg/L) M12989 and **10 mL** of Na (10,000 mg/L) M12679. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M12947, **10 mL** of Fe (10,000 mg/L) M12992, **10 mL** of Ca (10,000 mg/L) M12991 and **10 mL** Al (10,000 mg/L) M12948. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

Standard ID#:	M13015	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	10/31/2016	Lot #:	161238
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	CETAC
Standard Log #:	M13016	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/31/2016	Expiration Date:	10/31/2016
Prep:	Carefully mixed **3** parts HCl AB.631 with **1** part HNO_3 AB.628 in a hood.		

Standard Log #:	M13013	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	10/26/2016	Expiration Date:	04/26/2016
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M13014	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	10/26/2016	Expiration Date:	04/26/2016
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12629 and **60 g** hydroxylamine sulfate M12610 and brought up to volume.		

		Instrument:	ICP 6000
Standard Log #:	M13011	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	10/26/2016	Expiration Date:	04/15/2017
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M12672 Sn (1000 µg/mL) M12669 Sr (1000 µg/mL) M12670 Ti (1000 µg/mL) M12671 W (1000 µg/mL) M12673		

		Instrument:	ICP 6000
Standard Log #:	M13012	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	10/26/2016	Expiration Date:	04/15/2017

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M12672	1000	1	04/15/2017
W	100/300	M12673	1000	5	04/15/2017
Ti	10/30	M12671	1000	0.5	04/15/2017
Sr	10/30	M12670	1000	0.5	04/15/2017
Sn	20/60	M12669	1000	1	04/15/2017

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

		Instrument:	ICP
Standard Log #:	M13009	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	10/26/2016	Expiration Date:	06/30/2017

Prep:

Standard Conc. (ug/L)	Pipette the following:
1	**0.01 mL** of Custom Assurance Standard XCTWI-5-500 M12909 and **0.001 mL** W (1000 µg/mL) M12784 into 1L = *1 µg/L*
10	**0.10 mL** of Custom Assurance Standard XCTWI-5-500 M12909 and **0.01 mL** W (1000 µg/mL) M12784 into 1L = *10 µg/L*
100	**1 mL** of Custom Assurance Standard XCTWI-5-500 M12909 and **0.1 mL** W (1000 µg/mL) M12784 into 1L = *100 µg/L*
1000 (CCV)	**2 mL** of Custom Assurance Standard XCTWI-5-500 M12909 and **0.2 mL** W (1000 µg/mL) M12784 into 200mL = *1000 µg/L*
10000	**20 mL** of Custom Assurance Standard XCTWI-5-500 M12909 and **2 mL** W (1000 µg/mL) M12784 into 200mL = *10000 µg/L*

		Instrument:	ICP 6000
Standard Log #:	M13010	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	10/26/2016	Expiration Date:	04/15/2017

Prep:

Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12910, **6 mL** of Fe (10,000 mg/L) M12949, **0.1 mL** of Li (1000 µg/mL) M12672, **0.1 mL** of Sn (1000 µg/mL) M12669, **0.1 mL** of Sr (1000 µg/mL) M12670, **0.1 mL** of Ti (1000 µg/mL) M12671, and **0.1 mL** of W (1000 µg/mL) M12784 and brought up to volume using Milli-Q H_2O.
(0.5% HNO_3, 0.5% HCl)

		Instrument:	CETAC
Standard Log #:	M13006	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	10/25/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M13007	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/25/2016	Expiration Date:	10/25/2016
Prep:	Carefully mixed **3** parts HCl AB.631 with **1** part HNO_3 AB.628 in a hood.		

		Instrument:	CETAC
Standard Log #:	M13008	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	10/25/2016	Expiration Date:	04/25/2017
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.631 and dissolved **100 g** Stannous chloride M12926 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M13003	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/25/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M13004	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/25/2016	Expiration Date:	05/30/2017
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12856 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M13005	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	10/25/2016	Expiration Date:	05/30/2017
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12856 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	GFAA
Standard Log #:	M13000	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	10/25/2016	Expiration Date:	06/01/2017
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12862 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13001	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	10/25/2016	Expiration Date:	06/01/2017
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12862 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M13002	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	10/25/2016	Expiration Date:	06/01/2017
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M12863 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M12999	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	Pd Matrix Modifier
Date Received:	10/20/2016	Lot #:	1616501
Expiration Date (if any):	10/17/2017	Catalog #:	HP1900-100

Standard ID#:	M12998	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	10/19/2016	Lot #:	F267-16
Expiration Date (if any):		Catalog #:	LC251701

		Instrument:	ICP 6000
Standard Log #:	M12995	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	10/17/2016	Expiration Date:	04/15/2017
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M12957 and Si (1000 mg/L) M12675 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M12996	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	10/17/2016	Expiration Date:	04/15/2017
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12910, **0.05 mL** of B (1000 µg/mL) M12957, **0.05 mL** of Si (1000 µg/mL) M12675 and **3 mL** of Fe (10,000 mg/L) M12992 and brought up to volume using Milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M12997	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/17/2016	Expiration Date:	10/17/2016
Prep:	Carefully mixed **3** parts HCl AB.629 with **1** part HNO_3 AB.628 in a hood.		

Standard ID#:	M12992	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10000 mg/L
Date Received:	10/13/2016	Lot #:	16I080
Expiration Date (if any):	04/07/2018	Catalog #:	P/N 4400-10M261

Standard ID#:	M12993	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10000 mg/L
Date Received:	10/13/2016	Lot #:	16B102
Expiration Date (if any):	04/07/2018	Catalog #:	P/N 4400-10M11

Standard ID#:	M12994	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10000 mg/L
Date Received:	10/13/2016	Lot #:	16I092
Expiration Date (if any):	04/07/2018	Catalog #:	P/N 4400-10M671

Standard ID#:	M12988	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10000 mg/L
Date Received:	10/13/2016	Lot #:	16I165
Expiration Date (if any):	04/07/2018	Catalog #:	P/N 4400-10M411

Standard ID#:	M12989	Vendor:	CPI
Analyst:	NAH	Chemical:	Zn
Date Received:	10/13/2016	Lot #:	16H186
Expiration Date (if any):	04/07/2018	Catalog #:	P/N 4400-10M411

Standard ID#:	M12990	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10000 mg/L
Date Received:	1013/2016	Lot #:	16I168
Expiration Date (if any):	04/07/2018	Catalog #:	P/N 4400-10311

Standard ID#:	M12991	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10000 mg/L
Date Received:	10/13/2016	Lot #:	16I091
Expiration Date (if any):	04/07/2018	Catalog #:	P/N 4400-10M91

		Instrument:	CETAC
Standard Log #:	M12987	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/12/2016	Expiration Date:	10/12/2016
Prep:	Carefully mixed **3** parts HCl AB.629 with **1** part HNO_3 AB.628 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M12984	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	10/11/2016	Expiration Date:	04/15/2017
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M12946 and Na (10,000 mg/L) M12679 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M12985	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	10/11/2016	Expiration Date:	04/15/2017
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M12679 and **0.15 mL** K (10,000 µg/mL) M12946 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M12986	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	10/11/2016	Expiration Date:	10/11/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

		Instrument:	ICP 6000
Standard Log #:	M12981	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	10/11/2016	Expiration Date:	02/12/2017
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M12607 and K (1000 µg/mL) M12608 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M12982	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	10/11/2016	Expiration Date:	04/15/2017
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12910, **2.5 mL** of K (10,000 mg/L) M12946, **2.5 mL** of Na (10,000 mg/L) M12679 and **7.5 mL** of Fe (10,000 mg/L) M12949 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M12983	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	10/11/2016	Expiration Date:	02/12/2017
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M12607 and **0.5 mL** K (1000 µg/mL) M12608 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M12979	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	10/10/2016	Expiration Date:	04/10/2017
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M12980	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	10/10/2016	Expiration Date:	10/10/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard Log #:	M12978	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	10/07/2016	Expiration Date:	07/31/2017
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier MM12584 and **10 mL** Mg (10,000 mg/L) M12884 and brought up to volume.		

Standard ID#:	M12977	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	09/23/2016	Lot #:	39-001CR
Expiration Date (if any):	09/30/2016	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M12976	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/21/2016	Expiration Date:	09/21/2016
Prep:	Carefully mixed **3** parts HCl AB.624 with **1** part HNO_3 AB.626 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12972	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	09/16/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M112788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12973	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	09/16/2016	Expiration Date:	05/30/2017
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12856 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12974	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/16/2016	Expiration Date:	09/16/2016
Prep:	Carefully mixed **3** parts HCl AB.623 with **1** part HNO_3 AB.626 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12975	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	09/16/2016	Expiration Date:	03/16/2017
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.623 and dissolved **100 g** Stannous chloride M12864 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12969	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	09/16/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12970	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	09/16/2016	Expiration Date:	05/30/2017
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12856 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12971	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	09/16/2016	Expiration Date:	05/30/2017
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12856 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M12967	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	09/15/2016	Expiration Date:	09/15/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard Log #:	M12968	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	09/15/2016	Expiration Date:	09/15/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard Log #:	M12965	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	09/14/2016	Expiration Date:	0314/2017
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M12966	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	09/14/2016	Expiration Date:	09/14/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard ID#:	M12964	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	09/13/2016	Lot #:	1-136WG
Expiration Date (if any):	09/30/2017	Catalog #:	XCTWI-5-500

		Instrument:	CETAC
Standard Log #:	M12963	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/08/2016	Expiration Date:	09/08/2017
Prep:	Carefully mixed **3** parts HCl AB.624 with **1** part HNO_3 AB.625 in a hood.		

Standard Log #:	M12961	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	09/06/2016	Expiration Date:	09/06/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard ID#:	M12962	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 ug/mL
Date Received:	09/06/2016	Lot #:	1518025
Expiration Date (if any):	03/01/2016	Catalog #:	HP10M67-1

Standard Log #:	M12959	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	09/01/2016	Expiration Date:	09/01/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard Log #:	M12960	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	09/01/2016	Expiration Date:	09/01/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard ID#:	M12956	Vendor:	CPI
Analyst:	NAH	Chemical:	K 1000 mg/L
Date Received:	08/31/2016	Lot #:	16E154
Expiration Date (if any):	02/23/2018	Catalog #:	P/N4400-1000411

Standard ID#:	M12957	Vendor:	CPI
Analyst:	NAH	Chemical:	B 1000 mg/L
Date Received:	08/31/2016	Lot #:	16D064
Expiration Date (if any):	02/23/2018	Catalog #:	P/N S4400-100074

Standard ID#:	M12958	Vendor:	CPI
Analyst:	NAH	Chemical:	AS 1000 mg/L
Date Received:	08/31/2016	Lot #:	16H061
Expiration Date (if any):	02/23/2018	Catalog #:	P/N S4400-100031

		Instrument:	CETAC
Standard Log #:	M12955	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/30/2016	Expiration Date:	08/30/2016
Prep:	Carefully mixed **3** parts HCl AB.624 with **1** part HNO_3 AB.625 in a hood.		

		Instrument:	ICP
Standard Log #:	M12954	Standard:	As Pb ICV1
Analyst:	NAH	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	08/22/2016	Expiration Date:	11/11/2017
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** of As (1000 mg/L) M12860 and **0.5 mL** Pb (10,000 mg/L) M12861 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12953	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/18/2016	Expiration Date:	08/18/2016
Prep:	Carefully mixed **3** parts HCl AB.623 with **1** part HNO_3 AB.622 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12952	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/16/2016	Expiration Date:	08/16/2016
Prep:	Carefully mixed **3** parts HCl AB.623 with **1** part HNO_3 AB.622 in a hood.		

Standard ID#:	M12951	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Std Ca, Mg, & Na
Date Received:	08/11/2016	Lot #:	38-096CR
Expiration Date (if any):	08/30/2017	Catalog #:	XCTWI-1-500

Standard Log #:	M12950	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	08/09/2016	Expiration Date:	08/08/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938. Dilute to 20 L and mix.		

Standard ID#:	M12945	Vendor:	CPI
Analyst:	NAH	Chemical:	Copper 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	16C137
Expiration Date (if any):	01/29/2018	Catalog #:	S4400-10M141

Standard ID#:	M12946	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	16D218
Expiration Date (if any):	01/29/2018	Catalog #:	4400-10M411

Standard ID#:	M12947	Vendor:	CPI
Analyst:	NAH	Chemical:	Magnesium 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	16E106
Expiration Date (if any):	01/29/2018	Catalog #:	4400-10M311

Standard ID#:	M12948	Vendor:	CPI
Analyst:	NAH	Chemical:	Aluminum 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	16B102
Expiration Date (if any):	01/29/2018	Catalog #:	4400-10M11

Standard ID#:	M12949	Vendor:	CPI
Analyst:	NAH	Chemical:	Iron 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	16F173
Expiration Date (if any):	01/29/2018	Catalog #:	4400-10M261

		Instrument:	CETAC
Standard Log #:	M12940	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/04/2016	Expiration Date:	08/04/2016
Prep:	Carefully mixed **3** parts HCl AB.623 with **1** part HNO_3 AB.622 in a hood.		

Standard ID#:	M12941	Vendor:	CPI
Analyst:	NAH	Chemical:	Chromium 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	13D123
Expiration Date (if any):	01/29/2018	Catalog #:	S4400-10M121

Standard ID#:	M12942	Vendor:	CPI
Analyst:	NAH	Chemical:	Calcium 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	16E067
Expiration Date (if any):	01/29/2018	Catalog #:	4400-10M91

Standard ID#:	M12943	Vendor:	CPI
Analyst:	NAH	Chemical:	Silicon 1000 ug/mL
Date Received:	08/04/2016	Lot #:	16D134
Expiration Date (if any):	01/29/2018	Catalog #:	S4400-1000504F

Standard ID#:	M12944	Vendor:	CPI
Analyst:	NAH	Chemical:	Manganese 10,000 ug/mL
Date Received:	08/04/2016	Lot #:	16B024
Expiration Date (if any):	01/29/2018	Catalog #:	S4400-10M321

Standard Log #:	M12938b	Reagent:	10N NaOH
Analyst:	LJF		
Prep Date:	08/03/2016	Expiration Date:	02/03/2017
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W38729 and brought up to volume.		

Standard Log #:	M12939	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	08/03/2016	Expiration Date:	08/03/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12938b. Dilute to 20 L and mix.		

Standard ID#:	M12938	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	07/27/2016	Lot #:	2-46MKB
Expiration Date (if any):	07/20/2017	Catalog #:	XSPIKE-1-250

Standard Log #:	M12937	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/26/2016	Expiration Date:	01/26/2017
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M12936	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	07/20/2016	Expiration Date:	07/20/2016
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12878. Dilute to 20 L and mix.		

Standard Log #:	M12935	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	07/14/2016	Expiration Date:	11/29/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M12599	1000	0.2
Al	9.6	M12885	**10000**	0.048
As	32	M12860	1000	1.6
Ba	2	M12473	1000	0.1
Be	1.6	M12667	1000	0.08
Ca	56	M12886	**10000**	0.28
Cd	1.6	M12674	1000	0.08
Co	9.6	M12678	1000	0.48
Cr	5.6	M12470	**10000**	0.028
Cu	16	M12472	**10000**	0.08
Fe	72	M12887	**10000**	0.36
Mg	32	M12884	**10000**	0.16
Mn	6	M12533	**10000**	0.03
Mo	9.6	M12677	1000	0.48
Ni	4.8	M12681	1000	0.24
Pb	10	M12861	**10000**	0.05
Sb	32	M12602	1000	1.6
Se	16	M12600	1000	0.8
Tl	19	M12668	1000	0.95
V	3.2	M12676	1000	0.16
Zn	12	M12680	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12934	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 L2 Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	04/15/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	14.4	M12672	1000	0.72
Sn	20	M12669	1000	1
Sr	3.2	M12670	1000	0.16
Ti	9.6	M12671	1000	0.48
W	24	M12673	1000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12933	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	05/30/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M12876	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12932	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 k&na Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	04/15/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	2640	M12883	10000	13.2
Na	960	M12679	10000	4.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12931	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	04/15/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M12471	1000	2.6
Si	192	M12675	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12930	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	07/14/2016	Expiration Date:	11/29/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M12599	1000	0.2
Al	36	M12885	**10000**	0.18
As	24	M12860	1000	1.2
Ba	1.8	M12473	1000	0.09
Be	0.6	M12667	1000	0.03
Ca	100	M12886	**10000**	0.5
Cd	2.0	M12674	1000	0.1
Co	4	M12678	1000	0.2
Cr	4	M12470	**10000**	0.02
Cu	7	M12472	**10000**	0.035
Fe	100	M12887	**10000**	0.5
Mg	40	M12884	**10000**	0.2
Mn	4	M12533	**10000**	0.02
Mo	7	M12677	1000	0.35
Ni	6	M12681	1000	0.2
Pb	4	M12861	**10000**	0.02
Sb	12	M12602	1000	0.6
Se	13	M12600	1000	0.65
Tl	20	M12668	1000	0.75
V	5	M12676	1000	0.25
Zn	10	M12680	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12929	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 k&na Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	04/15/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	500	M12883	10000	2.5
Na	600	M12679	10000	3

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12929B	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 L2 Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	04/15/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	10	M12672	1000	0.5
Sn	10	M12669	1000	0.5
Sr	2	M12670	1000	0.1
Ti	8	M12671	1000	0.8
W	36	M12673	1000	1.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12928	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	05/30/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M12876	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12927	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	07/14/2016	Expiration Date:	04/15/2017

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M12471	1000	0.8
Si	200	M12675	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	ICP 6000
Standard Log #:	M12924	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	07/14/2016	Expiration Date:	10/15/2016
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12733 , **0.05 mL** of B (1000 µg/mL) M12471 , **0.05 mL** of Si (1000 µg/mL) M12675 and **3 mL** of Fe (10,000 mg/L) M12887 and brought up to volume using Milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M12925	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/14/2016	Expiration Date:	07/14/2016
Prep:	Carefully mixed **3** parts HCl AB.621 with **1** part HNO_3 AB.622 in a hood.		

Standard ID#:	M12926	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	07/14/2016	Lot #:	F161-11
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M12923	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	07/13/2016	Expiration Date:	07/13/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12878. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M12921	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	07/12/2016	Expiration Date:	02/10/2017
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M12602 **1.0 mL** of As (1000 mg/L) M12860 **2.0 mL** of Se (1000 mg/L) M12600 **0.045 mL** of Pb (10,000 mg/L) M12861 **0.4 mL** of Tl (1000 mg/L) M12668 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M12922	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	07/12/2016	Expiration Date:	01/12/2017
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M12920	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	07/12/2016	Expiration Date:	02/10/2017
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M12602 **3.2 mL** of As (1000 mg/L) M12860 **3.2 mL** of Se (1000 mg/L) M12600 **0.08 mL** of Pb (10,000 mg/L) M12861 **1.0 mL** of Tl (1000 mg/L) M12668 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	ICP 6000
Standard Log #:	M12919	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	07/08/2016	Expiration Date:	02/12/2017
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M12607 and **0.5 mL** K (1000 µg/mL) M12608 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M12915	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	07/07/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12916	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	07/07/2016	Expiration Date:	05/30/2017
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12856 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12917	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	07/07/2016	Expiration Date:	07/07/2016
Prep:	Carefully mixed **3** parts HCl AB.621 with **1** part HNO_3 AB.622 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12918	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	07/07/2016	Expiration Date:	11/06/2016
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.621 and dissolved **100 g** Stannous chloride M12802 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12912	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	07/07/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12913	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	07/07/2016	Expiration Date:	05/30/2017
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12856 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12914	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	07/07/2016	Expiration Date:	05/30/2017
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12856 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12911	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/28/2016	Expiration Date:	06/28/2016
Prep:	Carefully mixed **3** parts HCl AB.621 with **1** part HNO_3 AB.622 in a hood.		

