Draper Aden Associates
Engineering • Surveying • Environmental Services

2206 South Main Street
Blacksburg, Virginia 24060
(540) 552-0444 • Fax (540) 552-0291
www.daa.com

April 7, 2016

Mr. Ervin Lane
Compliance Hydrogeologist
NC DEQ – Division of Waste Management/Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

RE: Watauga County Transfer Station
Response to NCDEQ Compliance Inspection Report and Notice of Violation, dated November 20, 2015 & Sampling and Analysis Report
Draper Aden Associates Project No.6520-39

Dear Mr. Lane:

The following information provides a summary of the field activities and findings from soil sampling and analysis conducted at the Watauga County Transfer Station on January 7, 2016 in response to observations of leakage from solid waste collection trailers at the Watauga County Transfer Station as outlined in the North Carolina Department of Environment & Natural Resources' (NCDENR now NCDEQ) Compliance Inspection Report and Notice of Violation, dated November 20, 2015 (attached). A Sampling and Analysis Plan (SAP) was developed and approved by NCDEQ on December 28, 2015. This work was completed in accordance with the approved SAP.

The purpose of the site investigation is to address the requirements of NCDEQ as noted in the referenced Compliance Inspection Report/Notice of Violation and identify potential impact to soil near the trailers from the release of liquids that came in contact with municipal solid waste. Based on the findings, presented below, impact was not identified and no further action is planned at this time.

Background

The Watauga County Transfer Station is located within the closed Watauga County Landfill property (Figure 1) and collects municipal solid waste for transport to the Foothills Environmental MSW landfill (Permit # 14-03) in Lenoir, NC for disposal. The waste, once collected, is staged in trailers outside the bailing/recycling building for future hauling by a subcontractor. The trailers, once full are covered with a tarp. The attached map illustrates the location of the trailers staged for transport relative to facility operations (Figure 2).

On November 10, 2015, during a routine inspection, a representative of NCDEQ, Mr. Charles Gerstell, Environmental Senior Specialist, observed liquid discharging from the loaded trailers onto the asphalt paved staging area and flowing toward a vegetative slope bordering the parking area. This liquid, present due to significant recent rainfall in the area, is considered leachate by NCDEQ since it has come in contact with the waste stored in the trailers. The amount of liquid discharged is unknown, but is believed to be between 5-15 gallons total.

The observations were brought to the attention of facility staff and the hauling contractor during the inspection and a formal Compliance Inspection Report/Notice of Violation was provided by NCDEQ to Watauga County on November 20, 2015. Donna Watson with the County contacted you by phone on November 20, 2015 to imitate the required response actions.

As noted in the SAP and consistent with observations during the January 2016 field effort, the issue of leaking trailers has been resolved and all trailers repaired to eliminate potential leakage in the future. According to the landfill personnel, the leakage was addressed immediately after the inspection on November 10, 2015 (within 24-48 hours). Subsequently, Watauga County was directed by your office to address potential impact resulting from the observed release. Accordingly a SAP was developed and submitted to your office on December 21, 2015. The SAP was approved by NCDEQ on December 28, 2015. The following outlines the actions taken and results of the analytical sampling in response to the November 2015 observations.

Sample Area and Field Observations

Field observations and soil sample collection were conducted on January 7, 2016. Weather conditions during the field event were cold to mild with temperatures in the low to mid 40s and sunny. No leakage was observed from trailers present on site (photograph below). Site conditions were dry and no recent rainfall had occurred; however, below freezing temperatures were observed in the days prior to the field event. Sediment previously observed within the parking area during the NCDEQ inspection was no longer present and no sediment build up was observed. Therefore, no surface sediment samples could be collected.

Photograph of the trailer staging area from Jan 7, 2016.

Surface water appears to flow from south to north across the parking area which is graded to support surface water movement away from the building and staging areas. Based on the assumed volume of discharge, nature of soil at the site, and the flow direction across the parking lot an area approximately 100' in length and 25' wide was defined as the initial sampling area (Figure 2). The slope of the asphalt parking area was observed to drain more toward the northeast rather than to the north as originally thought. Therefore, the sampling area was modified in the field based on observations at the time of sampling. This is a minor deviation to the SAP that is not considered significant. Sample locations were chosen based on the assumed flow path across the parking area and to sample within drainage rills that had developed in the open space adjacent to the parking area.

Seven soil samples were collected from within the area of investigation (Figure 2). Samples WS-1, WS-3, and WS-4 reflect conditions along the linear edge of the parking area. The remaining samples were collected from within secondary flow paths as observed in the field. Samples WS-5 and WS-7 were chosen to represent areas farther away from the release area and to help define the impact area if impact were observed. To aid in evaluating inorganic sample data, a potential background sample location was chosen (assumed to be undisturbed native material) identified as WS-BG (Figure 2).

Soils observed included silty sands and sandy silts, which are consistent with prior observations of soil from well and gas probe installation at the landfill. Early in the day, the upper 2 inches of soil were frozen; however, the field technician was still able to collect samples using hand-held equipment. Samples were collected from a depth just below the root zone of grasses or scrub vegetation observed within the sampling area.

Sample Methodology

Samples were collected using a hand held soil auger in general conformance with NCDEQ's Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling dated April 2008, Draper Aden Associates standard operating procedures (SOP) for soil sampling, and EPA guidelines as outlined in the SAP. There were no deviations from the planned sampling methodology during the sampling event. To collect sufficient sample aliquot for analysis, sample depths generally within a 3inch depth interval were required. All samples were collected between 1 to 6 inches below the ground surface. Specific sample intervals are documented on the field notes (attached). Sample locations chosen are considered representative for evaluating for potential impact from the trailer release.

Soil samples were observed for visual or olfactory evidence of impact and none was identified. A small amount of soil from each borehole was placed in a baggie and a photoionization detector was used to assist in evaluating for potential petroleum-based impact. PID measurements ranged from 0.3 to 1.0 ppm, which is attributed to low level fluctuations likely resulting from temperature, pressure, or humidity fluctuations and is not considered an indication of potential impact. Sampling of deeper soil, groundwater, or surface water was not conducted at this time.

Based on the nature of sampling (minimal ground disturbance and limited decontamination liquids generated) a negligible amount of investigation derived waste was generated. Soil cuttings were returned to the boreholes or thin spread onto the surface within the investigation area. Decontamination of sample equipment was conducted within the study area; decontamination liquid was discharged to the ground surface. Used sample supplies (e.g., used gloves, single use soil sampling equipment) were discarded in waste dumpsters on site.

Samples collected for laboratory analysis were immediately placed on ice and packed in a cooler for transport to the laboratory. Samples were shipped via overnight courier with chain-of-custody documents and arrived on January 8, 2016 at the laboratory. All shipping and laboratory preservation criteria were met. Chain-of-custody documentation and laboratory check-in information are included in the laboratory analytical reports, enclosed.

Laboratory Analysis

All soil samples were collected and analyzed for inorganic and organic parameters listed on Appendix I of 40 CFR 258. Analytical methods include SW-846 Method 6020A for inorganic parameters and Method 8260B/5035 for organic parameters. Since the liquid has been in contact with waste, NCDEQ also requested analysis of parameters biological oxygen demand (BOD), chemical oxygen demand (COD), and total Phosphorus to aid in evaluating potential impact from solid waste derived leachate. Three soil samples (WS-2, WS-3, and WS-5) were chosen for the analyses. EPA Method 365.4 was used for total Phosphorous analysis. Leaching methods were utilized to prepare soil samples for BOD and COD analysis by Method 5210B.

CompuChem Labs of Cary, North Carolina completed the laboratory analysis except for BOD and COD analyses, which were conducted by Pace Analytical in Huntersville, NC. CompuChem indicated that their laboratory reporting limits were at or below the NCDEQ's Preliminary Soil Remediation Goals (PSRGs; September 2015; https://ncdenr.s3.amazonaws.com/s3fspublic/Waste%20Management/DWM/SF/IHS/guidance/SoilTable%20September%20%202015.pdf) for the lower of the Residential Health Based Soil Remediation Goals or Protection of Groundwater for all parameters listed on the Appendix I list, except 1,2,3-trichloropropane and vinyl chloride. However, as noted in the SAP the reporting limits for 1,2,3-trichloropropane and vinyl chloride are only slightly higher than the PSRGs. Final laboratory data packages, enclosed, dated January 21, 2016 were received on January 25, 2016. However, an error was identified in the laboratory data package provided by PACE Analytical regarding sample identifications. A revised data package was requested and received on April 5, 2016.

Data Evaluation

The purpose of this investigation is to identify potential impact to nearby soil from the release of liquids through the waste containment trailers. To assist in that evaluation, data were compared to the previously mentioned PSRGs dated September 2015. Specifically, data were compared to Preliminary Residential Health Based Soil Remediation Goals or Protection of Groundwater, whichever is lower. There are no comparative limits for chromium, BOD, COD, or total phosphorus.

Of the organic parameters analyzed, only acetone was detected (Table 1). Acetone was observed at low concentrations in soil samples WS-1 and WS-7. Though blank contamination was not observed as part of this event, acetone is commonly used in analytical laboratories and detections of acetone are often a result of inadvertent contamination during sample handling or processing. Regardless, the concentrations observed (0.052 mg/kg and 0.34 mg/kg, respectively) were significantly lower than the lowest screening level of 24 mg/kg (Protection of groundwater). No other organic parameters were detected in the soil samples.

Inorganic parameters were observed in all samples collected at the site, as identified on the attached table. Of these, detections of arsenic and thallium in all sample locations were reported above the Residential PSRG and detections of cobalt and vanadium exceeded the PSRG for Protection of GW, which represent the lowest PSRG for each parameter. The Residential PSRG (arsenic and thallium) and the Protection of Groundwater PSRG (cobalt and vanadium) were also exceeded in the background sample collected during this investigation. Sample data and background data for these parameters were similar in concentration to the background samples. Therefore, inorganic detections observed above a PSRG are attributed to likely natural concentrations of these parameters in native in-situ (assumed) soil rather than a result of potential impact from the noted release.

BOD, COD and total phosphorus were analyzed at three locations only including WS-2, WS-3, and WS-5. A water leach was conducted for the BOD/COD analyses. All BOD and COD samples were non-detect. Total phosphorus was detected in the soil samples at concentrations of 0.378 mg/kg (WS-2), 4.2 mg/kg (WS-3), and 0.554 mg/kg (WS-5) (Table 1). The total phosphorus is attributed to naturally occurring concentrations in soil rather than a result of leachate potentially released from the trailers. In this area, surface and stormwater generally infiltrate to the subsurface and runoff is not generated; therefore, phosphorus present is likely to be absorbed via plant uptake and is not anticipated to mobilize from the site.

The data obtained as part of this assessment, including BOD, COD, and total phosphorus, do not show evidence of leachate impact to soils. NCDEQ was notified by phone on February 8, 2016 of the preliminary findings.

Recommendations

The previously identified trailer leakage has been resolved by the site contractor. Based on results of this sampling and analysis there does not appear to be an indication of impact to soils resulting from the previously observed leaking tanks. No further action is recommended at this time.

In summary, Watauga County completed all required actions in response to the November 20, 2015 site inspection report and notice of violation, and no further action is planned. Please feel free to contact me at 540-552-0444 if you have any questions regarding the content of this letter.