Standard ID#:	M12909	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard 23 meta
Date Received:	06/27/2016	Lot #:	2-18MKB
Expiration Date (if any):	06/30/2017	Catalog #:	XCTWI-5-500

Standard ID#:	M12910	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Interference A
Date Received:	06/27/2016	Lot #:	12-165YPX
Expiration Date (if any):	06/30/2016	Catalog #:	INT-A1

		Instrument:	CETAC
Standard Log #:	M12906	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	06/21/2016	Expiration Date:	06/21/2016
Prep:	Carefully mixed **3** parts HCl AB.621 with **1** part HNO_3 AB.622 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12907	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	06/21/2016	Expiration Date:	11/06/2016
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.621 and dissolved **100 g** Stannous chloride M12802 and brought up to volume.		

Standard ID#:	M12908	Vendor:	AMCO Clear
Analyst:	NAH	Chemical:	Amco clear turbidity std 2.0 NTU
Date Received:	06/21/2016	Lot #:	C583585
Expiration Date (if any):	7/2017	Catalog #:	#8008

		Instrument:	CETAC
Standard Log #:	M12904	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	06/21/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12905	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	06/21/2016	Expiration Date:	05/30/2017
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12856 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12901	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	06/21/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12902	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	06/21/2016	Expiration Date:	05/30/2017
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12856 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12903	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	06/21/2016	Expiration Date:	05/30/2017
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12856 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard ID#:	M12900	Vendor:	HACH
Analyst:	NAH	Chemical:	StablCal Standard, 200 NTU or FNU
Date Received:	06/17/2016	Lot #:	A6036
Expiration Date (if any):	02/2018	Catalog #:	2660449

Standard Log #:	M12899	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	06/16/2016	Expiration Date:	06/16/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH W38729. Dilute to 20 L and mix.		

Standard Log #:	M12898	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	06/13/2016	Expiration Date:	12/13/2016
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

		Instrument:	ICP 6500
Standard Log #:	M12896	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	06/09/2016	Expiration Date:	10/2016
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12769 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M12882 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M12897	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	06/09/2016	Expiration Date:	10/2016
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12769 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M12882 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M12894	Standard:	DOD MRL
Analyst:	NAH	Concentrations:	4 ug/L: Be. 5 ug/L: Cd. 10 ug/L: Ag, Ba, Co, Cr, Cu, Mn, Mo. Ni, Pb, V, Zn, Sr, and Ti. 20 ug/L: Sb, As, Se, Tl, Li, Sn and B. 50 ug/L: W. 100 ug/L: Si. 300 ug/L: Fe. 400 ug/L Fe. 500 ug/L: S, Ca and Mg. 1000 ug/L: K and Na.
Prep Date:	06/09/2016	Expiration Date:	10/2016
Prep:	Into a 500 mL volumetric flask, pipetted **10 mL** of MRL Base STD M12893 and brought to volume with Milli-Q H_2O. (5% HNO_3 & 5% HCL)		

		Instrument:	ICP 6500
Standard Log #:	M12895	Standard:	ICVLL
Analyst:	NAH	Concentrations:	12 ug/L: Be. 15 ug/L: Cd. 30 ug/L: Ag, Ba, Co, Cr, Cu, Mn, Mo. Ni, Pb, V, Zn, Sr, and Ti. 60 ug/L: Sb, As, Se, Tl, Li, Sn and B. 150 ug/L: W. 300 ug/L: Si. 900 ug/L: Fe. 1200 ug/L Al. 1500 ug/L: S, Ca and Mg. 3000 ug/L: K and Na.
Prep Date:	06/09/2016	Expiration Date:	10/2016
Prep:	Into a 500 mL volumetric flask, pipetted 30 **mL** of MRL Base STD M12893 and brought to volume with Milli-Q H_2O. (5% HNO_3 & 5% HCL)		

MRL BASE STD M12893

Analyst NAH

Prep Date 06/09/2016

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M12599	1000	1	02/10/2017
Al	400	M12885	10000	2	12/01/2017
Ba	10	M12473	1000	0.5	10/15/2016
Be	4	M12667	1000	0.2	04/15/2017
Cd	5	M12674	1000	0.25	04/15/2017
Co	10	M12678	1000	0.5	04/15/2017
Cr	10	M12470	10000	0.05	10/15/2016
Cu	10	M12472	10000	0.05	10/15/2016
Mg	500	M12884	10000	2.5	12/01/2017
Mn	10	M12533	10000	0.05	11/29/2016
Mo	10	M12677	1000	0.5	04/15/2017
Ni	10	M12681	1000	0.5	04/15/2017
Pb	10	M12861	10000	0.05	11/11/2017
Sb	20	M12602	1000	1	02/10/2017
V	10	M12676	1000	0.5	04/15/2017
Zn	10	M12680	10000	0.05	04/15/2017
K	1000	M12883	10000	5	12/01/2017
Na	1000	M12679	10000	5	04/15/2017
As	20	M12860	1000	1	11/11/2017
Ca	500	M12886	10000	2.5	12/01/2017
Fe	300	M12887	10000	1.5	12/01/2017
Se	20	M12600	1000	1	02/10/2017
Tl	20	M12668	1000	1	04/15/2017
Si	100	M12675	1000	5	04/15/2017
B	20	M12471	1000	1	10/15/2016
Li	20	M12672	1000	1	04/15/2017
W	50	M12673	1000	2.5	04/15/2017
Ti	10	M12671	1000	0.5	04/15/2017
Sr	10	M12670	1000	0.5	04/15/2017
Sn	50	M12669	1000	2.5	04/15/2017
S	300	M12876	10000	1.5	05/30/2017

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Expiration Date: 10/2016

		Instrument:	ICP 6500
Standard Log #:	M12892	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	06/09/2016	Expiration Date:	12/2016
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12733 , **15 mL** Fe (10,000 mg/L) M12887 , **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M12769 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12882 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M12890	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	06/09/2016	Expiration Date:	10/2016
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M12819, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12733, **0.5 mL** Mo (1000 mg/L) M12677, **0.5 mL** B (1000 mg/L) M12471, **0.5 mL** Sr (1000 mg/L) M12670, **0.5 mL** Li (1000 mg/L) M12672, **0.5 mL** Sn (1000 mg/L) M12669 and **0.5 mL** Ti (1000 mg/L) M12671.		

		Instrument:	ICP 6500
Standard Log #:	M12891	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	06/09/2016	Expiration Date:	12/2016
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12733 and **15 mL** Fe (10000 mg/L) M12887 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M12889	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	06/09/2016	Expiration Date:	02/28/2017
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12769, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M12882 and **1 mL** of Si (1000 mg/L) M12675. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M12883. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M12472, **10 mL** of Mn (10,000 mg/L) M12533, **10 mL** of Cr (10,000 mg/L) M12470, **10 mL** Pb (10,000 mg/L) M12861, **10 mL** of Zn (10,000 mg/L) M12680 and **10 mL** of Na (10,000 mg/L) M12679. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M12884, **10 mL** of Fe (10,000 mg/L) M12887, **10 mL** of Ca (10,000 mg/L) M12886 and **10 mL** Al (10,000 mg/L) M12885. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

Standard ID#:	M12886	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	06/08/2016	Lot #:	16E067
Expiration Date (if any):	12/01/2017	Catalog #:	4400-10M91

Standard ID#:	M12887	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	06/08/2016	Lot #:	16D220
Expiration Date (if any):	12/01/2017	Catalog #:	4400-10M261

Standard ID#:	M12888	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	06/01/2016	Lot #:	16E033
Expiration Date (if any):	12/01/2017	Catalog #:	4400-10M671

Standard ID#:	M12882	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	06/08/2016	Lot #:	37-058CR
Expiration Date (if any):	06/30/2017	Catalog #:	XCTWI-4-500

Standard ID#:	M12883	Vendor:	CPI
Analyst:	NAH	Chemical:	K 10,000 mg/L
Date Received:	06/08/2016	Lot #:	16D014
Expiration Date (if any):	12/01/2017	Catalog #:	4400-10M411

Standard ID#:	M12884	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10,000 mg/L
Date Received:	06/08/2016	Lot #:	16E106
Expiration Date (if any):	12/01/2017	Catalog #:	4400-10M311

Standard ID#:	M12885	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	06/08/2016	Lot #:	16B102
Expiration Date (if any):	12/01/2017	Catalog #:	4400-10M11

Standard Log #:	M12879	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	06/06/2016	Expiration Date:	06/06/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH W38729. Dilute to 20 L and mix.		

Standard Log #:	M12880	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	06/06/2016	Expiration Date:	06/06/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH W38729. Dilute to 20 L and mix.		

Standard Log #:	M12881	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	06/06/2016	Expiration Date:	06/06/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH W38729. Dilute to 20 L and mix.		

Standard ID#:	M12876	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Sulfur 10,000 mg/L
Date Received:	06/06/2016	Lot #:	AJ16-45SY
Expiration Date (if any):	05/30/2016	Catalog #:	PLS9-3Y

Standard ID#:	M12877	Vendor:	FISHER
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	06/06/2016	Lot #:	158648
Expiration Date (if any):		Catalog #:	S271-500

Standard Log #:	M12878	Reagent:	10N NaOH
Analyst:	LJF		
Prep Date:	06/06/2016	Expiration Date:	06/06/2017
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH W38729 and brought up to volume.		

Standard Log #:	M12875	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 22 µg/L Tl 24 µg/L Sb, Se 0.8 µg/L Ag
Prep Date:	06/03/16	Expiration Date:	02/10/17

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M12860	10,000
Pb	0.1	10,000	M12861	10,000
Tl	1	1000	M12668	10,000
Se	1	1000	M12600	10,000
Sb	1	1000	M12602	10,000
Ag	0.1	1000	M12599	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1	10,000	10
Pb	0.6	10,000	6
Tl	2.2	10,000	22
Se	2.4	10,000	24
Sb	2.4	10,000	24
Ag	0.8	1000	0.8

Standard ID#:	M12873	Vendor:	CPI
Analyst:	NAH	Chemical:	Sodium 1000 mg/L
Date Received:	06/03/16	Lot #:	16D063
Expiration Date (if any):	11/27/17	Catalog #:	4400-1000521

Standard ID#:	M12874	Vendor:	CPI
Analyst:	NAH	Chemical:	Potassium 1000 mg/L
Date Received:	06/03/16	Lot #:	16B100
Expiration Date (if any):	11/27/17	Catalog #:	4400-1000411

		Instrument:	ICP 6000
Standard Log #:	M12871	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	06/02/16	Expiration Date:	02/12/17
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M12607 and K (1000 µg/mL) M12608 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

Standard ID#:	M12872	Vendor:	SCP Science Plasma Cal
Analyst:	NAH	Chemical:	Sulfur 10,000 mg/L
Date Received:	06/02/16	Lot #:	S160222009
Expiration Date (if any):	11/2017	Catalog #:	140-060-161

		Instrument:	GFAA
Standard Log #:	M12868	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	06/01/16	Expiration Date:	06/01/17
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12862 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M12869	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	06/01/16	Expiration Date:	06/01/17
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12862 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M12870	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	06/01/16	Expiration Date:	06/01/17
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M12863 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M12867	Vendor:	SpexCertiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	05-27-2016	Lot #:	37-024CR
Expiration Date (if any):	05/20/2017	Catalog #:	XSPIKE-1-250

Standard ID#:	M12866	Vendor:	Fisher, distributer (saint-gobain, manu
Analyst:	NAH	Chemical:	Chemware Ultra pure PTFE Boiling St
Date Received:	05/23/2016	Lot #:	5608-6E001
Expiration Date (if any):		Catalog #:	0919120

Standard ID#:	M12864	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	05/19/2016	Lot #:	F120-15
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M12865	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	05/20/2016	Expiration Date:	05/20/2017
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard ID#:	M12862	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICAL/CCV
Date Received:	05/19/2016	Lot #:	J2-MEB581070
Expiration Date (if any):	06/01/2017	Catalog #:	CTI-SPK-1

Standard ID#:	M12863	Vendor:	Inorganic Ventures
Analyst:	MDS	Chemical:	GFAA ICV/SPIKE
Date Received:	05/19/2016	Lot #:	J2-MEB581069
Expiration Date (if any):	06/01/2017	Catalog #:	CTI-GFCAL-1

Standard ID#:	M12860	Vendor:	CPI
Analyst:	NAH	Chemical:	Arsenic 1000 mg/L
Date Received:	05/17/2016	Lot #:	16B070
Expiration Date (if any):	11/11/2017	Catalog #:	S4400-100031

Standard ID#:	M12861	Vendor:	CPI
Analyst:	NAH	Chemical:	Lead 10,000 mg/L
Date Received:	05/17/2016	Lot #:	16D240
Expiration Date (if any):	11/11/2017	Catalog #:	4400-10M281

Standard ID#:	M12859	Vendor:	Alfa Aesar Specpure
Analyst:	MDS	Chemical:	Nickel Nitrate Matrix Modifier
Date Received:	05/12/2016	Lot #:	921812Q
Expiration Date (if any):	06/30/2017	Catalog #:	39043

Standard ID#:	M12856	Vendor:	SPEX CertPrep
Analyst:	LJF	Chemical:	Hg
Date Received:	05/10/2016	Lot #:	CL8-144HGY
Expiration Date (if any):	05/30/2017	Catalog #:	CLHG4-2Y

Standard Log #:	M12857	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	05/10/2016	Expiration Date:	11/10/2016
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M12858	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	05/10/2016	Expiration Date:	11/10/2016
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12610 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12852	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	05/06/2016	Expiration Date:	08/18/2017
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12853	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	05/06/2016	Expiration Date:	06/30/2016
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12532 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12854	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	05/06/2016	Expiration Date:	05/06/2016
Prep:	Carefully mixed **3** parts HCl AB.618 with **1** part HNO_3 AB.619 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12855	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	05/06/2016	Expiration Date:	11/06/2016
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.618 and dissolved **100 g** Stannous chloride M12802 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12849	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	05/06/2016	Expiration Date:	08/18/2016
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12850	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	05/06/2016	Expiration Date:	06/30/2016
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12851	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	05/06/2016	Expiration Date:	06/30/2016
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12532 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	ICP 6000
Standard Log #:	M12848	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	05/04/16	Expiration Date:	12/30/16
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12733, **6 mL** of Fe (10,000 mg/L) M12745, **0.1 mL** of Li (1000 µg/mL) M12672, **0.1 mL** of Sn (1000 µg/mL) M12669, **0.1 mL** of Sr (1000 µg/mL) M12670, **0.1 mL** of Ti (1000 µg/mL) M12671, and **0.1 mL** of W (1000 µg/mL) M12673 and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	GFAA
Standard Log #:	M12846	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	04/29/16	Expiration Date:	06/01/16
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12504 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M12847	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	04/29/16	Expiration Date:	06/01/16
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M12505 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M12843	Vendor:	FISHER
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	04/28/16	Lot #:	161238
Expiration Date (if any):		Catalog #:	H331-500

		Instrument:	ICP 6000
Standard Log #:	M12844	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	04/29/16	Expiration Date:	02/28/17
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12769 and **1.0 mL** Si (1000 mg/L) M12675 and brought up to volume using milli-Q H_2O.		

		Instrument:	GFAA
Standard Log #:	M12845	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	04/29/16	Expiration Date:	06/01/16
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12504 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M12841	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	04/22/2016	Expiration Date:	04/15/2017
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M12744 and Na (10,000 mg/L) M12679 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M12842	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	04/22/2016	Expiration Date:	12/30/2016
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12733, **2.5 mL** of K (10,000 mg/L) M12744, **2.5 mL** of Na (10,000 mg/L) M12679 and **7.5 mL** of Fe (10,000 mg/L) M12745 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M12840	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 S Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	240	M12770	10000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12839	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 S Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
S	200	M12770	10000	1.0

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12838	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 B&Si Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	52	M12471	1000	2.6
Si	192	M12675	1000	9.6

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12837	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 B&Si Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
B	16	M12471	1000	0.8
Si	200	M12675	1000	10

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12836	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 k&na Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	2640	M12744	10000	13.2
Na	960	M12679	10000	4.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12835	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 k&na Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
K	500	M12744	10000	2.5
Na	600	M12679	10000	3

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12834	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3050 L2 Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	14.4	M12672	1000	0.72
Sn	20	M12669	1000	1
Sr	3.2	M12670	1000	0.16
Ti	9.6	M12671	1000	0.48
W	24	M12673	1000	1.2

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12833	Instrument:	ICP
Analyst:	NAH	Standard:	LOQ 3010 L2 Spiking Solution
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Li	10	M12672	1000	0.5
Sn	10	M12669	1000	0.5
Sr	2	M12670	1000	0.1
Ti	8	M12671	1000	0.8
W	36	M12673	1000	1.8

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12832	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3050 DOD Metals Spiking S
Prep Date:	0419/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M12599	1000	0.2
Al	9.6	M12713	**10000**	0.048
As	32	M12315	1000	1.6
Ba	2	M12473	1000	0.1
Be	1.6	M12667	1000	0.08
Ca	56	M12716	**10000**	0.28
Cd	1.6	M12674	1000	0.08
Co	9.6	M12678	1000	0.48
Cr	5.6	M12470	**10000**	0.028
Cu	16	M12472	**10000**	0.08
Fe	72	M12745	**10000**	0.36
Mg	32	M12715	**10000**	0.16
Mn	6	M12733	**10000**	0.03
Mo	9.6	M12677	1000	0.48
Ni	4.8	M12681	1000	0.24
Pb	10	M12313	**10000**	0.05
Sb	32	M12602	1000	1.6
Se	16	M12600	1000	0.8
Tl	19	M12668	1000	0.95
V	3.2	M12676	1000	0.16
Zn	12	M12680	**10000**	0.06

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12831	Instrument:	ICP 6500
Analyst:	NAH	Standard:	LOQ 3010 DOD Metals Spiking S
Prep Date:	04/19/2016	Expiration Date:	10/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	4	M12599	1000	0.2
Al	36	M12713	**10000**	0.18
As	24	M12315	1000	1.2
Ba	1.8	M12473	1000	0.09
Be	0.6	M12667	1000	0.03
Ca	100	M12716	**10000**	0.5
Cd	2.0	M12674	1000	0.1
Co	4	M12678	1000	0.2
Cr	4	M12470	**10000**	0.02
Cu	7	M12472	**10000**	0.035
Fe	100	M12745	**10000**	0.5
Mg	40	M12715	**10000**	0.2
Mn	4	M12533	**10000**	0.02
Mo	7	M12677	1000	0.35
Ni	6	M12681	1000	0.2
Pb	4	M12313	**10000**	0.02
Sb	12	M12602	1000	0.6
Se	13	M12600	1000	0.65
Tl	20	M12668	1000	0.75
V	5	M12676	1000	0.25
Zn	10	M12680	**10000**	0.05

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12830	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	041916	Expiration Date:	101916
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M11748 and brought up to volume.		

Standard Log #:	M12827	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	041816	Expiration Date:	101816
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard ID#:	M12828	Vendor:	Environmental Express
Analyst:	NAH	Chemical:	Yttrium 10,000 ug/mL
Date Received:	04/18/2016	Lot #:	1518025
Expiration Date (if any):	10/14/2017	Catalog #:	hp10m67-1

Standard ID#:	M12829	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 ug/mL
Date Received:	04/18/2016	Lot #:	16a118
Expiration Date (if any):	10/12/2017	Catalog #:	4400-10m671

		Instrument:	CETAC
Standard Log #:	M12823	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	041816	Expiration Date:	063016
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12824	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	041816	Expiration Date:	063016
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12825	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	041816	Expiration Date:	010118
Prep:	Carefully mixed **3** parts HCl AB.618 with **1** part HNO_3 AB.617 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12826	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	041816	Expiration Date:	101816
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.618 and dissolved **100 g** Stannous chloride M12802 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12820	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	041816	Expiration Date:	081817
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12821	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	041816	Expiration Date:	063016
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12822	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	041816	Expiration Date:	063016
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard ID#:	M12819	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custom Assurance Std
Date Received:	04/12/2016	Lot #:	36-051CR
Expiration Date (if any):	4/30/2017	Catalog #:	XSPIKE-1-250

		Instrument:	CETAC
Standard Log #:	M12816	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	04/01/16	Expiration Date:	02/26/17
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.615 and dissolved **100 g** Stannous chloride M12789 and brought up to volume.		

Standard Log #:	M12817	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	04/01/16	Expiration Date:	10/01/16
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M12818	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	04/01/16	Expiration Date:	10/01/16
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12610 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12813	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	04/01/16	Expiration Date:	08/18/17
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12814	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	04/01/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12815	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	04/01/16	Expiration Date:	10/01/17
Prep:	Carefully mixed **3** parts HCl AB.615 with **1** part HNO_3 AB.614 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12810	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	04/01/16	Expiration Date:	08/18/17
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12811	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	04/01/16	Expiration Date:	06/30/16
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12812	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	04/01/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M12809	Instrument:	ICP 6500
Analyst:	MDS	Standard:	MDL 21 Metals Spiking Solution
Prep Date:	03/22/2016	Expiration Date:	06/02/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (5% HNO_3, 5% HCl)

Analyte	MDL Conc. (ug/L)	Std. ID #	Std Conc	Volume (mL) pipetted into 1 L
Ag	5	M12599	1000	0.25
Al	10	M12713	**10000**	0.05
As	20	M12315	1000	1
Ba	2	M12473	1000	0.1
Be	0.5	M12667	1000	0.025
Ca	50	M12716	**10000**	0.25
Cd	0.5	M12674	1000	0.025
Co	2.5	M12678	1000	0.125
Cr	50	M12470	**10000**	0.25
Cu	10	M12472	**10000**	0.05
Fe	40	M12714	**10000**	0.2
Mg	25	M12715	**10000**	0.125
Mn	5	M12533	**10000**	0.025
Mo	2.5	M12677	1000	0.125
Ni	5	M12681	1000	0.25
Pb	10	M12313	**10000**	0.05
Sb	20	M12602	1000	1
Se	20	M12600	1000	1
Tl	20	M12668	1000	1
V	5	M12676	1000	0.25
Zn	5	M12680	**10000**	0.025

Of this Base standard, pipet **10 mL** into a 500 mL volumetric flask to create a working std or **1 mL** into a 50 mL digestion tube for a digested working standard.

Standard Log #:	M12808	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	03/17/16	Expiration Date:	03/17/17
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.534 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

		Instrument:	GFAA
Standard Log #:	M12805	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	03/15/2016	Expiration Date:	06/01/2016
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12504 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M12806	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	03/15/2016	Expiration Date:	06/01/2016
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12504 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M12807	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	03/15/2016	Expiration Date:	06/01/2016
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M12505 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

Standard ID#:	M12802	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	03/09/16	Lot #:	F053-07
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M12803	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	03/09/16	Expiration Date:	09/09/17
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard ID#:	M12804	Vendor:	CPI
Analyst:	NAH	Chemical:	Arsenic 10,000 mg/L
Date Received:	03/09/16	Lot #:	14A276
Expiration Date (if any):	09/03/17	Catalog #:	S4400-10M31

		Instrument:	ICP 6000
Standard Log #:	M12800	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	03/08/2016	Expiration Date:	04/15/2017
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M12672 Sn (1000 µg/mL) M12669 Sr (1000 µg/mL) M12670 Ti (1000 µg/mL) M12671 W (1000 µg/mL) M12784		

		Instrument:	ICP 6000
Standard Log #:	M12801	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	03/08/2016	Expiration Date:	04/15/2017

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M12672	1000	1	04/15/2017
W	100/300	M12784	1000	5	08/11/2017
Ti	10/30	M12671	1000	0.5	04/15/2017
Sr	10/30	M12670	1000	0.5	04/15/2017
Sn	20/60	M12669	1000	1	04/15/2017

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

Standard Log #:	M12798	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	03/07/16	Expiration Date:	03/07/17
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard Log #:	M12799	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	03/07/16	Expiration Date:	03/07/17
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard Log #:	M12797	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	02/29/16	Expiration Date:	08/29/16
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12548 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12793	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	02/26/16	Expiration Date:	08/18/17
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12794	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	02/26/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12795	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/26/16	Expiration Date:	10/01/17
Prep:	Carefully mixed **3** parts HCl AB.615 with **1** part HNO_3 AB.614 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12796	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	02/26/16	Expiration Date:	02/26/17
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.615 and dissolved **100 g** Stannous chloride M12789 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12790	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/26/16	Expiration Date:	08/18/17
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12788 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12791	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/26/16	Expiration Date:	06/30/16
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12792	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	02/26/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard ID#:	M12787	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10,000 mg/L
Date Received:	02/24/2016	Lot #:	16A118
Expiration Date (if any):	08/18/2017	Catalog #:	4400-10M671

Standard ID#:	M12788	Vendor:	CPI
Analyst:	NAH	Chemical:	Mercury 1000 mg/L
Date Received:	02/24/2016	Lot #:	15J139
Expiration Date (if any):	08/18/2017	Catalog #:	S4400-1000331

Standard ID#:	M12789	Vendor:	LabChem
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	02/24/16	Lot #:	F053-07
Expiration Date (if any):		Catalog #:	LC251701

Standard Log #:	M12786	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	02/22/16	Expiration Date:	02/22/17
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard Log #:	M12785	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	02/18/16	Expiration Date:	02/18/17
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard Log #:	M12783	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	02/16/16	Expiration Date:	08/16/16
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard ID#:	M12784	Vendor:	CPI
Analyst:	NAH	Chemical:	Tungsten
Date Received:	02/16/2016	Lot #:	15k204
Expiration Date (if any):	08/11/2017	Catalog #:	S4400-1000633

		Instrument:	CETAC
Standard Log #:	M12780	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	02/15/16	Expiration Date:	10/01/17
Prep:	Carefully mixed **3** parts HCl AB.615 with **1** part HNO_3 AB.614 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12781	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	02/15/16	Expiration Date:	08/12/16
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.615 and dissolved **100 g** Stannous chloride M12731 and brought up to volume.		

Standard ID#:	M12782	Vendor:	ALFA AESAR
Analyst:	LJF	Chemical:	TIN CHLORIDE DIH
Date Received:	02/11/16	Lot #:	W03B012
Expiration Date (if any):		Catalog #:	11536

		Instrument:	CETAC
Standard Log #:	M12777	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	02/15/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12778	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	02/15/16	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12779	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	02/15/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M12774	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	02/15/16	Expiration Date:	08/15/16
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M12774 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12775	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	02/15/16	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12776	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	02/15/16	Expiration Date:	06/30/16
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard ID#:	M12773	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance std-spike
Date Received:	02/12/16	Lot #:	35-054CR
Expiration Date (if any):	02/28/2016	Catalog #:	XSPIKE-1-250

Standard ID#:	M12770	Vendor:	SPEX CertiPrep
Analyst:	MDS	Chemical:	Sulfur 10,000 µg/mL
Date Received:	02/09/2016	Lot #:	AJ16-45SY
Expiration Date (if any):	02/28/2017	Catalog #:	PLS9-3Y

		Instrument:	ICP 6000
Standard Log #:	M12771	Standard:	Sulfur ICAL
Analyst:	MDS	Concentrations:	1000 10,000 100,000 1000K µg/L (S)
Prep Date:	02/09/2016	Expiration Date:	02/28/2017
Prep:	Into four, 100 mL volumetric flasks, pipetted the following from stock standard S (10,000 µg/mL) M12770 and brought up to volume using milli-Q H_2O. *1000 ug/L std.* - **0.01 mL** *10,000 ug/L std.* - **0.1 mL** *100,000 ug/L std.* -**1.0 mL**, also used as the CCV *1000K ug/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M12772	Standard:	Sulfur ICV
Analyst:	MDS	Concentrations:	100,000 µg/L (S)
Prep Date:	02/09/2016	Expiration Date:	08/13/2016
Prep:	Into a 100 mL volumetric flask, pipetted **1.0 mL** of S (10,000 µg/mL) M12371 and brought up to volume using Milli-Q H_2O.		

Standard ID#:	M12769	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	02/08/2016	Lot #:	11-035WL
Expiration Date (if any):	02/28/2017	Catalog #:	XCTWI-5-500

		Instrument:	ICP 6000
Standard Log #:	M12766	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	02/04/2016	Expiration Date:	12/30/2016
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12733, **6 mL** of Fe (10,000 mg/L) M12714, **0.1 mL** of Li (1000 µg/mL) M12672, **0.1 mL** of Sn (1000 µg/mL) M12669, **0.1 mL** of Sr (1000 µg/mL) M12670, **0.1 mL** of Ti (1000 µg/mL) M12671, and **0.1 mL** of W (1000 µg/mL) M12673 and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

		Instrument:	ICP 6000
Standard Log #:	M12767	Standard:	List 2 MRL/ICVLL Prep Solution
Analyst:	MDS	Concentrations:	5000 µg/L (W) 1000 µg/L (Li, Sn) 500 µg/L (Ti, Sr)
Prep Date:	02/04/2016	Expiration Date:	02/06/2016

Prep:

Analyte	MRL/ICVLL Conc. (µg/L)	Standard ID	Std. Conc. (µg/mL)	Volume (mL) Pipetted into 1 L	Expiration Date
Li	20/60	M12672	1000	1	04/15/2017
W	100/300	M12163	1000	5	02/06/2016
Ti	10/30	M12671	1000	0.5	04/15/2017
Sr	10/30	M12670	1000	0.5	04/15/2017
Sn	20/60	M12669	1000	1	04/15/2017

Pipette **10 mL** into a 500 mL volumetric flask to create a working MRL std. or **1 mL** into a 50 mL digestion tube for a digested MRL standard. Pipette **30 mL** into 500 mL for a working ICVLL std. or **3 mL** into a 50 mL digestion tube for a digested ICVLL standard.

(0.5% HNO_3, 0.5% HCl)

Standard ID#:	M12768	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custum Assurance Std Ca,Mg,Na
Date Received:	02/04/2016	Lot #:	11-022WL
Expiration Date (if any):	01/30/2017	Catalog #:	XTTWI-1-500

		Instrument:	ICP
Standard Log #:	M12764	Standard:	L2 ICAL
Analyst:	MDS	Concentrations:	1 (µg/L) 10 (µg/L) 100 (µg/L) 1000 (µg/L) 10,000 (µg/L)
Prep Date:	02/04/2016	Expiration Date:	11/30/2016
Prep:	Standard Conc. (ug/L) — Pipette the following: 1 — **0.01 mL** of Custom Assurance Standard XCTWI-5-500 M12703 and **0.001 mL** W (1000 µg/mL) M12673 into 1L = *1 µg/L* 10 — **0.10 mL** of Custom Assurance Standard XCTWI-5-500 M12703 and **0.01 mL** W (1000 µg/mL) M12673 into 1L = *10 µg/L* 100 — **1 mL** of Custom Assurance Standard XCTWI-5-500 M12703 and **0.1 mL** W (1000 µg/mL) M12673 into 1L = *100 µg/L* 1000 (CCV) — **2 mL** of Custom Assurance Standard XCTWI-5-500 M12703 and **0.2 mL** W (1000 µg/mL) M12673 into 200mL = *1000 µg/L* 10000 — **20 mL** of Custom Assurance Standard XCTWI-5-500 M12703 and **2 mL** W (1000 µg/mL) M12673 into 200mL = *10000 µg/L*		

		Instrument:	ICP 6000
Standard Log #:	M12765	Standard:	L2 ICV
Analyst:	MDS	Concentrations:	1000 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	02/04/2016	Expiration Date:	02/06/2016
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of the following and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) Li (1000 µg/mL) M12672 Sn (1000 µg/mL) M12669 Sr (1000 µg/mL) M12670 Ti (1000 µg/mL) M12671 W (1000 µg/mL) M12163		

Standard Log #:	M12763	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	02/03/16	Expiration Date:	08/03/16
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12548 and brought up to volume.		

Standard Log #:	M12762	Reagent:	Potassium Persulfate Solution
Analyst:	LJF		
Prep Date:	01/29/16	Expiration Date:	07/29/16
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium persulfate M11748 and brought up to volume.		

Standard Log #:	M12761	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	01/28/16	Expiration Date:	07/28/16
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard Log #:	M12760	Instrument:	GFAA
Analyst:	MDS	Standard:	MDL Spiking Solution
Prep Date:	01/25/2016	Expiration Date:	06/02/2016

Prep:

Into a 1 L volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. (2% HNO_3)

Analyte	Final MDL Conc. (ug/L)	Std. ID #	Std. Conc. (mg/L)	Volume (mL) pipetted
Ag	0.2	M12599	1000	0.01
As	2	M12315	1000	0.1
Pb	2	M12313	10000	0.01
Sb	2	M12602	1000	0.1
Se	2	M12600	1000	0.1
Tl	2	M12668	1000	0.1

Of this base standard, pipetted **1 mL** into a 50 mL digestion tube for a digested working standard.

		Instrument:	CETAC
Standard Log #:	M12757	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	01/19/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12758	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	01/19/16	Expiration Date:	09/01/17
Prep:	Carefully mixed **3** parts HCl AB.611 with **1** part HNO_3 AB.609 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12759	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	01/19/16	Expiration Date:	08/12/16
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.611 and dissolved **100 g** Stannous chloride M12731 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12755	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	01/19/16	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12756	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	01/19/16	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

Standard Log #:	M12752	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	01/19/16	Expiration Date:	01/19/17
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M12753	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	01/19/16	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12754	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	01/19/16	Expiration Date:	06/30/16
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

Standard Log #:	M12751	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	011116	Expiration Date:	071116
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12548 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M12750	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	01/05/2016	Expiration Date:	06/02/2016
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M12602 **1.0 mL** of As (1000 mg/L) M12315 **2.0 mL** of Se (1000 mg/L) M12600 **0.045 mL** of Pb (10,000 mg/L) M12313 **0.4 mL** of Tl (1000 mg/L) M12668 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

Standard Log #:	M12748	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	010516	Expiration Date:	070516
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M12749	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	01/05/2016	Expiration Date:	06/02/2016
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M12602 **3.2 mL** of As (1000 mg/L) M12315 **3.2 mL** of Se (1000 mg/L) M12600 **0.08 mL** of Pb (10,000 mg/L) M12313 **1.0 mL** of Tl (1000 mg/L) M12668 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

Standard Log #:	M12747	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	123015	Expiration Date:	123016
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

		Instrument:	ICP 6000
Standard Log #:	M12744b	Standard:	B&Si ICAL
Analyst:	MDS	Concentrations:	50, 200, 1000, 2000 and 10,000 ug/L (B, Si)
Prep Date:	12/21/2015	Expiration Date:	10/15/2016
Prep:	Into five, 1 L volumetric flasks, pipetted the following from stock standards B (1000 mg/L) M12471 and Si (1000 mg/L) M12601 and brought up to volume using milli-Q H_2O. *50 ug/L std.* - **0.05 mL** of each *200 ug/L std.* - **0.2 mL** of each *1000 ug/L std.* -**1.0 mL** of each, also used for Continuing Calibration Verification *2000 ug/L std.* - **2.0 mL** of each *10,000 ug/L std.* -**10 mL** of each		

		Instrument:	ICP 6000
Standard Log #:	M12745b	Standard:	B & Si ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (B,Si)
Prep Date:	12/22/2015	Expiration Date:	06/30/2016
Prep:	Into a 100 mL volumetric flask, pipetted **10 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12529, **0.05 mL** of B (1000 µg/mL) M12471, **0.05 mL** of Si (1000 µg/mL) M12601 and **3 mL** of Fe (10,000 mg/L) M12714 and brought up to volume using Milli-Q H_2O.		

Standard Log #:	M12746b	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	12/22/2015	Expiration Date:	05/18/2017
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M12584 and **10 mL** Mg (10,000 mg/L) M12715 and brought up to volume.		

Standard ID#:	M12744	Vendor:	CPI
Analyst:	NAH	Chemical:	potassium 10,000 mg/L
Date Received:	12/21/2015	Lot #:	15L015
Expiration Date (if any):	06/08/2017	Catalog #:	4400-10M411

Standard ID#:	M12745	Vendor:	CPI
Analyst:	NAH	Chemical:	iron 10,000 mg/L
Date Received:	12/21/2015	Lot #:	15H243
Expiration Date (if any):	06/08/2017	Catalog #:	4400-10M261

Standard ID#:	M12746	Vendor:	CPI
Analyst:	NAH	Chemical:	Y 10,000 mg/L
Date Received:	12/21/2015	Lot #:	15E153
Expiration Date (if any):	06/08/2017	Catalog #:	4400-10M671

		Instrument:	CETAC
Standard Log #:	M12740	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	12/21/15	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12741	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	12/21/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12742	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	12/21/15	Expiration Date:	09/01/17
Prep:	Carefully mixed **3** parts HCl AB.611 with **1** part HNO_3 AB.609 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12743	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	12/21/15	Expiration Date:	08/12/16
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.611 and dissolved **100 g** Stannous chloride M12731 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12737	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	12/21/15	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12738	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	12/21/15	Expiration Date:	06/30/16
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12739	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	12/21/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard Log #:	M12734	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	121715	Expiration Date:	121716
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard Log #:	M12735	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	121715	Expiration Date:	061716
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12548 and brought up to volume.		

Standard Log #:	M12736	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	121715	Expiration Date:	121716
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard Log #:	M12730	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	12/14/15	Expiration Date:	06/14/16
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

Standard ID#:	M12731	Vendor:	MACRON
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	12/10/15	Lot #:	0000119473
Expiration Date (if any):	08/12/16	Catalog #:	8176-04

Standard ID#:	M12732	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Custom Assurance Standard
Date Received:	12-14-2015	Lot #:	34-008CR
Expiration Date (if any):	12-30-2016	Catalog #:	XSPIKE-1-250

Standard ID#:	M12733	Vendor:	Spex Certiprep
Analyst:	NAH	Chemical:	Interference A
Date Received:	12-14-2015	Lot #:	12-165YPX
Expiration Date (if any):	12-30-2016	Catalog #:	INT-A1

		Instrument:	ICP 6000
Standard Log #:	M12729	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	12/07/2015	Expiration Date:	06/03/2015
Prep:	Into a 500 mL volumetric flask, pipetted **0.5 mL** of Na (1000 µg/mL) M12377 and **0.5 mL** K (1000 µg/mL) M12378 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M12725	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	120415	Expiration Date:	060416
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12548 and brought up to volume.		