Sincerely,
DRAPER ADEN ASSOCIATES

Karen M. Weber, P.G.
Senior Project Geologist

Attachments: (1) Inspection Report/Notice of Violation dated November 20, 2015
(2) Figure 1 – Soil Sampling Area
(3) Figure 2 – Soil Sample Location Map
(4) Table 1 – Summary of Detected Parameters in Soil
(5) January 7, 2016 – Field Notes
(6) Analytical Laboratory Data (CompuChem, Pace)

cc: Mr. J.V. Potter, Watauga County
Ms. Donna Watson, Watauga County
Mr. Srikanth Nathella, P.E., Draper Aden Associates

Attachment 1

Inspection Report/Notice of Violation dated November 20, 2015

Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

LINDA CULPEPPER
Director

November 20, 2015

CERTIFIED MAIL: 7015 1520 0002 8376 1527
RETURN RECEIPT REQUESTED

Mr. Deron Geouque, Watauga County Manager
814 West King Street, Suite 205
Boone, North Carolina 28607

CERTIFIED MAIL: 7015 1520 0002 8376 1534
RETURN RECEIPT REQUESTED

Mr. J.V. Potter, Operations Service Director
336 Landfill Road
Boone, North Carolina 28607

SUBJECT: **Notice of Violation**
Compliance Inspection Report
Watauga County Transfer Station
Permit ID#: 9503T-TRANSFER-1996
Watauga County

Dear Sirs:

On November 10, 2015, Charles Gerstell, Environmental Senior Specialist, representing the State of North Carolina, Division of Waste Management Solid Waste Section, inspected the above referenced facility for compliance with North Carolina solid waste statues and rules. Mr. J.V. Potter was present and represented the Watauga County Transfer Station during this inspection. The following violations were noted:

A. SL2013-413, Section 59.2(c), in amending 15A NCAC 13B .0105, requires that vehicles or containers used for the collection and transportation of solid waste to "be designed and maintained to be leak-resistant in accordance with industry standards."

Watauga County in in violation of Section 59.2(c) in that leachate was observed actively leaking from loaded trailers being used at Watauga County Transfer Facility to collect and transport solid waste. Leachate was observed flowing across the pavement to the edge of a vegetated area to the north and then flowing east to an excavated area within the vegetated area.

Based upon the foregoing, within **10-days** of receipt of this Notice of Violation, Watauga County shall come into compliance with all the requirements of the regulations in SL2013-413, Section 59.2(c) by completing the following:

1. Contact Ervin Lane, Compliance Hydrogeologist, to determine the requirements for a soil sampling plan in order to determine the impact of the leachate release.

Ervin Lane, Compliance Hydrogeologist
Division of Waste Management/Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
(919) 707-8288

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to $15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may also be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

Please keep me informed of your progress in this matter. Solid Waste Section staff will conduct follow-up inspection(s) to verify that the facility has completed the requirements of this Notice of Violation.

If you have any questions please contact me at (704) 235-2144 or charles.gerstell@ncdenr.gov.

Sincerely,

Digitally signed by Charles T. Gerstell
DN: cn=Charles T. Gerstell, o=Division of Waste Management, ou=Solid Waste Section, email=charles.gerstell@ncdenr.gov, c=US
Date: 2015.11.20 09:10:02 -05'00'

Charles T. Gerstell
Environmental Senior Specialist
Division of Waste Management - Solid Waste Section

Enclosure: Facility Compliance Inspection Report

Cc: Jason Watkins, Field Operations Branch Head
Deb Aja, District Supervisor
Jessica Montie, Compliance Officer

FACILITY COMPLIANCE INSPECTION REPORT
Department of Environmental Quality
Division of Waste Management - Solid Waste Section

UNIT TYPE:												
Lined MSWLF		LCID		YW		Transfer	X	Compost		SLAS		COUNTY: Watauga
Closed MSWLF		HHW		White goods	X	Incin		T&P		FIRM		PERMIT NO.: 9503T-TRANSFER-1996
CDLF		Tire T&P / Collection	X	Tire Monofill		Industrial Landfill		DEMO		SDTF		FILE TYPE: COMPLIANCE

Date of Site Inspection: November 10, 2015 **Date of Last Inspection:** May 19, 2014

FACILITY NAME AND ADDRESS:
Watauga County Transfer Station
336 Landfill Road
Boone, North Carolina 28607

GPS COORDINATES: **N**: 36.22032 **W**: 81.63165

FACILITY CONTACT NAME AND PHONE NUMBER:
Name: J.V. Potter, Operations Service Director
Telephone: (828) 264-5305 (o) or (828) 964-0681 (m)
Email address: jv.potter@watgov.org

FACILITY CONTACT ADDRESS:
Same as above

PARTICIPANTS:
J.V. Potter, Operations Service Director
Charles Gerstell, NCDEQ-Solid Waste Section

STATUS OF PERMIT:
A Permit to Operate 9503T-TRANSFER-1996 Watauga County Transfer Station and 9503-HHW-2015 Watauga County Permanent HHW was issued to Watauga County on May 29, 2015. This permit shall expire on August 26, 2020.

PURPOSE OF SITE VISIT:
Comprehensive Inspection

STATUS OF PAST NOTED VIOLATIONS:
N/A

OBSERVED VIOLATIONS

SL2013-413, Section 59.2(c), in amending 15A NCAC 13B .0105, requires that vehicles or containers used for the collection and transportation of solid waste to "be designed and maintained to be leak-resistant in accordance with industry standards."

Watauga County in in violation of Section 59.2(c) in that leachate was observed actively leaking from loaded trailers being used at Watauga County Transfer Facility to collect and transport solid waste. Leachate was observed flowing across the pavement to the edge of a vegetated area to the north and then flowing east to an excavated area within the vegetated area.

Mr. Scott Barrett, Regional Manager with KRD Trucking, Inc. confirmed by telephone on November 13, 2015 that both trailers observed leaking during the November 10, 2015 inspection had been repaired and placed back into service.

View of leachate leaking from loaded trailers.

View of leachate leaking from loaded trailers.

View of leachate flowing across pavement toward vegetated area. Note drying material displaced by leachate flow.

View of ponded leachate in vegetated area adjacent to trailer parking/staging area.