Standard Log #:	M12726	Reagent:	Potassium Permanganate Solution
Analyst:	LJF		
Prep Date:	120415	Expiration Date:	060416
Prep:	Into a 1 L volumetric flask, partially filled with milli-Q H_2O, dissolved **50 g** potassium permanganate M12277 and brought up to volume.		

		Instrument:	ICP
Standard Log #:	M12727	Standard:	As Pb ICV1
Analyst:	MDS	Concentrations:	5000 ug/L (As,Pb)
Prep Date:	12/04/2015	Expiration Date:	03/26/2016
Prep:	Into a 1 L volumetric flask, pipetted **0.5 mL** of As (10,000 mg/L) M12213 and **0.5 mL** Pb (10,000 mg/L) M12313 and brought to volume with Milli-Q H_2O. (2% HNO_3, 2% HCl)		

Standard Log #:	M12728	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	120415	Expiration Date:	120416
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

		Instrument:	CETAC
Standard Log #:	M12721	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	120215	Expiration Date:	022616
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12722	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	120215	Expiration Date:	063016
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12723	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	120215	Expiration Date:	040117
Prep:	Carefully mixed **3** parts HCl AB.607 with **1** part HNO_3 AB.609 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12724	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	120215	Expiration Date:	120915
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.607 and dissolved **100 g** Stannous chloride M12549 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12718	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	120215	Expiration Date:	022616
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12719	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	120215	Expiration Date:	063016
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12720	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	120215	Expiration Date:	063016
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	ICP 6500
Standard Log #:	M12717	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	12-01-2015	Expiration Date:	06-16
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M12653, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12529, **0.5 mL** Mo (1000 mg/L) M12677, **0.5 mL** B (1000 mg/L) M12471, **0.5 mL** Sr (1000 mg/L) M12670, **0.5 mL** Li (1000 mg/L) M12672, **0.5 mL** Sn (1000 mg/L) M12669 and **0.5 mL** Ti (1000 mg/L) M12671.		

Standard ID#:	M12713	Vendor:	CPI
Analyst:	NAH	Chemical:	Al 10,000 mg/L
Date Received:	12/01/2015	Lot #:	15l132
Expiration Date (if any):	05/18/2017	Catalog #:	p/n 4400-10m11

Standard ID#:	M12714	Vendor:	CPI
Analyst:	NAH	Chemical:	Fe 10,000 mg/L
Date Received:	12/01/2015	Lot #:	15H243
Expiration Date (if any):	05/18/2017	Catalog #:	p/n 4400-10m261

Standard ID#:	M12715	Vendor:	CPI
Analyst:	NAH	Chemical:	Mg 10,000 mg/L
Date Received:	12-01-2015	Lot #:	15G077
Expiration Date (if any):	5-18-2015	Catalog #:	p/n 4400-10m311

Standard ID#:	M12716	Vendor:	CPI
Analyst:	NAH	Chemical:	Ca 10,000 mg/L
Date Received:	12-01-2015	Lot #:	15k045
Expiration Date (if any):	5-18-2015	Catalog #:	p/n 4400-10m91

		Instrument:	ICP 6500
Standard Log #:	M12710	Standard:	ICVLL
Analyst:	NAH	Concentrations:	12 ug/L: Be. 15 ug/L: Cd. 30 ug/L: Ag, Ba, Co, Cr, Cu, Mn, Mo. Ni, Pb, V, Zn, Sr, and Ti. 60 ug/L: Sb, As, Se, Tl, Li, Sn and B. 150 ug/L: W. 300 ug/L: Si. 900 ug/L: Fe. 1200 ug/L Al. 1500 ug/L: S, Ca and Mg. 3000 ug/L: K and Na.
Prep Date:	12/01/2015	Expiration Date:	06/2016
Prep:	Into a 500 mL volumetric flask, pipetted 30 **mL** of MRL Base STD M12709 and brought to volume with Milli-Q H_2O. (5% HNO_3 & 5% HCL)		

		Instrument:	ICP 6500
Standard Log #:	M12711	Standard:	ICSA
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg
Prep Date:	12/01/2015	Expiration Date:	06/2016
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12529 and **15 mL** Fe (10000 mg/L) M12603 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M12712	Standard:	ICSAB
Analyst:	NAH	Concentrations:	**500,000 ug/L** Al, Ca, Fe, Mg **500 ug/L** Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
Prep Date:	12/01/2015	Expiration Date:	06/2016
Prep:	Into a 500 mL volumetric flask, pipetted **50 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12529, **15 mL** Fe (10,000 mg/L) M12603, **2.5 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M12530 and **2.5 mL** Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12558 and brought up to volume with milli-Q H_2O.		

MRL BASE STD M12709

Analyst NAH

Prep Date 12-01-2015

Into a 1000 mL Volumetric Flask, pipet the following:

Analyte	(ug/L)	Std ID #	Std Conc (mg/L)	Amount (mL) to pipet into 1 L	Expiration Date
Ag	20	M12599	1000	1	-
Al	400	M12605	10000	2	-
Ba	10	M12473	1000	0.5	-
Be	4	M12667	1000	0.2	-
Cd	5	M12674	1000	0.25	-
Co	10	M12678	1000	0.5	-
Cr	10	M12470	10000	0.05	-
Cu	10	M12472	10000	0.05	-
Mg	500	M12606	10000	2.5	-
Mn	10	M12533	10000	0.05	-
Mo	10	M12677	1000	0.5	---
Ni	10	M12681	1000	0.5	--
Pb	10	M12313	10000	0.05	--
Sb	20	M12602	1000	1	--
V	10	M12676	1000	0.5	--
Zn	10	M12680	10000	0.05	--
K	1000	M12608	10000	5	--
Na	1000	M12607	10000	5	--
As	20	M12315	1000	1	--
Ca	500	M12604	10000	2.5	--
Fe	300	M12603	10000	1.5	--
Se	20	M12600	1000	1	--
Tl	20	M12668	1000	1	--
Si	100	M12601	1000	5	--
B	20	M12471	1000	1	--
Li	20	M12672	1000	1	--
W	50	M12673	1000	2.5	--
Ti	10	M12671	1000	0.5	--
Sr	10	M12670	1000	0.5	--
Sn	50	M12669	1000	2.5	--
S	300	M12371	10000	1.5	-

Of this Base standard, pipet 10 mls into 500 ml volumetric to create a working std or 1 ml into 50 ml digestion tube for a digested working standard.

Expiration Date: 10/2016

		Instrument:	ICP 6500
Standard Log #:	M12706	Standard:	CCV1
Analyst:	NAH	Concentrations:	**5000 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **500 µg/L** Ag, Be, Cd
Prep Date:	12/01/2015	Expiration Date:	06/2016
Prep:	Into a 1 L volumetric flask, pipetted **50 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12558 and **5.0 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M12530 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M12707	Standard:	CCV2
Analyst:	NAH	Concentrations:	**500 µg/L** Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn **50 µg/L** Ag, Be, Cd
Prep Date:	12/01/2015	Expiration Date:	06/2016
Prep:	Into a 1 L volumetric flask, pipetted **5 mL** Custom Assurance Standard #23 XCTWI-5-500 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12558 and **0.5 mL** of Custom Assurance Std. #3 XCTWI-4-500 (100 mg/L Ag, Be, Cd) M12830 and brought up to volume with milli-Q H_2O.		

		Instrument:	ICP 6500
Standard Log #:	M12708	Standard:	DOD MRL
Analyst:	NAH	Concentrations:	4 ug/L: Be. 5 ug/L: Cd. 10 ug/L: Ag, Ba, Co, Cr, Cu, Mn, Mo. Ni, Pb, V, Zn, Sr, and Ti. 20 ug/L: Sb, As, Se, Tl, Li, Sn and B. 50 ug/L: W. 100 ug/L: Si. 300 ug/L: Fe. 400 ug/L Al. 500 ug/L: S, Ca and Mg. 1000 ug/L: K and Na.
Prep Date:	12/01/2015	Expiration Date:	06/2016
Prep:	Into a 500 mL volumetric flask, pipetted **10 mL** of MRL Base STD M12709 and brought to volume with Milli-Q H_2O. (5% HNO_3 & 5% HCL)		

		Instrument:	ICP 6000
Standard Log #:	M12704	Standard:	Na & K ICAL
Analyst:	MDS	Concentrations:	0.5, 1, 5, 10, 50, 100, and 200 mg/L (Na,K)
Prep Date:	12/01/2015	Expiration Date:	07/03/2016
Prep:	Into seven, 200 mL volumetric flasks, pipetted the following from Na (1000 µg/mL) M12377 and K (1000 µg/mL) M12378 and brought up to volume using milli-Q H_2O. (2% HNO_3) *0.5 mg/L std.* - **0.1 mL** of each *1.0 mg/L std.* - **0.2 mL** of each *5.0 mg/L std.* - **1.0 mL** of each *10 mg/L std.* - **2.0 mL** of each *50 mg/L std.* - **10 mL** of each *100 mg/L std.* -**20 mL** of each, also used for Continuing Calibration Verification *200 mg/L std.* - **40 mL** of each		

		Instrument:	ICP 6500
Standard Log #:	M12705	Standard:	ICAL
Analyst:	NAH	Concentrations:	0.25, 0.5, 1, 5, 10, 20, 50, 100, 1000, 10,000, 100k, 100,000, 500,000 and 1000k (ug/L)
Prep Date:	12/01/2015	Expiration Date:	06/2016
Prep:	Using 1 L volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (5% HNO_3, 5% HCl) *1000 ug/L Std.* - **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, B, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12558, **10 mL** of Custom Assurance Std. #3 (100 mg/L Ag, Be, Cd) M12530 and **1 mL** of Si (1000 mg/L) M12601. *0.25 ug/L Std.* - **0.25 mL** of the 1000 ug/L Std. *0.5 ug/L Std.* - **0.5 mL** of the 1000 ug/L Std. *1 ug/L Std.* - **1 mL** of the 1000 ug/L Std. *5 ug/L Std.* - **5 mL** of the 1000 ug/L Std. *10 ug/L Std.* - **10 mL** of the 1000 ug/L Std. *20 ug/L Std.* - **20 mL** of the 1000 ug/L Std. *50 ug/L Std.* - **50 mL** of the 1000 ug/L Std. *100 ug/L Std.* - **1 mL** of Custom Assurance Std. (CAS) #23 and **1 mL** of CAS #3 *10,000 ug/L Std.* - **100 mL** CAS #23, **100 mL** CAS #3 and **1 mL** of K (10,000 mg/L) M12609. *100k ug/L Std.* - **10 mL** of Cu (10,000 mg/L) M12472, **10 mL** of Mn (10,000 mg/L) M12533, **10 mL** of Cr (10,000 mg/L) M12470, **10 mL** Pb (10,000 mg/L) M12313, **10 mL** of Zn (10,000 mg/L) M12680 and **10 mL** of Na (10,000 mg/L) M12679. *100,000 ug/L Std.* - **10 mL** of Mg (10,000 mg/L) M12606, **10 mL** of Fe (10,000 mg/L) M12603, **10 mL** of Ca (10,000 mg/L) M12490 and **10 mL** Al (10,000 mg/L) M12605. *500,000 ug/L Std.* - **50 mL** of Mg (10,000 mg/L), **50 mL** of Fe (10,000 mg/L), **50 mL** of Ca (10,000 mg/L) and **50 mL** of Al (10,000 mg/L) *1000k ug/L Std.* - **100 mL** of Mg (10,000 mg/L), **100 mL** of Fe (10,000 mg/L), **100 mL** of Ca (10,000 mg/L) and **100 mL** of Al (10,000 mg/L)		

		Instrument:	ICP 6000
Standard Log #:	M12701	Standard:	W ICAL and CCV
Analyst:	MDS	Concentrations:	100, 1000, and 10,000 µg/L (W)
Prep Date:	11/23/15	Expiration Date:	04/15/17
Prep:	Into four, 1 L volumetric flasks, pipetted the following from W (1000 µg/mL) M12673 and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl) *100 µg/L std.* - **0.1 mL** *1000 µg/L std.* - **1.0 mL** - also used for Continuing Calibration Verification *10,000 µg/L std.* - **10 mL**		

		Instrument:	ICP 6000
Standard Log #:	M12702	Standard:	W ICV
Analyst:	MDS	Concentrations:	1000 µg/L (W)
Prep Date:	11/23/15	Expiration Date:	02/06/16
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of W (1000 µg/mL) M12163 and brought up to volume using milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard ID#:	M12703	Vendor:	Spex CertiPrep
Analyst:	NAH	Chemical:	Custum Assurance Standard
Date Received:	11/19/2015	Lot #:	33-195CR
Expiration Date (if any):	11/30/2016	Catalog #:	XCTWI-5-500

Standard Log #:	M12700	Reagent:	TCLP EXTRACTION FLUID #1
Analyst:	LJF	pH:	4.93 ± 0.05
Prep Date:	11/20/15	Expiration Date:	11/20/16
Prep:	Into a 20 L carboy filled with 19 L of DI H_2O, add **114 mL** Glacial acetic acid AB.579 and **128.6 mL** 10N NaOH M12645. Dilute to 20 L and mix.		

Standard Log #:	M12699	Standard:	GFAA Instrument Check
Analyst:	MDS	Final Concentration:	10 µg/L As 6 µg/L Pb 22 µg/L Tl 24 µg/L Sb, Se 0.8 µg/L Ag
Prep Date:	11/12/15	Expiration Date:	06/02/16

Into six, 100 mL volumetric flasks, add the following and bring up to volume with milli-Q H_2O.

Element	Volume Pipetted (mL)	Standard Conc. (µg/mL)	Standard ID	New Conc. (µg/L)
As	1	1000	M12315	10,000
Pb	0.1	10,000	M12313	10,000
Tl	1	1000	M12668	10,000
Se	1	1000	M12600	10,000
Sb	1	1000	M12602	10,000
Ag	0.1	1000	M12599	1000

Into a 1 L volumetric flask, add the following and bring up to volume with Milli-Q H_20. (1% HNO_3)

Element	Volume Pipetted (mL)	Standard Conc. (µg/L)	New Conc. (µg/L)
As	1	10,000	10
Pb	0.6	10,000	6
Tl	2.2	10,000	22
Se	2.4	10,000	24
Sb	2.4	10,000	24
Ag	0.8	1000	0.8

		Instrument:	ICP 6000
Standard Log #:	M12695	Standard:	NaK ICV
Analyst:	MDS	Concentrations:	100 mg/L (Na, K)
Prep Date:	11/11/15	Expiration Date:	02/12/17
Prep:	Into a 250 mL volumetric flask, pipetted **2.5 mL** of K (10,000 mg/L) M12609 and Na (10,000 mg/L) M12679 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M12696	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	11/11/15	Expiration Date:	02/12/17
Prep:	Into a 500 mL volumetric flask, pipetted **0.15 mL** of Na (10,000 µg/mL) M12679 and **0.15 mL** K (10,000 µg/mL) M12609 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M12697	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	11/11/15	Expiration Date:	06/30/16
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12529, **2.5 mL** of K (10,000 mg/L) M12609, **2.5 mL** of Na (10,000 mg/L) M12679 and **7.5 mL** of Fe (10,000 mg/L) M12603 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard Log #:	M12698	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	11/11/15	Expiration Date:	05/11/16
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12403 and **60 g** hydroxylamine sulfate M12548 and brought up to volume.		

		Instrument:	GFAA
Standard Log #:	M12693	Standard:	ICV/LCS Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.0 ug/L (Ag)
Prep Date:	11/02/2015	Expiration Date:	06/01/2016
Prep:	Into a 1 L volumetric flask, pipetted **1.0 mL** of GFAA Custom Stock Std. ((10 ug/mL As, Pb, Sb, Se, Tl) (1.0 ug/mL Ag)) M12505 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	ICP 6000
Standard Log #:	M12694	Standard:	List 2 ICSAB
Analyst:	MDS	Concentrations:	500,000 µg/L (Al, Ca, Fe, Mg) 500 µg/L (Li, Sn, Sr, Ti, W)
Prep Date:	11/02/2015	Expiration Date:	02/06/2016
Prep:	Into a 200 mL volumetric flask, pipetted **20 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12529, **6 mL** of Fe (10,000 mg/L) M12603, **0.1 mL** of Li (1000 µg/mL) M12672, **0.1 mL** of Sn (1000 µg/mL) M12669, **0.1 mL** of Sr (1000 µg/mL) M12670, **0.1 mL** of Ti (1000 µg/mL) M12671, and **0.1 mL** of W (1000 µg/mL) M12163 and brought up to volume using Milli-Q H_2O. (0.5% HNO_3, 0.5% HCl)		

Standard ID#:	M12690	Vendor:	MACRON
Analyst:	LJF	Chemical:	STANNOUS CHLORIDE
Date Received:	11/02/15	Lot #:	0000119473
Expiration Date (if any):	08/12/16	Catalog #:	8176-04

		Instrument:	GFAA
Standard Log #:	M12691	Standard:	Calibration Std.
Analyst:	MDS	Concentrations:	25 ug/L (As, Pb, Sb, Se, Tl) 3.75 ug/L (Ag)
Prep Date:	11/02/2015	Expiration Date:	06/01/2016
Prep:	Into a 1 L volumetric flask, pipetted **0.25 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12504 and brought to volume with Milli-Q H_2O. (1% HNO_3)		

		Instrument:	GFAA
Standard Log #:	M12692	Standard:	CCV Std.
Analyst:	MDS	Concentrations:	10 ug/L (As, Pb, Sb, Se, Tl) 1.5 ug/L (Ag)
Prep Date:	11/02/2015	Expiration Date:	06/01/2016
Prep:	Into a 1 L volumetric flask, pipetted **0.1 mL** of GFAA Custom Stock Std. ((100 ug/mL As, Pb, Sb, Se, Tl) (15 ug/mL Ag)) M12504 and brought to volume with Milli-Q DI H_2O. (1% HNO_3)		

		Instrument:	CETAC
Standard Log #:	M12688	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	10/27/15	Expiration Date:	08/12/16
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.607 and dissolved **100 g** Stannous chloride M12649 and brought up to volume.		

Standard Log #:	M12689	Reagent:	NaCl Hydroxylamine Sulfate
Analyst:	LJF		
Prep Date:	10/27/15	Expiration Date:	04/27/16
Prep:	Into a 500 mL volumetric flask, partially filled with milli-Q H_2O, dissolved **60 g** NaCl M12270 and **60 g** hydroxylamine sulfate M12548 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12685	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	10/27/15	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12686	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	10/27/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12687	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/27/15	Expiration Date:	06/30/15
Prep:	Carefully mixed **3** parts HCl AB.607 with **1** part HNO_3 AB.606 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12682	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/27/15	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12683	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/27/15	Expiration Date:	02/26/16
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12684	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	10/27/15	Expiration Date:	02/26/16
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

Standard ID#:	M12677	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Mo 1000 ug/L
Date Received:	10/21/15	Lot #:	15G130
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000343

Standard ID#:	M12678	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Co 1000 ug/L
Date Received:	10/21/15	Lot #:	15I020
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000131

Standard ID#:	M12679	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Na 10,000 ug/L
Date Received:	10/21/15	Lot #:	15I102
Expiration Date (if any):	04/15/17	Catalog #:	4400-10M521

Standard ID#:	M12680	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Zn 10,000 ug/L
Date Received:	10/21/15	Lot #:	15H234
Expiration Date (if any):	04/15/17	Catalog #:	S4400-10M681

Standard ID#:	M12681	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Ni 1000 ug/L
Date Received:	10/21/15	Lot #:	15G129
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000361

Standard ID#:	M12672	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Li 1000ug/L
Date Received:	10/21/15	Lot #:	15I044
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000291

Standard ID#:	M12673	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	W 1000ug/L
Date Received:	10/21/15	Lot #:	15F057
Expiration Date (if any):	04/15/17	Catalog #:	S4400-100633

Standard ID#:	M12674	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Cd 1000ug/L
Date Received:	10/21/15	Lot #:	15G138
Expiration Date (if any):	04/15/17	Catalog #:	S4400-100081

Standard ID#:	M12675	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Si 1000 ug/L
Date Received:	10/21/15	Lot #:	15H045
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000504F

Standard ID#:	M12676	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	V 1000 ug/L
Date Received:	10/21/15	Lot #:	15H133
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000651

Standard ID#:	M12667	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Be 1000ug/L
Date Received:	10/21/15	Lot #:	15I030
Expiration Date (if any):	04/15/17	Catalog #:	S4400-100051

Standard ID#:	M12668	Vendor:	CPI INERNATIONAL
Analyst:	LJF	Chemical:	Tl 1000ug/L
Date Received:	10/21/15	Lot #:	15F051
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000581

Standard ID#:	M12669	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Sn 1000ug/L
Date Received:	10/21/15	Lot #:	15H126
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000613

Standard ID#:	M12670	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Sr 1000ug/L
Date Received:	10/21/15	Lot #:	15F052
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000531

Standard ID#:	M12671	Vendor:	CPI INTERNATIONAL
Analyst:	LJF	Chemical:	Tl 100ug/L
Date Received:	10/21/15	Lot #:	15G013
Expiration Date (if any):	04/15/17	Catalog #:	S4400-1000623

		Instrument:	ICP 6000
Standard Log #:	M12666	Standard:	B&Si ICV
Analyst:	MDS	Concentrations:	1000 ug/L (B, Si)
Prep Date:	10/21/2015	Expiration Date:	03/2016
Prep:	Into a 1 L volumetric flask, pipetted **10 mL** of Custom Assurance Std. #23 (100 mg/L Al, As, **B**, Ba, Ca, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn) M12558 and **1.0 mL** Si (1000 mg/L) M11919 and brought up to volume using milli-Q H_2O.		

		Instrument:	CETAC
Standard Log #:	M12662	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	10/16/15	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12663	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	10/16/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12664	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	10/16/15	Expiration Date:	07/01/17
Prep:	Carefully mixed **3** parts HCl AB.607 with **1** part HNO_3 AB.606 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12665	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	10/16/15	Expiration Date:	08/12/16
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.607 and dissolved **100 g** Stannous chloride M12649 and brought up to volume.		

		Instrument:	CETAC
Standard Log #:	M12659	Standard:	Hg ICAL
Analyst:	LJF	Concentrations:	10,000, 100, 0.5, 1, 2, 4, 5, 10 ug/L
Prep Date:	10/16/15	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *0.5 ug/L Std.* - **0.5 mL** Hg (*100 ug/L*) *1 ug/L Std.* - **1 mL** Hg (*100 ug/L*) *2 ug/L Std.* - **2 mL** Hg (*100 ug/L*) *4 ug/L Std.* - **4 mL** Hg (*100 ug/L*) *5 ug/L Std.* - **5 mL** Hg (*100 ug/L*) *10 ug/L Std.* - **10 mL** Hg *(100 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12660	Standard:	Alt. Source Working Std.
Analyst:	LJF	Concentrations:	10,000 and 100 ug/L
Prep Date:	10/16/15	Expiration Date:	06/30/16
Prep:	Into two, 100 mL volumetric flasks, pipetted the following and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** of Hg (1000 mg/L) M12532 *100 ug/L Std.* - **1 mL** of Hg (*10,000 ug/L working Std.*)		

		Instrument:	CETAC
Standard Log #:	M12661	Standard:	Hg ICV/LCS
Analyst:	LJF	Concentration:	3 ug/L
Prep Date:	10/16/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **3 mL** of Hg (*100 ug/L working Std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	GFAA
Standard Log #:	M12657	Standard:	LODS/LOQS Spiking Sol'n
Analyst:	MDS	Concentrations:	60 ug/L (Sb) 160 ug/L (As,Se) 40 ug/L (Pb) 50 ug/L (Tl)
Prep Date:	10/12/2015	Expiration Date:	11/08/2015
Prep:	Into a 200 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.2 mL** of Sb (1000 mg/L) M12602 **3.2 mL** of As (1000 mg/L) M12315 **3.2 mL** of Se (1000 mg/L) M12600 **0.08 mL** of Pb (10,000 mg/L) M12313 **1.0 mL** of Tl (1000 mg/L) M11997 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (1.2 *ug/L* Sb, *3.2 ug/L* As, *3.2 ug/L* Se, *0.8 ug/L* Pb, *1 ug/L* Tl) and **2 mL** spiking solution for LOQ (2.4 *ug/L* Sb, *6.4 ug/L* As, *6.4 ug/L* Se, *1.6 ug/L* Pb, *2 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M12658	Standard:	LODW/LOQW Spiking Sol'n
Analyst:	MDS	Concentrations:	150 ug/L (Sb) 100 ug/L (As) 200 ug/L (Se) 45 ug/L (Pb) 40 ug/L (Tl)
Prep Date:	10/12/2015	Expiration Date:	11/08/2015
Prep:	Into a 100 mL volumetric flask, pipetted the following and brought up to volume with Milli-Q H_2O. **1.5 mL** of Sb (1000 mg/L) M12602 **1.0 mL** of As (1000 mg/L) M12315 **2.0 mL** of Se (1000 mg/L) M12600 **0.045 mL** of Pb (10,000 mg/L) M12313 **0.4 mL** of Tl (1000 mg/L) M11997 From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*3 ug/L* Sb, *2 ug/L* As, *4 ug/L* Se, *0.9 ug/L* Pb, *0.8 ug/L* Tl) and **2 mL** spiking solution for LOQ (*6 ug/L* Sb, *4 ug/L* As, *8 ug/L* Se, *1.8 ug/L* Pb, *1.6 ug/L* Tl)		

		Instrument:	GFAA
Standard Log #:	M12655	Standard:	LODW/LOQW Ag Spiking Sol'n
Analyst:	MDS	Concentrations:	10 ug/L (Ag)
Prep Date:	10/12/2015	Expiration Date:	02/10/2017
Prep:	Into a 100 mL volumetric flask, pipetted **0.1 mL** of Ag (1000mg/L) M12599 and brought to volume with Milli-Q H_2O to make a 1000 ug/L Ag std. Into a 1 L volumetric flask, pipetted **10 mL** of Ag (*1000 ug/L*) std. and brought to volume with Milli-Q H_2O. (1% HNO_3) *Pipette **1 mL** spiking solution into 50 mL H_2O for LOD (*0.2 ug/L*) and **2 mL** spiking solution for LOQ (*0.4 ug/L*)		

		Instrument:	GFAA
Standard Log #:	M12656	Standard:	LODS/LOQS Ag Spiking Sol'n
Analyst:	MDS	Concentration:	6 ug/L (Ag)
Prep Date:	10/12/2015	Expiration Date:	02/10/2017
Prep:	Into a 200 mL volumetric flask, pipetted **0.12 mL** of Ag (1000 mg/L) M12599 and brought up to volume with Milli-Q H_2O. From this diluted standard solution, pipetted **10 mL** into a 1 L volumetric flask and brought up to volume with Milli-Q H_2O to make the spiking solution. (1% HNO_3) *Pipette **2 mL** spiking solution into 50 mL H_2O for LOD *(0.24 ug/L)* and **4 mL** spiking solution for LOQ *(0.48 ug/L)*		

		Instrument:	CETAC
Standard Log #:	M12633	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	09/18/15	Expiration Date:	02/26/15
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12634	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	09/18/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12635	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/18/15	Expiration Date:	04/01/17
Prep:	Carefully mixed **3** parts HCl AB.604 with **1** part HNO_3 AB.603 in a hood.		

Standard Log #:	M12628	Reagent:	10N NaOH
Analyst:	LJF		
Prep Date:	09/16/15	Expiration Date:	09/16/16
Prep:	Into a 1 L volumetric flask, added **400 g** NaOH M11852 and brought up to volume.		

Standard ID#:	M12629	Vendor:	GR ACS
Analyst:	LJF	Chemical:	SODIUM CHLORIDE
Date Received:	09/16/15	Lot #:	x131a
Expiration Date (if any):		Catalog #:	C710L50

		Instrument:	CETAC
Standard Log #:	M12619	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	09/03/15	Expiration Date:	02/26/15
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12620	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	09/03/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12621	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	09/03/15	Expiration Date:	04/01/17
Prep:	Carefully mixed **3** parts HCl AB.604 with **1** part HNO_3 AB.603 in a hood.		

		Instrument:	ICP 6000
Standard Log #:	M12614	Standard:	NaK ICSAB
Analyst:	MDS	Concentrations:	500 mg/L (Al, Ca, Fe, Mg) 100 mg/L (Na, K)
Prep Date:	08/31/15	Expiration Date:	11/08/15
Prep:	Into a 250 mL volumetric flask, pipetted **25 mL** of Interferents A custom stock (5000 mg/L Al, Ca, Mg and 2000 mg/L Fe) M12529, **2.5 mL** of K (10,000 mg/L) M12474, **2.5 mL** of Na (10,000 mg/L) M12010 and **7.5 mL** of Fe (10,000 mg/L) M12489 and brought up to volume using Milli-Q H_2O. (2% HNO_3)		

Standard ID#:	M12612	Vendor:	CPI
Analyst:	NAH	Chemical:	Yttrium 10000 ug/mL
Date Received:	08/27/15	Lot #:	15E153
Expiration Date (if any):	02/20/17	Catalog #:	4400-10M671

Standard ID#:	M12607	Vendor:	CPI
Analyst:	NAH	Chemical:	SODIUM 1000ug/mL
Date Received:	08/19/2015	Lot #:	15F159
Expiration Date (if any):	02/12/2017	Catalog #:	4400-1000521

Standard ID#:	M12608	Vendor:	CPI
Analyst:	NAH	Chemical:	POTASSIUM 1000ug/mL
Date Received:	08/19/2015	Lot #:	15E009
Expiration Date (if any):	02/12/2017	Catalog #:	4400-1000411

Standard ID#:	M12609	Vendor:	CPI
Analyst:	NAH	Chemical:	POTASSIUM 10000ug/mL
Date Received:	08/19/2015	Lot #:	15E086
Expiration Date (if any):	02/12/2017	Catalog #:	4400-10M411

Standard ID#:	M12610	Vendor:	ALFA AESAR
Analyst:	LJF	Chemical:	HYDROXYLAMINE SULFATE
Date Received:	08/20/15	Lot #:	Z16A019
Expiration Date (if any):		Catalog #:	88944

Standard ID#:	M12602	Vendor:	CPI
Analyst:	NAH	Chemical:	ANTIMONY 1000 ug/ml
Date Received:	08-14-2015	Lot #:	15D168
Expiration Date (if any):	02-10-2017	Catalog #:	S4400-100023

Standard ID#:	M12603	Vendor:	CPI
Analyst:	NAH	Chemical:	IRON 10000 ug/ml
Date Received:	08-14-2015	Lot #:	15C057
Expiration Date (if any):	02-10-2017	Catalog #:	4400-10M261

Standard ID#:	M12604	Vendor:	CPI
Analyst:	NAH	Chemical:	CALCIUM 10000 ug/ml
Date Received:	08-14-2015	Lot #:	15G076
Expiration Date (if any):	02-10-2017	Catalog #:	4400-10M91

Standard ID#:	M12605	Vendor:	CPI
Analyst:	NAH	Chemical:	ALUMINUM 10000 ug/ml
Date Received:	08-14-2015	Lot #:	15E015
Expiration Date (if any):	02-10-2017	Catalog #:	4400-10M11

Standard ID#:	M12606	Vendor:	CPI
Analyst:	NAH	Chemical:	MAGNESIUM 10000 ug/ml
Date Received:	08-14-2015	Lot #:	15G077
Expiration Date (if any):	02-10-2015	Catalog #:	4400-10M311

Standard ID#:	M12599	Vendor:	CPI
Analyst:	NAH	Chemical:	SILVER 1000 ug/ml
Date Received:	8-14-2015	Lot #:	15H040
Expiration Date (if any):	02-10-2017	Catalog #:	S4400-1000511

Standard ID#:	M12600	Vendor:	CPI
Analyst:	NAH	Chemical:	SELENIUM 1000 ug/ml
Date Received:	08-14-2015	Lot #:	15E095
Expiration Date (if any):	2-10-2017	Catalog #:	S4400-1000491

Standard ID#:	M12601	Vendor:	CPI
Analyst:	NAH	Chemical:	SILICON 1000 ug/ml
Date Received:	08-14-2015	Lot #:	15F050
Expiration Date (if any):	02-10-2017	Catalog #:	S4400-1000504F

		Instrument:	CETAC
Standard Log #:	M12596	Standard:	Hg CCV
Analyst:	LJF	Concentration:	3.0 ug/L Hg
Prep Date:	08/13/15	Expiration Date:	02/26/16
Prep:	Using 100 mL volumetric flasks, pipetted the following and brought up to volume using milli-Q H_2O. (0.2% HNO_3, 0.2% HCl) *10,000 ug/L Std.* - **1 mL** Hg (1000 mg/L) M12179 *100 ug/L Std.* - **1 mL** Hg (*10,000 ug/L*) *3.0 ug/L Std.* (CCV) - **3.0 mL** Hg (*100 ug/L*)		

		Instrument:	CETAC
Standard Log #:	M12597	Standard:	Hg MRL
Analyst:	LJF	Concentration:	0.2 ug/L Hg
Prep Date:	08/13/15	Expiration Date:	06/30/16
Prep:	Into a 100 mL volumetric flask, pipetted **0.2 mL** of Hg (*100 ug/L working std.*) M12552 and brought up to volume using Milli-Q H_2O. (0.2% HNO_3, 0.2% HCl)		

		Instrument:	CETAC
Standard Log #:	M12598	Reagent:	Hg Aqua Regia
Analyst:	LJF		
Prep Date:	08/13/15	Expiration Date:	04/01/17
Prep:	Carefully mixed **3** parts HCl AB.604 with **1** part HNO_3 AB.603 in a hood.		

		Instrument:	CETAC
Standard Log #:	M12599a	Reagent:	Stannous Chloride Solution
Analyst:	LJF		
Prep Date:	08/13/15	Expiration Date:	12/09/15
Prep:	Into a 1 L volumetric flask, partially filled with 400 mL milli-Q H_2O, added **70 mL** hydrochloric acid AB.604 and dissolved **100 g** Stannous chloride M12549 and brought up to volume.		

Standard Log #:	M12588	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	08/10/15	Expiration Date:	10/23/16
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted **15 mL** Pd Modifier M12584 and **10 mL** Mg (10,000 mg/L) M12488 and brought up to volume.		

Standard ID#:	M12584	Vendor:	Environmental Express
Analyst:	MDS	Chemical:	GFAA Pd Matrix Modifier
Date Received:	08/05/15	Lot #:	1421912
Expiration Date (if any):	07/31/17	Catalog #:	HP1900-100

		Instrument:	ICP 6500
Standard Log #:	M12585	Standard:	ICV Std.
Analyst:	NAH	Concentrations:	**12,000 mg/L** Al **10,000 mg/L** Ca, Mg **5000 mg/L** Fe **2000 mg/L** As, Ba, Se, Tl **500 mg/L** B, Co, Li, Mn, Mo, Ni, Pb, Sb, Sn, Sr, Ti, V, Zn **250 mg/L** Cu **200 mg/L** Cr **50 mg/L** Ag, Be, Cd
Prep Date:	08/05/15	Expiration Date:	11/15
Prep:	Into a 1 L volumetric flask, pipetted the following and brought up to volume with milli-Q H_2O. **10 mL** Custom Assurance Standard #18 ((200 mg/L Al, As, Ba, Se, Tl) (100 mg/L Fe) (50 mg/L Co, Mn, Ni, Pb, Sb, V, Zn) (25 mg/L Cu) (20 mg/L Cr) (5 mg/L Ag, Be, Cd)) M12574, **2 mL** Interferents A Standard ((5000 mg/L Al, Ca, Mg) (2000 mg/L Fe)) M12529, **0.5 mL** Mo (1000 mg/L) M12008, **0.5 mL** B (1000 mg/L) M12471, **0.5 mL** Sr (1000 mg/L) M11999, **0.5 mL** Li (1000 mg/L) M11998, **0.5 mL** Sn (1000 mg/L) M11996 and **0.5 mL** Ti (1000 mg/L) M12003.		

Standard ID#:	M12548	Vendor:	Alfa Aesar
Analyst:	LJF	Chemical:	Hydroxylamine Sulfate
Date Received:	07/08/15	Lot #:	Z16A019
Expiration Date (if any):	N/A	Catalog #:	88944

Standard ID#:	M12549	Vendor:	MACRON
Analyst:	LJF	Chemical:	Stannous Chloride
Date Received:	07/08/15	Lot #:	0000111217
Expiration Date (if any):	12/09/15	Catalog #:	8176-04

Standard ID#:	M12529	Vendor:	SPEX Certiprep
Analyst:	NAH	Chemical:	Interference-A
Date Received:	06/04/2015	Lot #:	12-101YPX
Expiration Date (if any):	06/30/2016	Catelog #:	INT-A1

Standard ID#:	M12530	Vendor:	SPEX Certiprep
Analyst:	NAH	Chemical:	Custom Assurance STD (3) Ag,Be,Cd
Date Received:	06/04/2015	Lot #:	30-152CR
Expiration Date (if any):	06/30/2016	Catelog #:	XCTWI-4-500

Standard ID#:	M12531	Vendor:	SPEX Certiprep
Analyst:	NAH	Chemical:	Custom Assurance STD (23)
Date Received:	06/04/2015	Lot #:	30-153CR
Expiration Date (if any):	06/30/2016	Catelog #:	XCTWI-5-500

Standard ID#:	M12532	Vendor:	SPEX Certiprep
Analyst:	NAH	Chemical:	Mercury 1000 mg/L
Date Received:	06/04/2015	Lot #:	CL7-180HGY
Expiration Date (if any):	06/30/2016	Catelog #:	CLHG4-2Y

Standard ID#:	M12533	Vendor:	CPI
Analyst:	NAH	Chemical:	Mn 10000 mg/L
Date Received:	06/04/2015	Lot #:	15E180
Expiration Date (if any):	11/29/2016	Catelog #:	P/N S4400-10M321

#M12488 5-5-15 - Mg 10,000mg/L CPI Lot 15C248 ex 10/2016.

#M12489 5-5-15 - Fe 10,000mg/L CPI Lot 15C290 ex 10/16.

#M12490 5-5-15 Ca 10,000mg/L CPI Lot 15A007 ex 10/16.

#M12491 05/06/15C3F TCLP Extraction Fluid #1: Fill a 20L carboy w/19L D.I. H2O. Add 114mL Glacial Acetic Acid (AB 579) and 128.6mL of 5N NaOH (#M12797). Dilute to 20L w/D.I. H2O and mix. pH = 4.93 ± 0.05

Exp: 05/06/16

#M12492 05/06/15C3F SPLP Extraction Fluid #2 west: Fill a 20L carboy with D.I. H2O and adjust pH to 5.00 ± 0.05 with (#M12457) 60/40 HNO_3, H_2SO_4 mix w/v mix.