To achieve compliance, within **10-days** of receipt of the Notice of Deficiency, Watauga County must take the following actions:

1. Contact Ervin Lane, Compliance Hydrogeologist, to determine the requirements for a soil sampling plan in order to determine the impact of the leachate release.

Ervin Lane, Compliance Hydrogeologist
Division of Waste Management/Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
(919) 707-8288

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to $15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may also be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

ADDITIONAL COMMENTS

1. The facility is permitted to receive waste generated within Ashe, Avery, Caldwell, Watauga and Wilkes Counties.
2. All waste is transported to the Foothills Environmental MSW landfill (Permit #: 14-03)
3. A gate was located at the entrance to the facility to prevent unauthorized access.

Records Review:

4. The permit and operations plan were verified. Both documents were current and available upon request.
5. Tonnage reports for January 2015 – October 2015 were verified. The facility received approximately 177 tons of waste each operating day during this time period.
6. Certified Transfer Station Operations Specialists:
- Jim Fink (expires 7/19/18)
- Scott Gregg (expires 3/12/16)
- Jimmy Johnson (expires 11/16/16)
- Dale Miller (expires 5/19/18)
- Terry Scott (expires 11/16/16)
- Douglas Allen Stanberry (expires 7/19/18)
- Ryan A. Woodring (expires 7/19/18)

7. Waste screening reports were verified for January 2015 – November 9, 2015. Reports appeared to be performed with adequate frequency and provided good documentation of observed unacceptable waste streams along with final disposition of those wastes.

Operations Inspection of the Transfer Station:

8. Two separate entrance areas are provided for waste acceptance. The general public enters the facility on the south side of the building while commercial vehicles and larger public vehicles enter on the east side of the building.
9. No unacceptable waste streams were observed at the time of inspection.
10. The walls of the facility were in need of cleaning. It is recommended that pressure washing of the walls be performed to remove buildup of residues.
11. The trench drain located along the eastern entrance appeared to be functional at the time of inspection. However, some portions of the grates covering the drain were partially obstructed by residues. It is recommended that the grates covering the trench drains be cleaned of residues to ensure proper function of the device. Scheduling of periodic cleanings is also recommended.
12. Please ensure that all waste on the floor of the transfer trailer loading bay is picked up and properly disposed at the end of the working day.
13. **General Facility Permit Condition #10(d) states:** *"Effective vector control measures must be applied at all times to control any potential vectors including flies, rodents, insects, and other vermin."*
- During the inspection, multiple rats were observed on the floor of the transfer trailer loading bay. It is recommended that the facility implement vector control measures to control the presence of rats at the facility. This can include, but not be limited to contacting a pest control contractor for assistance.

14. Windblown waste was well controlled at the time of inspection. However, it is recommended that steps be taken to remove the buildup of small pieces of waste consisting primarily of paper at the entrance and exit to the trailer loading bay.

Operations Inspection of the White Goods Area:

15. White goods containing chlorofluorocarbon refrigerants (CFCs) were stacked on pavement adjacent to the northwest corner of the baling/recycling building. This area was well managed

Operations Inspection of the Tire Collection Area:

16. Tires are collected into covered trailers next to a covered loading dock on the west side of the baling/recycling building. This area was well managed.

Supporting Comments:

17. A convenience area for public disposal of wastes and recyclables is provided on the north side of the access road across from the scale house.
18. Electronics are collected within the baling/recycling building and then placed on wooden pallets and shrink wrapped for placement into a covered trailer for removal by their designated vendor.
19. Florescent bulbs and batteries are collected at the recycling/baling facility.

Operations Inspection of the Permanent HHW Facility (9503-HHW-2005):

20. The facility consists of a steel building with three separate compartments for the collection of HHW.
21. The facility was not in operation as of the date of the inspection.
22. The facility structure had just recently been delivered and placed on a concrete pad. Mr. Potter explained that the county was currently working to get the fire suppression system charged and operational.

Please contact me if you have any questions or concerns regarding this inspection report.

Digitally signed by Charles T. Gerstell
DN: cn=Charles T. Gerstell, o=Division of Waste Management, ou=Solid Waste Section, email=charles.gerstell@ncdenr.gov, c=US
Date: 2015.11.20 09:03:27 -05'00'