Exp: 05/06/16

#M12493 05/11/15C3F	Hg Working Stds: (0.2% HNO3, HCl)	1.0ml of 1000mg/L Hg (#M10563) into 100ml=10mg/L Hg 1.0ml of 10mg/L Hg into 100ml = 100ug/L Hg 0.5ml of 100ug/L Hg into 100ml = 0.5ug/L Hg 1.0ml of 100ug/L Hg into 100ml = 1.0ug/L Hg 2.0ml of 100ug/L Hg into 100ml = 2.0ug/L Hg 4.0ml of 100ug/L Hg into 100ml = 4.0ug/L Hg 5.0ml of 100ug/L Hg ino 100ml =5.0ug/L Hg 10.0ml of 100ug/L Hg into 100ml = 10.0ug/L Hg
#M12494 05/11/15C3F	Hg Alt Source Working Std: (0.2% HNO3, HCl)	1.0ml of 1000mg/L Hg (#M9063) into 100ml = 10mg/L Hg 1.0ml of 10mg/L into 100ml = 100ug/L Hg
#M12495 05/11/15C3F	Hg ICV / LCSW (0.2% HNO3, HCl)	3.0ml of 100ug/L Hg (#M12494) into 100ml = 3.0ug/L Hg
#M12496 05/11/15C3F	Hg CCV (0.2% HNO3, HCl)	1.0ml of 1000mg/L Hg (#M10563) into 100ml=10mg/L Hg 1.0ml of 10mg/L Hg into 100ml = 100ug/L Hg 3.0ml of 100ug/L Hg into 100ml = 3.0ug/L Hg
#M12497 05/11/15C3F	Hg MRL: (0.2% HNO3, HCl)	0.2ml of 100ug/L Hg (#M12494) into 100ml = 0.2ug/L Hg
#M12498 05/11/15C3F	Hg Aqua Regia Reagent:	"Carefully" in hood, mix 3 parts HCl (AB: 553) with 1part HNO3 (AB: 554)
#M12499 05/11/15C3F	Stannous Chloride Reagent:	Into a 1000 mL volumetric flask, dissolve 100g Stannous Chloride (#M12799 in 70 mL HCl (AB: 553). Bring up to volume with D.I. Water.

#M12468
4/22/15
MDS

		Instrument:	ICP 6000
Standard Log #:	M12468	Standard:	Na,K ICVLL
Analyst:	MDS	Concentrations:	3 mg/L (Na,K)
Prep Date:	04/22/2015	Expiration Date:	11/8/2015
Prep:	Into a 500 mL volumetric flask, pipetted 0.15 mL of Na (10,000 µg/mL) M12010 and 0.15 mL K (10,000 µg/mL) M12294 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

#M12469
4/22/15
MDS

		Instrument:	ICP 6000
Standard Log #:	M12469	Standard:	Na,K MRL
Analyst:	MDS	Concentrations:	1 mg/L (Na,K)
Prep Date:	04/22/2015	Expiration Date:	04/29/2016
Prep:	Into a 500 mL volumetric flask, pipetted 0.5 mL of Na (1000 µg/mL) M12296 and 0.5 mL K (1000 µg/mL) M12295 and brought to volume with Milli-Q H_2O. (2% HNO_3)		

M12470 A Cr 10,000 ~~mg/L~~ mg/L CPI lot # 13D123. ex oct/2016
4-24-15 4-24-15

M12471 A Boron 1000 mg/L CPI lot # 15D007. ex oct/2016
4-24-15

M12472 A Cu 10,000 mg/L CPI lot # 15B087. ex oct/2016

M12473 A Ba 1000 mg/L CPI lot # 15C142. ex oct/2016

M12474 A K 10,000 mg/L CPI lot # 15D114. ex oct/2016

#M12475
04/24/15
MDS

Standard Log #:	M12475	Instrument:	GFAA
Analyst:	MDS	Reagent:	Pd/Mg Matrix Modifier
Prep Date:	04/24/2015	Expiration Date:	08/07/2015
Prep:	Into a 50 mL volumetric flask, partially filled with milli-Q H_2O, pipetted 15 mL Pd Modifier M12158 and 10 mL Mg (10,000 mg/L) M12314 and brought up to volume.		

11/04/14 15F

#M12271 TCLP Extraction Fluid #1: Fill a 20L carboy w/ 19L D.I. H2O. Add 11.4mL Glacial Acetic Acid (AB: 579) and 128.6mL 10N NaOH (#M11955). Dilute to 20L with D.I. H2O and mix. pH = 4.93 ± 0.05

Exp: 10/21/04/14
11/04/14 15F

#M12272 11/05/14 15F	Hg Working Stds: (0.2% HNO3, HCl)	1.0ml of 1000mg/L Hg (#M10563) into 100ml=10mg/L Hg 1.0ml of 10mg/L Hg into 100ml = 100ug/L Hg 0.5ml of 100ug/L Hg into 100ml = 0.5ug/L Hg 1.0ml of 100ug/L Hg into 100ml = 1.0ug/L Hg 2.0ml of 100ug/L Hg into 100ml = 2.0ug/L Hg 4.0ml of 100ug/L Hg into 100ml = 4.0ug/L Hg 5.0ml of 100ug/L Hg ino 100ml =5.0ug/L Hg 10.0ml of 100ug/L Hg into 100ml = 10.0ug/L Hg
#M12273 11/05/14 15F	Hg Alt Source Working Std: (0.2% HNO3, HCl)	1.0ml of 1000mg/L Hg (#M9063) into 100ml = 10mg/L Hg 1.0ml of 10mg/L into 100ml = 100ug/L Hg
#M12274 11/05/14 15F	Hg ICV / LCSW (0.2% HNO3, HCl)	3.0ml of 100ug/L Hg (#M12273) into 100ml = 3.0ug/L Hg
#M12275 11/05/14 15F	Hg CCV (0.2% HNO3, HCl)	1.0ml of 1000mg/L Hg (#M10563) into 100ml=10mg/L Hg 1.0ml of 10mg/L Hg into 100ml = 100ug/L Hg 3.0ml of 100ug/L Hg into 100ml = 3.0ug/L Hg
#M12276 11/05/14 15F	Hg MRL: (0.2% HNO3, HCl)	0.2ml of 100ug/L Hg (#M12273) into 100ml = 0.2ug/L Hg
#M12277 11/05/14 15F	Hg Aqua Regia Reagent:	"Carefully" in hood, mix 3 parts HCl (AB: 553) with 1part HNO3 (AB: 554)
#M12276 11/05/14 15F	Stannous Chloride Reagent:	Into a 1000mL volumetric flask, dissolve 100g Stannous Chloride (#M11995) in 70 mL HCl (AB: 553). Bring up to volume with D.I. Water.

#M12277 11/07/14 15F Potassium permanganate (Fisher) Lot# 138790A

#M12278 11/13/14 15F potassium permanganate soln: 50g potassium permanganate (#M11285) dissolve into 1000mL of D.I. H2O.
Exp: 05/13/15

ICAP Working Standards List 2

#M12279
11-13-14 MMS

.5% HNO3 .5%HCL

Standard name	Pipetted the following respectively:
1	0.01mL of #M12165 and 0.001mL #M12001 into 1L = 1 ug/L
10	0.10mL of #M12165 and 0.01mL #M12001 into 1L = 10 ug/L
100	1mL of #M12165 and 0.1mL #M12001 into 1L = 100 ug/L
1000	2mL of #M12165 and 0.2mL #M12001 into 200mL = 1000 ug/L
10000	20mL of #M12165 and 2mL #M12001 into 200mL = 10000 ug/L

Brought up to mark with milli-Q H20 Exp. 08/30/2015

#M12280
11-13-14 MMS

Continuing Calibration Standard (CCV)
Into a 200mL volumetric flask pipetted 2mL of #M12165 and 0.2mL #M12001 = 1000 ug/L
Brought up to mark with milli-Q H20 Exp. 08/30/2015

#M12281
11-13-14 MMS

Initial Calibration Standard (ICV) List 2
Into a 1 liter volumetric flask pipetted 1mL of #M12003, M11999, M11996, M11998 and M12163
Brought up to mark with milli-Q H20 Exp. 11/08/2015

INORGANIC
CLP FORMS
DOCUMENTS

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

RVAAP-50-RT

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix (soil/water):	SOIL	SDG No.:	123805
% Solids:		Lab Sample ID:	809340
Analytical Method:	EPA 1010A	Date Received:	11/19/2016
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	132940	Analysis Date/Time	11/21/2016 13:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	Deg. F

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
FLASHPT	Flashpoint	>140.0					

CT LABORATORIES
delivering more than data from your environmental analyses

1

INORGANIC ANALYSIS DATA SHEET

Sample Description

RVAAP-50-TD

Lab Name:	CT Laboratories	Contract:	ERT-RVAAP FY16
Matrix (soil/water):	SOIL	SDG No.:	123805
% Solids:		Lab Sample ID:	809342
Analytical Method:	EPA 1010A	Date Received:	11/19/2016
Dilution Factor:	1	TCLP/SPLP Extraction Date/time:	
Analytical Run #:	132940	Analysis Date/Time	11/21/2016 13:30
Analytical Prep Batch #:		Prep. Date/Time:	
ICAL Calibration #:		Concentration Units:	Deg. F

CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
FLASHPT	Flashpoint	>140.0					

CT LABORATORIES
delivering more than data from your environmental analyses

6

DUPLICATES

Sample Description

RVAAP-50-RT

Lab Name: CT Laboratories

Contract: ERT-RVAAP FY16

Matrix: SOLID

SDG No.: 123805

% Solid for Sample:

Concentration Units: Deg. F

Analytical Prep Batch # 1

Analytical Preparation Date/Time

Analytical Run #: 132940

ICAL Calibration #:

Sample #: 809528

Parent Sample #: 809340

Analysis Type *Initial Analysis*

Analyte	Analysis Date/Tim		RPD Limit	Original Parent Conc. (S)	C	Duplicate Conc. (D)	C	RPD	Q	M
Flashpoint	11/21/2016	13:30	5	>140.0		>140.0		0		

CT LABORATORIES
delivering more than data from your environmental analyses

7-2

Sample No:

LABORATORY CONTROL SAMPLE - SOLID

LCS

Lab Name: CT Laboratories Contract ERT-RVAAP FY16

LCS Source: SPEX and Ultra SDG No.: 123805

Concentration Units: Deg. F

Analytical Run #: 132940 Sample No.:#: 809529

Analytical Prep Batch #: Preparation Date/Time:

ICAL Calibration #:

Analysis Type ---------- Initial Analysis

Analyte	Analysis Date/Time	Control Limit (%R)	Spike Result	C	Spike Amount	%R	Q	M
Flashpoint	11/21/2016 13:30	90-110	78.8		79.8	99		

INORGANICS
RAW DATA
DOCUMENTS

Flashpoint Bench Sheet

DATE: 11/21/16 TIME: 13:30 RUN: 132940

METHOD: EPA 1010A ANALYST: [illegible]

	SAMPLE#	DATE SAMPLED	MATRIX	FLASHPOINT (F°)	COMMENTS:
1	LCS	W39962	QC	78.8	
2	809340	11/18/16	S	>140.0	
3	DUP809340	"	S	>140.0	
4	809342	"	S	>140.0	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

INORGANICS
LOGBOOK
DOCUMENTS

WFLASHPOINT Analytical Run
132940 on 11/23/2016

Date Analyzed: _____ Date Reviewed: _____

Date Entered: _____ Date Validated: _____

COC	ORDER	SAMPLE DECRIPTION	SAMPLE DATE/ TIME	QC TYPE (Parent Sample)	CLIENT	PROJECT	TEST	PREP BATCH	MATRIX	DEL	RUSH
123805	809340		11/18/2106 1337		ERT	RVAAP FY16	FLASHPOINT		S	**4**	Y
		RVAAP-50-RT									
123805	809342		11/18/2106 1345		ERT	RVAAP FY16	FLASHPOINT		S	**4**	Y
		RVAAP-50-TD									
	809528		11/18/2106 1337				FLASHPOINT				
		RVAAP-50-RT		DUP 809340							
	809529						WFLASHPOINT				
				LCSS							

4 SAMPLE COUNT ON RUN, INCLUDING METHOD AND INSTRUMENT QC

Matrix: S-Soil Slg-Sludge GW-GroundWater M-Misc Waste SW-Surface Water A-Air WW-WasteWater DW-Drinking Water SD=Sediment Leachate=LE

Flashpoint Data Validation Checklist

LIMS #: 132940	Method: Flashpoint EPA Method 1010			
Analysis Date	Analyst / Data Interpreter	Independent Reviewer	Date of Review	Approved
11/21/16	DJS / LTS	MER	11/29/16	(Yes) ... No

Instructions: Complete one checklist per *analytical run*. Enter the appropriate response for each question. Each "No" response requires an explanation in the Comments section, and may require the initiation of a Nonconformance Report.

Requirement:	Acceptance Criteria	Analyst Review		Independent Review		Comments: (indicate reference to an attachment if necessary)
		Yes	No	Yes	No	
1. Was LCS within acceptable limits?	77.9-81.9 F	X		X		
2. Were reagents/standards used before expiration date?	---	X		X		
3. Were duplicates analyzed at the appropriate frequency	1 every 20 samples of the same matrix	X		X		
4. Were the duplicates within acceptable limits?	Differ by ≤ 5 F	X		X		
5. Are all samples on the job lists accounted for?	---	X		X		

Standard Log #:	W39962	Chemical:	p-Xylene
Analyst:	SAW	Vendor:	Alfa Aesar
Date Received:	09/22/16	Catalog #:	A10534
Expiration Date (if any):		Lot #:	10199703
Comments:			

CHAIN OF CUSTODY,
PM CONFIRMATION
AND
SAMPLE CONDITION FORMS
DOCUMENTS

Rev. 3/2015

CHAIN OF CUSTODY

Page _____ of _____

Company: ERT, Inc.

Project Contact: Sean Carney

Telephone: 607-259-7017

Project Name: RVAAP FY16

Project #: 3369

Location: Camp Ravenna, Ohio

Sampled By: Carney

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 123805
Company: ERT
Project: RVAAP
Logged By: BNA PM BNA

Program:
RCRA SDWA NPDES
Waste Other _____
#

Report To:
EMAIL:
Company:
Address:

Invoice To:*
EMAIL:
Company:
Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	TCLP VOCs	TCLP SVOCs	TCLP Metals	Flashpoint	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
						ANALYSES REQUESTED / Fill in Spaces with Bottles per Test							
11/18/16	1:37	M	Comp	1	RVAAP-50 - RT		X	X	X	X			869338/869340
11/18/16	1:45	M	Comp	1	RVAAP-50 - TP		X	X	X	X			869341/869342

Turnaround Time
Normal RUSH*
Date Needed: 11/28/16
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Relinquished By:	Date/Time	Received By:	Date/Time
S. Carney	11/18/16 3:33		11/19/16 1120
Received by:	Date/Time	Received for Laboratory by:	Date/Time
			11-21-16 1150

Lab Use Only
Ice Present Yes No
Temp 3.4 IR Gun 16
Cooler # 30X



ORIGIN ID:PHDA (330) 563-4421
POSTAL PLUS
C/O POSTAL PLUS
3939 MASSILLON RD # 801

UNIONTOWN, OH 44685
UNITED STATES US

SHIP DATE: 18NOV16
ACTWGT: 10.00 LB
CAD: 103005062/WSXI3100
DIMS: 18x15x7 IN

BILL SENDER

TO ATT: RECEIVING
C T LABORATIES
1230 LANGE COURT

BARABOO WI 53913

(607) 259-7017 REF: 0146217

INV:
PO: DEPT:

FedEx Express

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7846 9057 3017

XO MSNA

53913
WI-US MSN

Part # 156287V-435 RIT2 APV EXP 05/17

Folder #: 123805

PM LOGIN CONFIRMATION

********RUSH PROJECT********
REPORT DUE 11/28/2016

Contract #: 3013

Company: ERT **Project:** RVAAP FY16 **Proj #:** 3369

Project Phase: **PO Number:** **Invoice #:** 124342

Project Manager: *BMS* **Date Received:** 11/19/16 **Log Date:** 11/21/2016

Report To: SEAN CARNEY CC:
4890 UNIVERSITY SQUARE
SUITE 2A
HUNSTVILLE, AL 35816
Phone: 607-259-7017: Fax:
Rep. E-Mail sean.carney@ertcorp.com

Invoice To :ACCOUNTS PAYABLE CC:
14401 SWEITZER LANE
SUITE 300
LAUREL, MD 20707
Phone: Fax:
EMail: ert-ap@ertcorp.com

Collected By:
Collector's Phone: 607-259-7017

Arrival Temperature: 3.4 oC

SAMPLE #: 809338 **DESCR: RVAAP-50-RT** **PRIMARY / DETAILED MATRIX:** AQUEOUS / TCLP **SAMPLED: 11/18/2016** **Time: 1337**

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1192	ICP QSM TCLP 5.0	(EPA 6010C)				05/17/2017	11/28/2016	*Y*	NeedExt
			Arsenic						
			Barium						
			Cadmium						
			Chromium						
			Lead						
			Selenium						
			Silver						
1207	MERCURY QSM TCLP 5.0	(EPA 7470A)				12/16/2016	11/28/2016	*Y*	NeedExt
1223	VOC 8260 QSM TCLP 5.0	(EPA 8260C)			*Y*		11/28/2016	*Y*	NeedExt
1247	SVOC 8270 QSM 5 TCLP	(EPA 8270D)					11/28/2016	*Y*	NeedExt

Folder #: 123805 **Company:** *ERT* **Project:** RVAAP FY16

SAMPLE #: 809340 **DESCR:** RVAAP-50-RT **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 11/18/2106 **Time:** 1337

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
618	FLASHPOINT	(EPA 1010A)				11/28/2106	11/28/2016	*Y*	Entered

SAMPLE #: 809341 **DESCR:** RVAAP-50-TD **PRIMARY / DETAILED MATRIX:** AQUEOUS / TCLP **SAMPLED:** 11/18/2016 **Time:** 1345

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1192	ICP QSM TCLP 5.0	(EPA 6010C)				05/17/2017	11/28/2016	*Y*	NeedExt
			Arsenic						
			Barium						
			Cadmium						
			Chromium						
			Lead						
			Selenium						
			Silver						
1207	MERCURY QSM TCLP 5.0	(EPA 7470A)				12/16/2016	11/28/2016	*Y*	NeedExt
1223	VOC 8260 QSM TCLP 5.0	(EPA 8260C)			*Y*		11/28/2016	*Y*	NeedExt
1247	SVOC 8270 QSM 5 TCLP	(EPA 8270D)					11/28/2016	*Y*	NeedExt

SAMPLE #: 809342 **DESCR:** RVAAP-50-TD **PRIMARY / DETAILED MATRIX:** SOLID / SOIL **SAMPLED:** 11/18/2106 **Time:** 1345

CLIENT SAMPLE #: **DETAILED SITE/POINT ID INFORMATION:**

TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
618	FLASHPOINT	(EPA 1010A)				11/28/2106	11/28/2016	*Y*	Entered