Charles T. Gerstell
Environmental Senior Specialist
Regional Representative

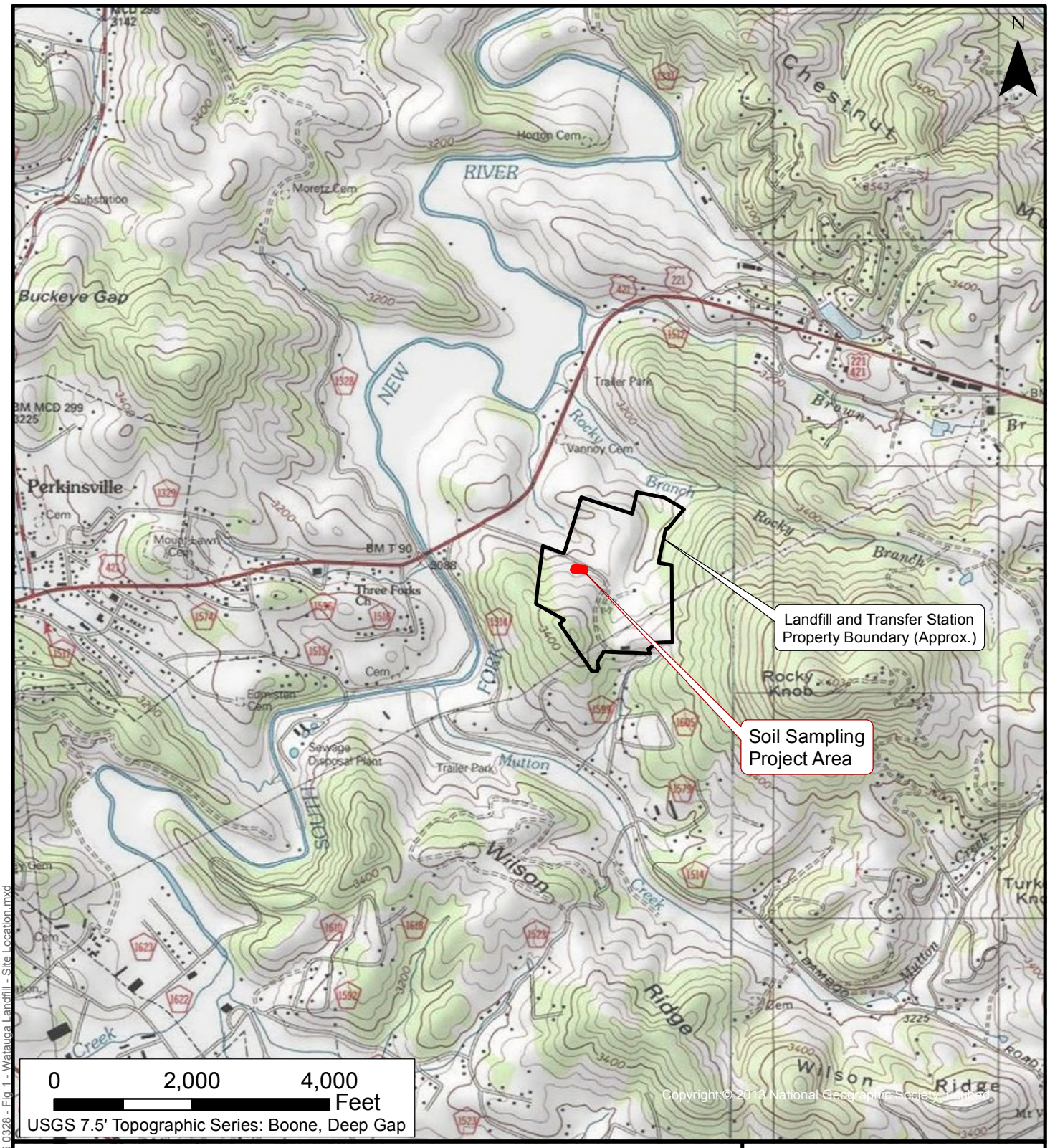
Phone: (704) 235-2144

Sent on: 11/20/15		Email		Hand delivery	**X (with NOV)**	US Mail		Certified No. [7015 1520 0002 8376 1534]

Copies: Jason Watkins, Field Operations Branch Head
Deb Aja, Western District Supervisor
Jessica Montie, Compliance Officer.
Deron Geouque, Watauga County Manager **Certified No.: 7015 1520 0002 8376 1527**

Attachment 2

Figure 1 – Soil Sampling Area



January 2016 Soil Sampling Event
Site Location Map

Watauga County Landfill
Watauga County, North Carolina

SCALE 1" = 2000'

PLAN NO. 6520-39

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
Richmond, VA
Charlottesville, VA
Hampton Roads, VA
Coats, NC

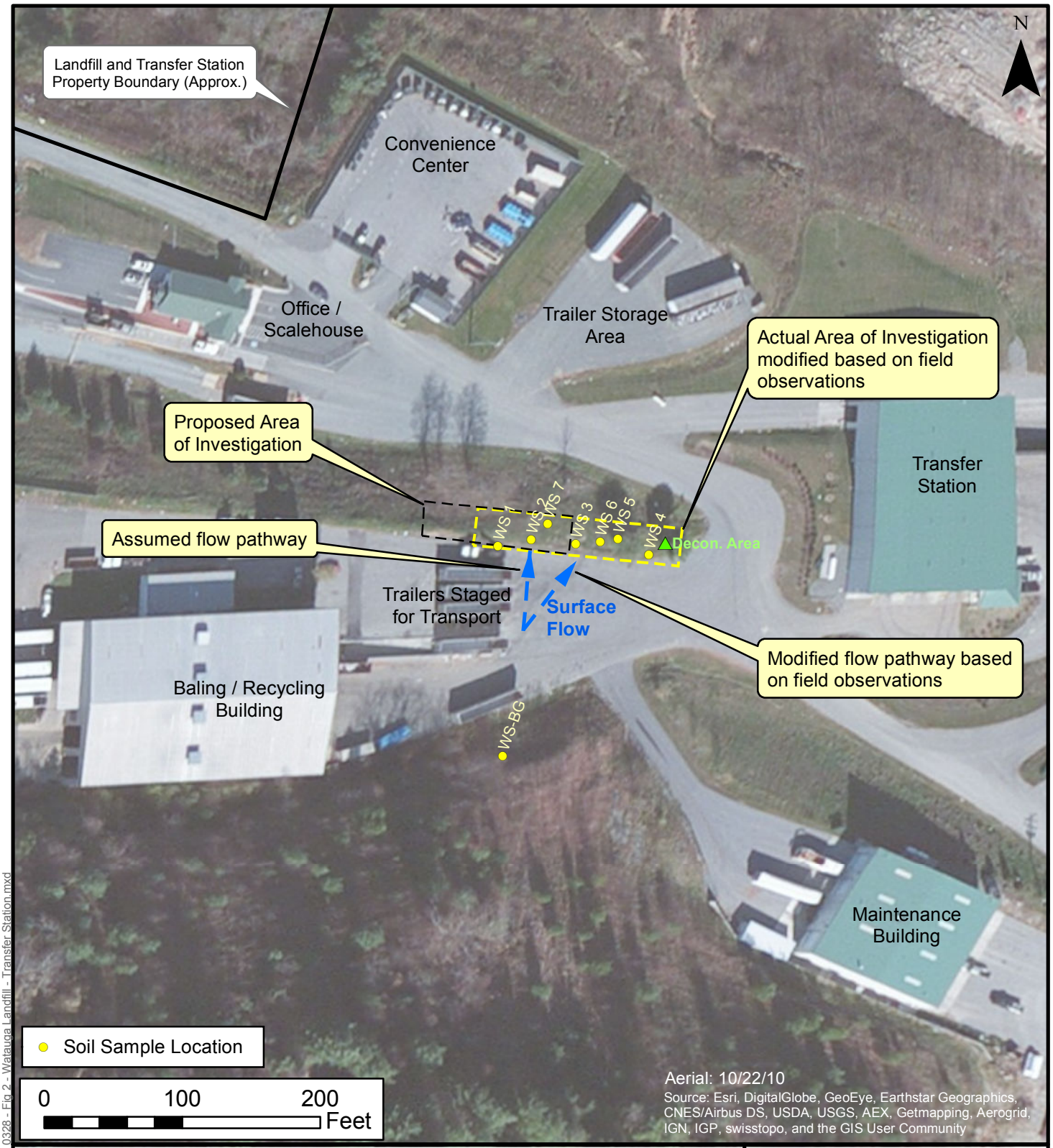
DESIGNED KMW
DRAWN SMF
CHECKED SN
DATE 03-28-16