Folder #: 123805 **Company:** *ERT* **Project:** RVAAP FY16

Invoice Number: 124342 **Preliminary Invoice Estimate:** $ 602.00

Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
FLASHPOINT	SOIL	2	$ 20.00	0.00	$ 40.00
ICP QSM TCLP 5.0 Arsenic	TCLP	2	$ 8.00	0.00	$ 16.00
ICP QSM TCLP 5.0 Barium	TCLP	2	$ 8.00	0.00	$ 16.00
ICP QSM TCLP 5.0 Cadmium	TCLP	2	$ 8.00	0.00	$ 16.00
ICP QSM TCLP 5.0 Chromium	TCLP	2	$ 8.00	0.00	$ 16.00
ICP QSM TCLP 5.0 Lead	TCLP	2	$ 8.00	0.00	$ 16.00
ICP QSM TCLP 5.0 Selenium	TCLP	2	$ 8.00	0.00	$ 16.00
ICP QSM TCLP 5.0 Silver	TCLP	2	$ 8.00	0.00	$ 16.00
MERCURY QSM TCLP 5.0	TCLP	2	$ 20.00	0.00	$ 40.00
SOLIDS,PERCENT	SOIL	2	$ 0.00	0.00	$ 0.00
SVOC 8270 QSM 5 TCLP	TCLP	2	$ 135.00	0.00	$ 270.00
VOC 8260 QSM TCLP 5.0	TCLP	2	$ 70.00	0.00	$ 140.00
Temporary Fuel Surcharge on lab supplies and services (if applicable):					$ 0.00

Bottle Information

Container	# Containers	Tests
MISC	**4**	%SOL,FLASH

CT LABORATORIES
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Sample Condition Report

Folder #: 123805
Client: ERT

Print Date / Time: 11/21/2016 11:50
Received Date / Time / By: 11/19/2016 11:20 JLS

Project Name: RVAAP FY16
Project Phase:

Log-In Date / Time / By: 11/21/2016 11:50 BNA
Project #: 3369 PM: BMS

Coolers: BOX
Custody Seals Present :

Temperature: 3.4 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **N**
Ship Method: FEDEX EXPRESS
Adequate Packaging: **Y**

Numbers: NOT PRESENT
Tracking Number: 0201784690573017
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
809338 RVAAP-50-RT	MISC	1	/	8270,VOC,HG,ICP
	Total # of Containers of Type (*MISC*) = 1			
809340 RVAAP-50-RT	MISC	1	/	FLASH,%SOL
	Total # of Containers of Type (*MISC*) = 1			
809341 RVAAP-50-TD	MISC	1	/	8270,VOC,HG,ICP
	Total # of Containers of Type (*MISC*) = 1			
809342 RVAAP-50-TD	MISC	1	/	%SOL,FLASH
	Total # of Containers of Type (*MISC*) = 1			

Condition Code	*Condition Description*
1	Sample Received OK

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APPENDIX D

Waste Disposal and Recycling Bills of Lading

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American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356002

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn Tait	1-10-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO

VEHICLE I.D. NO.	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1537				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Jay Campbell	1-10-17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 397-6[illegible]

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( )

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 AMERICAN WASTE MANAGEMENT SERVICES Copy 2 TRANSPORTER Copy 3 DISPOSAL FACILITY INVOICING Copy 4 GENERATOR/CUSTOMER Copy 5

PM05 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356003

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait

DATE: 1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER	HANOVETON, OH	( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer s site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: DAN PARRY

DRIVER'S SIGNATURE: Dan Parry

DATE: 1/10/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6723

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator s Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356004

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Fisher TKK	Canal St. Hamilton	332-[illegible] 545-0488

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
0093 Int-2013	oh			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: Ken Howell

DRIVER S SIGNATURE: Ken Howell

DATE: 1/10/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Assessment

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356005

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster		( ) - 1-10-17

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: JAY CAMPBELL

DRIVER'S SIGNATURE: Jay Campbell

DATE: 1-10-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS DAILEY RD WARREN, OH 44481	(330) 399-5729

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMSS.AWASMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356006

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE Kathleen E. Tait	DATE 1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER	HANOVERTON	( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME DAN PARRY	DATE 1/10/17
	DRIVER'S SIGNATURE Dan Parry	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS ANALYSIS

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356007

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60628
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]	[illegible]	330-515-0408

VEHICLE I D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
009 PVX-2963	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: [illegible]

DRIVER S SIGNATURE: [illegible]

DATE: 1/10/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6723

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356008

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	6451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn E Tait	1-10-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I D NO	STATE	BOX NUMBER IN	BOX NUMBER OUT	JOB NO
1537	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DRIVER'S SIGNATURE	DATE
	Jay Campbell	Jay Campbell	1-10-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6723

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356009

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk.	[illegible] St. [illegible]	330-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
6603 TNV-6963	[illegible]			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	[illegible]	1/10/17
	DRIVER'S SIGNATURE	
	[illegible]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356010

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster	Hanguerton	( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Dan Parry	1/10/17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356011

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1-10-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1537				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DRIVER'S SIGNATURE	DATE
	Jay Campbell		1-10-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWASMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356012

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED

RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #

NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	[illegible]

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk. Canal St Hanover [illegible]		[illegible]-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
0093 TVX-6963	[illegible]			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Bob Howell	1/10/17
	DRIVER'S SIGNATURE: Bob Howell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO 356033

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	6451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1-11-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
The Akwi Company		(330) 758 2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1501	OH	6027		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Bill Wellett — DATE: 1-11-17
DRIVER'S SIGNATURE:

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE.	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6726

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356032

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	3/30/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER		( )

VEHICLE I D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	3/30/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356031

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRK.	Canal St. Hunterdon	330-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
0093 NY-6963	Oh			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Bob Howell	1/11/17
	DRIVER'S SIGNATURE: Bob Howell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE.	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356030

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trkg	Austintown OH.	(330 565-0408

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: GARY Schmidt
DRIVER'S SIGNATURE: Gary Schmidt
DATE: 1-11-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE | DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME | PHONE NUMBER ( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

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Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356029

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	50622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT CAP

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Katie Tait

DATE: 1-11-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
The Hertz Company		

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME

DRIVER'S SIGNATURE

DATE: 1-11-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

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Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356028

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-11-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1538				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Jay Campbell	1-11-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMANI

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Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356027

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	11/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
FOSTER		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
[illegible]	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	11/14/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS[illegible]

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356026

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk.	Canal St. Hanoverton	330-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
0003 NX-6963	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Bob Howell	1/11/17
	DRIVER'S SIGNATURE: Bob Howell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356025

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/11/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
FOSTER TRKG	AUSTINTOWN OH	(330) 565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME	DRIVER'S SIGNATURE	DATE
Gary Schmidt	Gary Schmidt	1-11-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356024

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED

RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #

NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn F. Tait	[illegible]

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
The [illegible]		[illegible]

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
[illegible]	Ohio	C227		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DATE
	DRIVER S SIGNATURE	[illegible]

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356023

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-11-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1537				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DATE
	Jay Campbell	1-11-17
	DRIVER S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356022

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen E. Tait	6/20/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
[illegible]		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
[illegible]	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	[illegible]	6/20/17
	DRIVER'S SIGNATURE	
	[illegible]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( )

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMSAWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO 356021

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRK [illegible]	[illegible]	330-565-[illegible]

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
6093 PVX-6963	Oh			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Bob Howell
DRIVER'S SIGNATURE: Bob Howell
DATE: 1/11/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356020

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60620
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/11/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster Trkg	Austintown OH	(330) 545-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Gary Schmidt	1-11-17
	DRIVER'S SIGNATURE: Gary Schmidt	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356019

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathrine S. Tait

DATE: 1/11-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
The Acme Company		(330) 758-2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1304	OH	227		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: [illegible]

DRIVER'S SIGNATURE: [illegible]

DATE: 1/11/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356018

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1537				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Jay Campbell	1-11-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44451	(330) 399-6788

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356017

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn E. Tait — DATE: 5/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
[illegible]	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: [illegible] — DATE: 5/11/17

DRIVER'S SIGNATURE: [illegible]

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS ASSESSMENT

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356016

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE ID NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60625
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1/11/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRK. Akron St. Hartville		330-877-4[illegible]

VEHICLE ID NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
0003 HVX-6903	Ohio			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Bob Howell	1/11/17
	DRIVER'S SIGNATURE	
	Bob Howell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44461	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356015

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/11/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKg	Austintown. OH.	(330) 565-6408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: GARY Schmidt

DRIVER'S SIGNATURE: Gary Schmidt

DATE: 1-11-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356014

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1-11-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
The Acme Company		(330) 758-2313

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1301	OH	2257	--	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: T. Wheeler

DRIVER'S SIGNATURE:

DATE: 1-11-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN7

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356013

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1-11-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Fosler		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1537				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER S NAME: Jay Campbell
DRIVER S SIGNATURE: [signature]
DATE: 1-11-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME | PHONE NUMBER ( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator s Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356171

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
FOSTER		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Dan Parker	1/12/17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356170

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/12/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
On Rown Trking		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
Pur 4332	Ohio	1902	1902	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: Murfny

DRIVER S SIGNATURE: Murfny

DATE: 1-12-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN7

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO 356169

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	6451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/12/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Jay Campbell

DRIVER'S SIGNATURE: Jay Campbell

DATE: 1-12-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6720

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMSS.AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356168

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)338-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-12-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Active Cc		[illegible]

VEHICLE I.D. NO.	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
130	oh	027		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DRIVER'S SIGNATURE	DATE
	S. [illegible]		1-12-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356167

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TEK Const. Co. Inc.	Hermitage	331-515-1418

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
6003 HVY-6963	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Pat Howell
DRIVER'S SIGNATURE: Pat Howell
DATE: 1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6720

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -
OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

SPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

MS-AWMSMAN4

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356166

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Force		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1515				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Dan Perry	1/12/17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356165

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1/12/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
On Run Trucking		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
PWA 4292	Ohio	1962	1962	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Mingo	1-12-17
	DRIVER'S SIGNATURE	
	Mingo	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6729

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356164

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-12-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Jay Campbell	1-12-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Assessment

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356163

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-10-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme Co.		(330) 346 2310

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1501	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1-10-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356051

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKG	Austintown OH.	330 565 0408

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER S NAME: GARY Schmidt
DRIVER'S SIGNATURE: Gary Schmidt
DATE: 1-12-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6726

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME
PHONE NUMBER
OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS ASSESSMENT

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356050

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRK.	Canal St. Hanoverton	330-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
PVY-6963 0093	Oh.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Bob Howell
DRIVER'S SIGNATURE: Bob Howell
DATE: 1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356049

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60628
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn E. Tait

DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
107	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Dan Bailey

DRIVER'S SIGNATURE:

DATE: 1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356048

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1/12/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
BM & SON TRUCKING		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
TRK 4227	OHIO	1962	1962	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Murphy — DRIVER'S SIGNATURE: Murphy — DATE: 1-12-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS5.AWASMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356047

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait

DATE: 1-12-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: JAY Campbell

DRIVER'S SIGNATURE: Jay Campbell

DATE: 1-12-16

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS DAILEY RD WARREN, OH 44481	(330) 399-6729

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356046

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1-10-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Area Grain		(55)-[illegible]-[illegible]3

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
30	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER S NAME: [illegible]

DRIVER S SIGNATURE:

DATE: 1-13-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Awesome

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356045

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait

DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKG	Austintown OH.	(330) 565 0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1547/1391	OH.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Gary Schmidt

DRIVER'S SIGNATURE: Gary Schmidt

DATE: 1-12-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMSS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356044

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn E Tait
DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk. Equip. St. Marys		330-525-0418

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
0093 PVI-0863	OH.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Bob Howell
DRIVER'S SIGNATURE: Bob Howell
DATE: 1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356043

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen E. Tait

DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]		( )

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
[illegible]				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: [illegible]

DRIVER'S SIGNATURE: [illegible]

DATE: 1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS DAILEY RD WARREN, OH 44481	(330) 399-6720

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356042

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1/12/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
On R own Trking		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
PUR#232	OH	1962	1962	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Murphy
DRIVER'S SIGNATURE: Murphy
DATE: 1-12-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE | DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME | PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356041

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1-12-18

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Fosler		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: JAY CAMPBELL

DRIVER'S SIGNATURE:

DATE: 1-12-18

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356040

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1/10/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]		

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME:

DRIVER'S SIGNATURE:

DATE: 1/10/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE:

DATE:

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Assessment

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356039

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trkg Austintown OH		(330) 565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1547/1391	OH.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	GARY Schmidt	1-12-17
	DRIVER'S SIGNATURE: Gary Schmidt	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS] AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356038

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen E. Tait
DATE: 1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk.	Canal St. Hanoverton	330-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
0093 PVY-6963	Oh.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Bob Haurel
DRIVER'S SIGNATURE: Bob Haurel
DATE: 1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMBS.AWM.SMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356037

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/12/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Dan Parry DRIVER'S SIGNATURE [signature]	1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356036

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT CAP

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6134	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/12/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
OWN		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
PUA 4382	Ohio	1962	1962	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Murphy	1-12-17
	DRIVER'S SIGNATURE Murphy	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( )

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356035

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: JAY Campbell
DRIVER'S SIGNATURE: J Campbell
DATE: 1-18-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356034

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-12-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
The Acme Company		330 758 2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1301				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Bill Mellott	1-12-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMAN7

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356202

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24 HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait

DATE: 1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FORTNER		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
675	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: Dan Fortner

DRIVER'S SIGNATURE:

DATE: 1/13/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBSAWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356190

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-13-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]		550 758 2017

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1-01	OH	[illegible]		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	[illegible]	1-13-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356189

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/13/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
On R Dun Trking		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
AUN4232	OH	1962	1962	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Murphy

DRIVER'S SIGNATURE: Murphy

DATE: 1-13-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( )

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356188

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-13-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Jay Campbell	1-13-17
	DRIVER'S SIGNATURE: Jay Campbell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS ASSESSMENT

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356187

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn E. Tait

DATE: 1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trkg	Austintown OH.	(330) 565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Gary Schmidt

DRIVER'S SIGNATURE: Gary Schmidt

DATE: 1-13-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65.AWASMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356186

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622
		P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk.	Canal St. Harvester	330-565-0408

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
PVY-6963 0093	Oh			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DRIVER S SIGNATURE	DATE
	Bob Howell	Bob Howell	1/13/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMBS AWAISMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356185

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathrem S. Tait	1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		[illegible]

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1301	[illegible]	[illegible]		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	[illegible]	1/13/17
	DRIVER'S SIGNATURE	
	[illegible]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356184

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
on Rown Trucking		( )

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1WA4382	Ohio	1962	1962	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Murphy	1-13-17
	DRIVER'S SIGNATURE: Murphy	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356183

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1-13-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: JAY CAMPBELL
DRIVER'S SIGNATURE: Jay Campbell
DATE: 1-13-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6726

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -
OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356182

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1515				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Dan Parry	1/13/17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMES AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356181

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	6451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24 HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait — DATE: 1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster TRKg	Austintown OH	(330) 565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: GARY Schmidt
DRIVER'S SIGNATURE: Gary Schmidt
DATE: 1-13-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6726

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS5 AWMSMAN7

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356180

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	80622 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster-Trk. Co. 3rd St. Hartville		330-877-9446

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
6095 PVX-6415	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Eric Howell
DRIVER S SIGNATURE: Eric Howell
DATE: 1/12/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6726

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -
OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356179

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622
		P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-13-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]		[illegible]

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1301	OH	022T		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	[illegible]	1-13-17
	DRIVER'S SIGNATURE	
	[illegible]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356178

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen Tait	1/13/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
On Known Trking		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
6WA4382	Ohio	1962	1962	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Murphy	1-13-17
	DRIVER'S SIGNATURE: Murphy	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44421	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356177

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn E. Tait — DATE: 1-13-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
#1515				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Jay Powell — DRIVER'S SIGNATURE: [signature] — DATE: 1-13-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6723

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS Awareness

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356176

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Katherine S. Tait	1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk. Clearing Sta.	Hamilton	330-565-0408

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
6093 PVX-6963	Oh			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Bob Howell	1/13/17
	DRIVER S SIGNATURE: Bob Howell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356175

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE Kathleen S. Tait	DATE 1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Eastern		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME Dan Feeney DRIVER'S SIGNATURE	DATE 1/13/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS ASSESSMENT

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356174

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER TRKG	AUSTINTOWN, OH	(330) 565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: GARY Schmidt — DATE: 1-13-17
DRIVER'S SIGNATURE: Gary Schmidt

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS AWASMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356173

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme Co		556-2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1361	OH	0227		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	[illegible]	1-13-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 AMERICAN WASTE MANAGEMENT SERVICES Copy 2 TRANSPORTER Copy 3 DISPOSAL FACILITY INVOICING Copy 4 GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356172

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	6451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1-13-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Jay Campbell
DRIVER'S SIGNATURE: Jay Campbell
DATE: 1-13-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME | PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS3.AWASMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356368

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60629
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED

RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #

NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kaitlin E. Tait

DATE: 1/17/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster Trk.	Rural St. Louis Ln	330-545-6414

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1203 PVX-6963	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: Ben Foster

DRIVER S SIGNATURE: Ben Foster

DATE: 1/17/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6729

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356367

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		755 2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1301	OH	8227		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: [illegible]
DRIVER'S SIGNATURE: [illegible]
DATE: 1-17-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356369

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/17/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKG	Canal St. Hanoverton OH.	(330) 565-0498

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	GARY Schmidt	1-17-17
	DRIVER'S SIGNATURE: Gary Schmidt	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6729

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PM65 AWAISMANT

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356370

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	9451 STATE ROUT 5	60622
FORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	[signature]	1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Jay Cam Poell	1-17-17
	DRIVER'S SIGNATURE [signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356371

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/17/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKG Canal St. Hanoverton OH		( ) 330-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Robert Collins	1-17-17
	DRIVER'S SIGNATURE: Robert Collins	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS MAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356191

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait — DATE: 1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER S NAME: Jay Campbell
DRIVER S SIGNATURE: Jay Campbell
DATE: 1-17-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6720

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356192

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE Kathleen S. Tait	DATE 1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
AWF		

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
501	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME [illegible]	DATE 1-17-17
	DRIVER S SIGNATURE [signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMSS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356193

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60422
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1/17/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster TRKg	Canal St. Hartville OH.	(330) 565 0408

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			1

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Gary Schmidt
DRIVER'S SIGNATURE: Gary Schmidt
DATE: 1-17-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356194

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1/17/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster-Wk. Clinton St. Hamilton		351-345-1468

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
0103 TW-1463	Oh.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Bob Hamil
DRIVER'S SIGNATURE: Bob Hamil
DATE: 1/17/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME
PHONE NUMBER ( ) -
OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356195

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/17/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKG.	Canal Stn OH	( ) 330-565-6407

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Robert Collin	1-17-17
	DRIVER'S SIGNATURE	
	Robert Collin	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6726

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 AMERICAN WASTE MANAGEMENT SERVICES Copy 2 TRANSPORTER Copy 3 DISPOSAL FACILITY INVOICING Copy 4 GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356196

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO.	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster		( ) -

VEHICLE I.D. NO.	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1513				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	JM Campbell	1-17-17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6726

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356197

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60639
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Hull		( ) 758-13

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
501				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME
DRIVER'S SIGNATURE
DATE: 1-17-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME
PHONE NUMBER ( ) -
OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356198

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/17/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKG	Canal st. Hanourrton OH.	(330) 565 0408