FIGURE 1

Path: P:\06\500\06520\06520-39\GIS\MAP - 16 0328 - Fig 1 - Watauga Landfill - Site Location.mxd

Attachment 3

Figure 2 – Soil Sample Location Map



January 2016 Soil Sampling Event
Soil Sample Location Map

Watauga County Landfill
Watauga County, North Carolina

SCALE 1" = 100'

PLAN NO. 6520-39

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services
2206 South Main Street
Blacksburg, VA 24060
540-552-0444 Fax: 540-552-0291
Richmond, VA
Charlottesville, VA
Hampton Roads, VA
Coats, NC

DESIGNED KMW
DRAWN SMF
CHECKED SN
DATE 03-28-16

FIGURE
2

Path: P:\06\500\06520\06520-39\GIS\MAP - 16 0328 - Fig 2 - Watauga Landfill - Transfer Station.mxd

Attachment 4

Table 1 – Summary of Detected Parameters in Soil

Table 2: Summary of Detections - Soil
Watauga County, North Carolina
Soil Sampling - January 2016

Method	CAS#	Analyte	NCDEQ Preliminary Soil Remediation Goals		Sample ID																	
			Protection of GW	Residential	WS-1	Q	WS-2	Q	WS-3	Q	WS-4	Q	WS-5	Q	WS-6	Q	WS-7	Q	WS-DUP	Q	WS-BG	Q
Inorganic Analytes (mg/kg)																						
6020	7440-36-0	Antimony	0.9	6.2	U		U		U		U		U		U		U		U		U	
6020	7440-38-2	Arsenic	6	0.68	2.01		2.11		2.27		4.1		3.04		4.15		2.67		2.77		2.16	
6020	7440-39-3	Barium	580	3,000	409		242		155		320		368		288		310		246		401	
6020	7440-41-7	Beryllium	63	32	1.29		0.825		0.47	J	1.19		1.86		1.68		2.03		0.846		1.16	
6020	7440-43-9	Cadmium	3	NE	0.488	J	0.805		0.874		1.56		0.998		1.22		0.733		0.991		0.5	J
6020	7440-47-3	Chromium	NE	NE	65.3		36.4		28		54.6		45.4		49		46.8		62.1		34.3	
6020	7440-48-4	Cobalt	0.9	4.6	27.9		21		9.45		20.2		23.7		29.2		31.7		22		25.2	
6020	7440-50-8	Copper	700	620	28.9		50.4		53.5		54.4		41.6		41.5		31.3		42.3		31.3	
6020	7439-92-1	Lead	270	400	6.95		25.1		29.9		48.5		13.9		22.1		10.9		31.2		8.2	
6020	7440-02-0	Nickel	130	300	39.8		24		19		34.1		35.7		33.9		32.9		27.2		28.1	
6020	7782-49-2	Selenium	2.1	78	0.684	J	0.62	J	0.511	J	0.996	J	1	J	1.09	J	1.27	J	0.612	J	0.46	J
6020	7440-22-4	Silver	3.4	78	U		0.0908	J	0.21	J	0.274	J	U		0.0835	J	U		0.112	J	U	
6020	7440-28-0	Thallium	0.28	0.16	0.319	J	0.199	J	0.17	J	0.476	J	0.298	J	0.324	J	0.365	J	0.209	J	0.274	J
6020	7440-62-2	Vanadium	6	78	96.4		59.4		46.2		85.2		119		111		118		65.9		92.4	
6020	7440-66-6	Zinc	1,200	4,600	99.8		173		228		325		160		187		85.4		202		109	
Volatile Organic Compounds (mg/kg)																						
8260B	67-64-1	Acetone	24	12,000	0.052		U		U		U		U		U		0.034		U		NS	
Total Phosphorus (mg/kg)																						
365.4	7723-14-0	Total Phosphorus	Not Established		NS		0.378		4.2		NS		0.554		NS		NS		NS		NS	

Notes:

U Denotes not detected at or above the detection limit.

J Denotes the concentration was observed between the laboratory detection and quantitation limit and the result is estimated.

NS Denotes not sampled.

NA Denotes not applicable. NE Denotes not established.

Q Denotes data validation qualifier.

Shading indicates the lowest of the two regulatory thresholds and when used with sample data indicates an exceedance of the lower threshold.

NCDEQ Preliminary Soil Remediation Goals, September 2015.

Attachment 5

January 7, 2016 – Field Notes

12/10/15 Bland CoLF B03268-04 JGE/KMW PFB#1

pulled pump up 3' to draw from diffuser screen

(1415) turb 0.62NTUs

(1420) turb 0.97NTUs prev 3' from bott now 6' " "

(1430) stop pumping and pull pump

11/7/16 Watauga CoLF 0520-39 JGE PFB#1

General Notes

- Arrival Time (1030)
- Weather: Sunny 40
- PPE: Eye Protection, Nitrile Gloves
- Calibrations: MiniRAE 300 PID
  100PPM Isobutylene = 100 PPM

- All sampling equipment (trowels, shovels & auger) are deconed prior to sampling first location & between each sampling location using Alconox soap, methanol as the rinse agent & DI water.
- Decon takes place within sample area in designated spot identified on map.
- Excess soil from sampling is spread within sample area
- all samples collected are immediately placed on ice in coolers.

- condition of existing trailers: appear to be in good shape. no obvious evidence of recent leakage
- water appear to flow NE toward edge of parking lot away from Recycling building and trailers

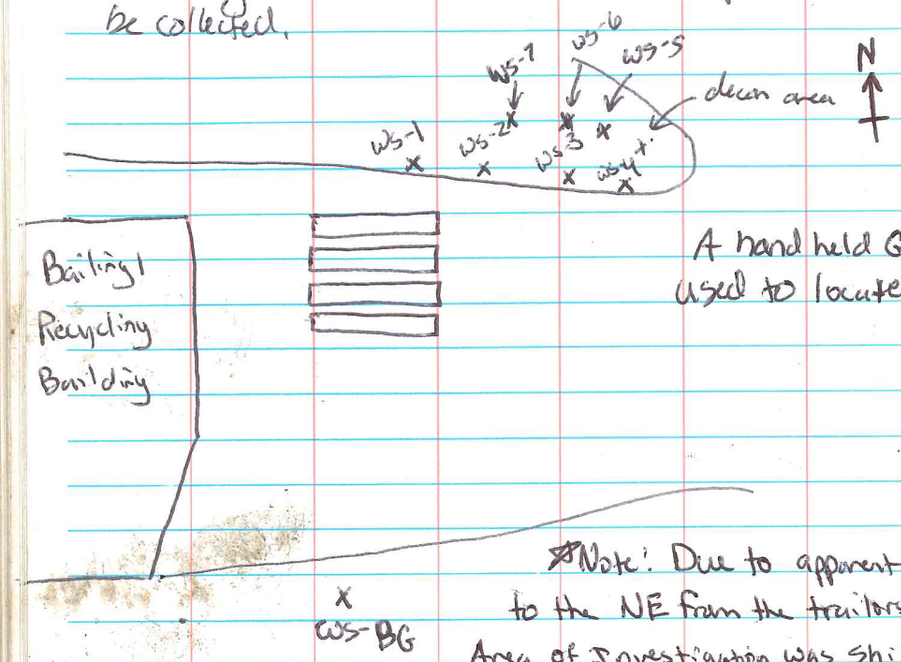
- All samples are collected below vegetative roots to a depth no greater than 12". Specific depth ranges for each sample are noted/documented on COC & in specific sample location notes.

- Soil jars are filled and lightly compacted w/ no headspace. Volatile samples are collected using T-handle 5mL collectors and placed into vials (40 mL) containing preservative

11 7 16 Watauga Co LF 65-20-39 TQE PFB#1

General Notes (con't)

- Soils noted on asphault during NCDEQ are ~~no longer~~ have been removed. No sample can be collected.



A hand held GPS used to locate locations

*Note: Due to apparent flow to the NE from the trailors, the Area of Investigation was shifted to the NE to more effectively capture ~~accurate samples~~ representative samples.

WS-BG

Sample Time (1130)
Samples Collected: (1) TM, (1) Dry weight

PID: 0.9 ppm
Soil desc: Top 2" frozen. 2"-4" yellow brown sandy silt
Depth: 2"-4" No odor or discoloration

Note: PID reading in empty ziploc bag is 0.8 ppm

1/7/16 Watauga Co LF 65-20-39 TQE PFB #1

WS-1

Sample Time (1200)
Samples Collected: (1) TM, (1) Dry Weight, (3) 8260

PID: 0.4 ppm
Soil desc: brown sandy, gravely silt, no odor or discoloration
Sample depth: 1"-3"

WS-2

Sample Time (1220)
Samples Collected: (1) TM, (1) Dry Weight, (3) 8260, (1) BOD, COD, Total P

PID: 1.0 ppm
Soil desc: dark brown sandy silt, bits of glass found in soil @ approx 4"
Sample depth: 3"-6"

WS-DUP - taken from WS-2 Location

Sample Time (1230)
Samples Collected: (1) TM, (1) Dry weight (3) 8260

WS-3

Sample Time (1255)
Samples Collected: (1) TM, (1) Dry Weight (3) 8260, (1) BOD, COD, Total P

PID: 0.3 ppm
Soil desc: dark brown to black silty sandy clay no odor or discoloration
Sample Depth: 3"-6"

1/7/16 Watauga Co LF 6520-39 PFB#1 PFB#1

WS-4

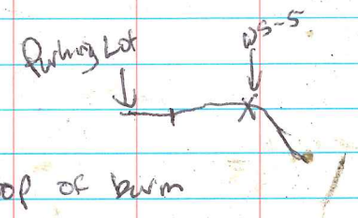
Sample Time (1320)
Samples Collected: (3) TM, (1) Dry weight
(9) 8260

PID: 0.2 ppm
Soil desc: dark brown, silty clay
no odor or discoloration
Sample depth: 6-9"

WS-5

Sample Time (1350)
Samples Collected: (1) TM, (1) Dry weight
(3) 8260, (1) BOD, COD, Total P

PID: 0.2 ppm
Soil desc: orange brown silty clay
No odor or discoloration
Sample depth: 2-5"



Note: sample collected just ~~before~~ at top of berm for WS-5, 6, & 7

WS-6

Sample Time (1410)
Samples Collected: (1) TM, (1) Dry weight
(3) 8260

PID: 0.3
Soil desc: orange brown silty clay

Sample depth: 3-6"