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: GARY Schmidt
DRIVER'S SIGNATURE: Gary Schmidt
DATE: 1-17-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWARSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356199

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/17/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Fedex - T.K. Hauling	44444 St. Hamilton	330-565-0408

VEHICLE I.D. NO.	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
6003 PVN-0463	Oh.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Rob Howell

DRIVER'S SIGNATURE: Rob Howell

DATE: 1/17/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356200

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Easter		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: JAY CAMPBELL — DATE: 1-17-17
DRIVER'S SIGNATURE:

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS-AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356201

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathrem S. Tait

DATE: 1/17/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRLC Canal St. Hanoverton OH		330-565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Robert Collins

DRIVER'S SIGNATURE: Robert Collins

DATE: 1-17-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356386

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/20/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME	BOARDMAN	(330) 772-6233

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
621	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	[illegible]	1-20-17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE
	[signature]	

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356385

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1-20-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME Tr # 941		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Greg Martin T-21
DRIVER'S SIGNATURE: Greg Martin
DATE: 1/20/2017

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE:
DATE:

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME | PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS.AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356377

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED

RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #

NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/20/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME	BOARDMAN	[illegible]

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
021	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: EUGENE L. [illegible] II

DRIVER'S SIGNATURE: [illegible] II

DATE: 1-25-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE: [illegible]

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PM03 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356376

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED

RAILROAD TIES, TELEPHONE POLES & ASPHALT C&D

COMMENTS/FACILITY APPROVAL #

NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait

DATE: 1/20/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme Company		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
MDV7235	Ohio	15:14		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Tim Kook

DRIVER'S SIGNATURE: Tim Kook

DATE: 1/20/2017

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
LAFARGE	6205 NEWTON FALLS BAILEY RD WARREN, OH 44481	(330) 399-6728

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356346

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		758 2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1301	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	[illegible]	1-18-17
	DRIVER'S SIGNATURE [illegible]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356345

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen F. Tait	1 18 17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme	40	( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DATE
	DRIVER S SIGNATURE	1 18 17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356344

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME		(330) 758-2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1301	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Bill Mellott	1-18-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMSSAWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356343

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1 18 17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme	51	( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1202	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: [illegible] — DATE: 1 18 17

DRIVER'S SIGNATURE: [illegible]

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 750-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356342

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	6451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		(330) 758-2313

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1301	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DATE
	DRIVER S SIGNATURE	1-18-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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PMBSAWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356341

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 AMERICAN WASTE MANAGEMENT SERVICES Copy 2 TRANSPORTER Copy 3 DISPOSAL FACILITY INVOICING Copy 4 GENERATOR/CUSTOMER Copy 5

PMBS AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356340

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen E. Tait — DATE: 1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
135	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: B. L. Mellott — DATE: 1-18-17
DRIVER'S SIGNATURE: [signature]

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( )

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356339

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO.
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1-18-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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PMS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356338

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE Kathryn S. Tait	DATE 1/13/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Ravenna	50	( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME [illegible]	DATE 1/13/17
	DRIVER S SIGNATURE [signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356337

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	5451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster TRKg	Canal ST Hanoverton OH	330 565 0488

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: GARY Schmidt
DRIVER'S SIGNATURE: Gary Schmidt
DATE: 1-18-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM85 AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356336

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Fabco		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1516				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Jay Campbell	1-18-17
	DRIVER'S SIGNATURE	
	Jay Campbell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

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American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356348

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn E. Tait

DATE: 1 19 17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
H&A	Ed	( )

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
13	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER S NAME

DRIVER'S SIGNATURE

DATE: 1 19 17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

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American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356349

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen E. Tait

DATE: 1/19/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME T-7611		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Greg Martin T-21

DRIVER'S SIGNATURE: Greg Martin

DATE: 1-19-2017

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356351

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA / STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		[illegible]

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
501	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: [illegible]
DRIVER'S SIGNATURE: [illegible]
DATE: 1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -
OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356352

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1 19 17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme	70	( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER S NAME	DATE
	CALLAHAN	1-19 17
	DRIVER S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Awesome!

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356353

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1-17-2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME Trk # 941		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Gary Martin T-21
DRIVER'S SIGNATURE: Gary Martin
DATE: 1/19/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

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Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS Awaismani

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356354

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME		

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
801				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	S. M. Mellott	1-19-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356355

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1 19 17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME	40	

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1307	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	CALLAHAN	1 19-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356356

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 11/19/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme Tr# 941		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Greg Martin T-21
DRIVER'S SIGNATURE: Greg Martin
DATE: 1-19-2017

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356357

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME		(330) 758-2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
130	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS.AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356358

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/19/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME	40	( )

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER S NAME:
DRIVER S SIGNATURE:
DATE: 1/19/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -
OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS ANNISMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356359

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen E. Tait	1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme	Youngstown	330 758-2313

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1502	Oh			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: J. McConnell 143 — DATE: 1-19-17

DRIVER'S SIGNATURE: J. McConnell

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS.AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356347

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		(330) 758 2313

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
130	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Bill Mellett	1-19-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMES AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356365

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1/20/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Acme		

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: [illegible]
DRIVER'S SIGNATURE: [illegible]
DATE: 1/20/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356362

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/20/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme Company		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
PDY9285	Ohio	1504		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Tim Roose T-2	1/20/2017
	DRIVER'S SIGNATURE: Tim Roose	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( )

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM05.AWAISMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356335

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait

DATE: 1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster JRK Hauling	Hamilton	330-565-0418

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
04.03 PVX-2963	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: Bob Howell

DRIVER S SIGNATURE: Bob Howell

DATE: 1/18/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME

PHONE NUMBER ( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356316

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
15 14				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1/18/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356315

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60625
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]	[illegible]	330-545-6462

VEHICLE I.D. NO	STATE	BOX NUMBER IN	BOX NUMBER OUT	JOB NO.
6003 PVV-6983				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Bob Howell	1/18/17
	DRIVER'S SIGNATURE	
	Bob Howell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356314

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	6451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen E. Tait	1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DATE
	JAY CAMPBELL DRIVER S SIGNATURE	1-18-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356313

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster TRKg	Canal ST Hanoverton OH	(330) 565-0408

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Gary Schmidt	1-18-17
	DRIVER'S SIGNATURE: Gary Schmidt	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356312

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathrum S. Tait	1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1575	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Dan Perry	1/18/17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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PM85 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356311

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait — DATE: 1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER TRKG	CANAL ST. HANDOVER TOWN OH	(330) 565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: GARY Schmidt
DRIVER'S SIGNATURE: Gary Schmidt
DATE: 1-18-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS.AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356310

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE Kathrun S. Tait	DATE 1-17-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME Jay Campbell	DATE 1-18-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Assessment

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356309

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
FOSTER		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1515	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER S NAME	DATE
	DRIVER'S SIGNATURE	1/18/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 AMERICAN WASTE MANAGEMENT SERVICES Copy 2 TRANSPORTER Copy 3 DISPOSAL FACILITY INVOICING Copy 4 GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356308

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster Trk. [illegible] St. Hamilton		330-565-0406

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
0093 FVX-6963	Oh.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Bob Howell
DRIVER'S SIGNATURE: Bob Howell
DATE: 1/18/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356307

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/18/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Foster TRKg	Canal ST, Hanoverton OH	(330) 565-0408

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1547/1391	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	GARY Schmidt	1-18-17
	DRIVER'S SIGNATURE: Gary Schmidt	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMSSAWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356306

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathleen S. Tait
DATE: 1-18-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1518				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Jay Campbell
DRIVER'S SIGNATURE:
DATE: 1-18-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Awesome

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356329

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme	Youngstown	(330) 758-2313

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1502	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Don McConnell T45
DRIVER'S SIGNATURE: Don McC.
DATE: 1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356328

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme Company		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
PDY7285	Ohio	1504		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DATE
	Tim Roose	1/19/2017
	DRIVER'S SIGNATURE	
	Tim Roose	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Assessment

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356327

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
003	Ohio			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Ronald Kennedy	1-19-17
	DRIVER'S SIGNATURE: [signature] T-42	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356326

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Katherine S. Tait
DATE: 1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
086	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Stephen J Corey
DRIVER'S SIGNATURE:
DATE: 1/19/2017

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356325

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME	BOARDMAN	(770) 773 0233

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
021	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	EUGENE LEMINHIZER II	1-19-17
	DRIVER'S SIGNATURE	
	[signature] II	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356324

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
003	Ohio			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1/19/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS Awasman

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356323

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	40622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO.
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
AC MI		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
CYC	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Stephen Carey	1-19-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 750-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356322

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathrin S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Acme Company		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
PDY9285	Ohio	1504		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Tim Roose	1-19-17
	DRIVER'S SIGNATURE	
	Tim Roose	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356321

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Acme	Youngstown	330 758-2313

VEHICLE I.D. NO.	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1502	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Dan McConnell Jr	1-19-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356320

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5	60622
	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME	D.MARDMAN	(770)2770273

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
021	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	EUGENE LEMONIEZER	1-19-17
	DRIVER'S SIGNATURE	
	[signature]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMES AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356319

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Acme		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
003	Ohio			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Ronald [illegible]	1-19-17
	DRIVER'S SIGNATURE: [illegible] 1-17	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM05 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356317

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1/19/2017

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

OSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356318

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

	GENERATOR SIGNATURE	DATE
I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME TRUCKING		( )

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
	OH			

	PRINT DRIVER S NAME	DATE
I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	Stephen J Corey	1-16-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

	AUTHORIZED SIGNATURE	DATE
I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes		

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO 356479

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60620
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
066	OH		Stark TX	

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER S NAME	DRIVER'S SIGNATURE	DATE
	Stephen J Cote,		1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN1

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356491

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1 1917

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme	40	( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1 1917

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356490

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/17/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
[illegible]	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER S NAME	DATE
	DRIVER S SIGNATURE	1-17-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 538-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 AMERICAN WASTE MANAGEMENT SERVICES Copy 2 TRANSPORTER Copy 3 DISPOSAL FACILITY INVOICING Copy 4 GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356478

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME	BOARDMAN	(330)717-0273

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
021	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	EUGENE CONTNER	1-19-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS Awareness

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356489

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathleen S. Tait	1-19-2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme TR# 941		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Greg Martin T-21	1/17/17
	DRIVER'S SIGNATURE: Greg Martin	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM65 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356488

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
003	Ohio			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Ronald Kennedy	1-19-17
	DRIVER'S SIGNATURE: [signature] T-42	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PM05 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356477

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE ID NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME Company		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
ODY4285	Ohio	1504		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Tim Noose	1-17-17
	DRIVER'S SIGNATURE	
	Tim Noose T-22	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

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Subsidiary of Avalon Holdings Corporation
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NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356487

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme	Youngstown	(330) 757-2315

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1502	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Dan McConnell T45	1-19-16
	DRIVER'S SIGNATURE	
	D. McC.	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

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One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356476

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
06	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	Stephen J Carey	1-10-17
	DRIVER'S SIGNATURE	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356474

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn E. Tait
DATE: 1/14/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
[illegible]		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
[illegible]				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: [illegible]
DRIVER'S SIGNATURE: [illegible]
DATE: 1/14/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 756-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME | PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS$.AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356475

CTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

IPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

E OR DESCRIPTION OF WASTE SHIPPED
SPHALT

MMENTS/FACILITY APPROVAL #
OTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

CASE OF AN IERGENCY OR ILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

reby certify that the above named waste(s) are properly ssified, described, packaged, marked, and labeled and are roper condition for transportation according to the licable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/17

ECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

MPANY NAME	ADDRESS	PHONE NO
Foster [illegible]	[illegible]	330-565-[illegible]

HICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
093 FVX-6963	[illegible]			

ereby certify that the above described wastes were accepted transportation at the producer's site and delivered to and off-ded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	[illegible]	1/19/17
	DRIVER'S SIGNATURE	
	[illegible]	

ECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

CILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

MMENTS

hereby certify that the above described wastes were delivered this Facility, that the Facility is authorized and permitted to ceive such wastes	AUTHORIZED SIGNATURE	DATE

ECTION 4 — ASBESTOS (Operator to complete)

Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

PERATOR'S NAME	PHONE NUMBER
	( ) -

PERATOR'S ADDRESS

ECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are lassified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, rdinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

ESPONSIBLE AGENCY
AME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

ISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

SAWMSMAN

American Waste Management Services, Inc
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356486

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen E. Tait — DATE: 1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
Acme	Go	

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: C Acman — DATE: 1-19-17

DRIVER'S SIGNATURE:

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANF

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Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356473

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
1501	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBSAWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356485

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60620 P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme TR# 9411		

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Corey Martin F21	1-19-2017
	DRIVER'S SIGNATURE: Corey Martin	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

OMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

rator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are sified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, nances, orders, rules and/or standards.

Operator's Name (print/type)	Signature of Operator's Authorized Agent	Date

SPONSIBLE AGENCY
AME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

SPOSAL FACILITY Copy 1 AMERICAN WASTE MANAGEMENT SERVICES Copy 2 TRANSPORTER Copy 3 DISPOSAL FACILITY INVOICING Copy 4 GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356472

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME	BOARDMAN	(330)270-77

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
021	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: EUGENE CIMINI JR

DRIVER'S SIGNATURE: E. Cimini Jr

DATE: 1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 753-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356361

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE Asphalt

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait — DATE: 1-19-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1537				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: Jay Campbell — DATE: 1-19-17
DRIVER'S SIGNATURE: Jay Campbell

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE — DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME — PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) — Signature of Operator's Authorized Agent — Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 — AMERICAN WASTE MANAGEMENT SERVICES Copy 2 — TRANSPORTER Copy 3 — DISPOSAL FACILITY INVOICING Copy 4 — GENERATOR/CUSTOMER Copy 5

PMS Awesmant

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO 356360

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE ~~ASPHALT~~

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathleen S. Tait

DATE: 1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme		( ) -

VEHICLE I D NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
003	Ohio			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER S NAME: Ronald Saunders

DRIVER S SIGNATURE: T-42

DATE: 1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME

PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS3 AWMSMANF

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356334

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5 CITY RAVENNA STATE OH ZIP 44266	60622 P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA

GENERATOR SIGNATURE: Kathryn S. Tait

DATE: 1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Acme Company		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO
PD 49285	Ohio	1504		

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon

PRINT DRIVER'S NAME: Tim Roose

DRIVER'S SIGNATURE: Tim Roose

DATE: 1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE

DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356333

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	6451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME		( ) -

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
CXG	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	DRIVER'S SIGNATURE	1-19-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356332

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	40622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO	24-HR. EMERGENCY NO
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/19/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
[illegible]		( ) -

VEHICLE I.D. NO.	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1545				

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME: [illegible]
DRIVER'S SIGNATURE: [illegible]
DATE: 1/19/17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 755-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME | PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS ASSESSMENT

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356331

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I D NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P O NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/16/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
Foster-Wk [illegible] St. Hermitage		330-565-2408

VEHICLE I D NO	STATE	BOX NUMBER IN	BOX NUMBER OUT	JOB NO
0093 TNV-6963	Oh.			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER S NAME	DATE
	Bob Howell	1/16/17
	DRIVER'S SIGNATURE	
	Bob Howell	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 750-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMS AWMSMAN7

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356330

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT PORTAGE	8451 STATE ROUT 5, CITY RAVENNA STATE OH ZIP 44266	60622
		P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
ASPHALT

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR. EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn S. Tait	1/19/2017

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME	[illegible]	(330) 730-2973

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
021	[illegible]			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.	PRINT DRIVER'S NAME	DATE
	EUGENE [illegible]	1-19-18
	DRIVER'S SIGNATURE	
	[illegible]	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

PMBS AWMSMANI

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356364

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60622
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #
NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

	NAME	PHONE NO.	24-HR. EMERGENCY NO.
IN CASE OF AN EMERGENCY OR SPILL CONTACT	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA.

GENERATOR SIGNATURE: Kathryn S. Tait
DATE: 1/20/17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO.
ACME	40	( ) -

VEHICLE I.D. NO.	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO.
1302	OH			

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon.

PRINT DRIVER'S NAME:
DRIVER'S SIGNATURE:
DATE: 1-20-17

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO.
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE
DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME
PHONE NUMBER ( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

DISPOSAL FACILITY Copy 1 | AMERICAN WASTE MANAGEMENT SERVICES Copy 2 | TRANSPORTER Copy 3 | DISPOSAL FACILITY INVOICING Copy 4 | GENERATOR/CUSTOMER Copy 5

American Waste Management Services, Inc.
Subsidiary of Avalon Holdings Corporation
One American Way • Warren, Ohio 44484-5555 • (330) 856-8800

NON-HAZARDOUS WASTE MANIFEST

DOCUMENT NO. 356363

SECTION 1 — THIS SECTION TO BE COMPLETED BY GENERATOR:

COMPANY NAME	ADDRESS	WASTE I.D. NUMBER
FORMER RAVENNA ARMY AMMO PLANT	8451 STATE ROUT 5	60628
PORTAGE	CITY RAVENNA STATE OH ZIP 44266	P.O. NUMBER

NAME OR DESCRIPTION OF WASTE SHIPPED
CONCRETE

COMMENTS/FACILITY APPROVAL #

NOTE: 24-HOUR EMERGENCY CONTACT NUMBER IS SEAN CARNEY 607-259-7017

IN CASE OF AN EMERGENCY OR SPILL CONTACT	NAME	PHONE NO	24-HR EMERGENCY NO
	KATIE TAIT	(614)336-6136	(607)259-7017

I hereby certify that the above named waste(s) are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the DOT and the EPA	GENERATOR SIGNATURE	DATE
	Kathryn E. Tait	1-20-17

SECTION 2 — THIS SECTION TO BE COMPLETED BY THE HAULER/TRANSPORTER:

COMPANY NAME	ADDRESS	PHONE NO
ACME Trk # 941		( )

VEHICLE I.D. NO	STATE	BOX NUMBER-IN	BOX NUMBER-OUT	JOB NO

I hereby certify that the above described wastes were accepted for transportation at the producer's site and delivered to and off-loaded at the waste facility, both as listed hereupon	PRINT DRIVER'S NAME	DATE
	Greg Martin T-21	1-20-2017
	DRIVER'S SIGNATURE: Greg Martin	

SECTION 3 — THIS SECTION TO BE COMPLETED BY RECEIVER AT DISPOSAL SITE:

FACILITY NAME	ADDRESS	PHONE NO
ACME COMPANY	11600 MAHONING AVE NORTH JACKSON, OH 44451	(330) 758-2313

COMMENTS

I hereby certify that the above described wastes were delivered to this Facility, that the Facility is authorized and permitted to receive such wastes	AUTHORIZED SIGNATURE	DATE

SECTION 4 — ASBESTOS (Operator to complete)

"Operator" is defined as the company which owns, leases, operates, controls or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.

OPERATOR'S NAME	PHONE NUMBER
	( ) -

OPERATOR'S ADDRESS

RECOMMENDED SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION ☐ FRIABLE ☐ NON-FRIABLE

Operator's Certification: I hereby warrant and declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and domestic law, regulations, ordinances, orders, rules and/or standards.

Operator's Name (print/type) | Signature of Operator's Authorized Agent | Date

RESPONSIBLE AGENCY
NAME AND ADDRESS

QUANTITY TO BE DETERMINED AT DISPOSAL FACILITY
GENERATOR/CUSTOMER - COPY 5

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PMS AWASMAN

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