WS-7

Sample Time (1435)
Samples Collected: (1) TM, (1) Dry weight
(3) 8260

PID: 0.4 ppm
Soil desc: orangeish brown silty clay

Sample depth: ~~3-6~~" 2-5"

Attachment 6

Analytical Laboratory Data (CompuChem, Pace)

1/21/2016

JANET FRAZIER

DRAPER ADEN ASSOCIATES

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

WorkOrder: 1601025

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER ADEN ASSOCIATES **Work:** 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39 **Sdg:** 1601025

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1601025-01	WS-1	Soil	01/07/2016 12:00	01/08/2016 09:06
1601025-02	WS-2	Soil	01/07/2016 12:20	01/08/2016 09:06
1601025-03	WS-3	Soil	01/07/2016 12:55	01/08/2016 09:06
1601025-04	WS-4	Soil	01/07/2016 13:20	01/08/2016 09:06
1601025-05	WS-5	Soil	01/07/2016 13:50	01/08/2016 09:06
1601025-06	WS-6	Soil	01/07/2016 14:10	01/08/2016 09:06
1601025-07	WS-7	Soil	01/07/2016 14:35	01/08/2016 09:06
1601025-08	WS-DUP	Soil	01/07/2016 12:30	01/08/2016 09:06
1601025-09	WS-BG	Soil	01/07/2016 11:30	01/08/2016 09:06

ANALYSES DATA PACKAGE COVER PAGE

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Laboratory: Liberty Analytical

SDG: 1601025

Client Sample Id:	Analysis:	Lab Sample Id:
WS-1	EPA 6020A	1601025-01
WS-1	EPA 6020A	1601025-01RE1
WS-2	EPA 6020A	1601025-02
WS-3	EPA 6020A	1601025-03
WS-4	EPA 6020A	1601025-04
WS-5	EPA 6020A	1601025-05
WS-5	EPA 6020A	1601025-05RE1
WS-6	EPA 6020A	1601025-06
WS-7	EPA 6020A	1601025-07
WS-DUP	EPA 6020A	1601025-08
WS-BG	EPA 6020A	1601025-09
WS-BG	EPA 6020A	1601025-09RE1

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Susan W Bass

Name: Susan Bass

Date: 01/18/2016

Title: Chemist III

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

I. SAMPLE DATA PACKAGE

The Sample Data Summary Package shall contain data for all samples in one Work Order/Sample Delivery Group (SDG), as follows:

A. SDG Narrative

B. Chain of Custody Records

C. Sample Preparation and Analysis Holding Time Data
(HOLDING TIME SUMMARY)

D. MDL
(MDL SUMMARY)

E. Laboratory Control Sample Results
(LCS/LCS DUPLICATE RECOVERY)

F. Matrix Spike Results
(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

G. Serial Dilution Results– if applicable
(SERIAL DILUTION)

H. Post Digestion Spike Sample Recovery Results– if applicable
(POST DIGEST SPIKE SAMPLE RECOVERY)

I. Duplicate Results
(DUPLICATES)

J. Batch Summary
(PREPARATION BATCH SUMMARY)

K. Analysis Sequence Summary
(ANALYSIS SEQUENCE SUMMARY)

L. Target Element Results
(ANALYSIS DATA SHEET)

M. Low Level Initial and Continuing Calibration Check Results– if applicable
(LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK)

N. Initial and Continuing Calibration Results
(INITIAL CALIBRATION DATA)
(INITIAL AND CONTINUING CALIBRATION CHECK)

O. Low Range Standard Results– if applicable
(LOW RANGE STANDARD)

P. High Range Standard– if applicable
(HIGH RANGE STANDARD)

Q. ICP-AES and ICP-MS Instrument Results - if applicable
(ICP INTERFERENCE CHECK SAMPLE)
(ICP-AES AND ICP-MS LINEAR RANGES)
(ICP-AES INTERELEMENT CORRECTION FACTORS)
(ICP-MS TUNE)
(ICPMS Internal Standards Relative Intensity Summary)

R. Method and Instrument Blank Results
(BLANKS)

S. Run Logs/Raw Data

T. Digestion and Distillation Logs

U. Standard Info / Internal Coc Documents

A. SDG Narrative

Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1601025
Client: DRAPER ADEN ASSOCIATES
Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

The indicated Sample Delivery Group (SDG) consisting of twenty (20) solid samples were received into the laboratory information management system (LIMS) on January 8, 2016 intact and in good condition with the Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The sample's temperature was 0.3 degrees Celsius. Temperature was recorded by IR temperature gun.

The samples were prepared and analyzed in accordance with SW846 6020A methodology for the requested metals.

EQUATIONS FOR SOLID SAMPLE CALCULATIONS:

Client sample WS-1 used for illustration.

ICP Equation:

Equation for obtaining metals sample results in mg/Kg as presented on FORM I data sheets from ICP instrument acquired results in µg/L (ppb).

$$\text{Concentration (\% solids) (mg/Kg)} \quad \frac{C \times V}{W \times S} \times DF$$

Where
C = concentration (µg/L)
DF = dilution factor
V = final volume in liters after sample preparation
W = weight in grams of wet sample
S = % solids/100

Example: Arsenic result µg/L to mg/Kg.

$$\frac{3.40767\ \mu g/L \times 0.1\ L\ (V)}{1.04\ g\ (W) \times 0.816} \times 5 = 2.008\ mg/Kg \text{ reported as } 2.01\ mg/Kg$$

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (LLICV, LLCCV, ICV & CCV), blanks (ICB, & CCB), and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW-846 methodology.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSS & PBS) were found to be within acceptable ranges and the field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The ICP/MS sample matrix spike, CCN = 6011103-MS1 (WS-4S) was found to be inside control limits except antimony, arsenic, copper, selenium, and zinc.

The ICP/MS sample matrix duplicate spike, CCN = 6011103-MSD1 (WS-4SD) was found to be inside control limits except antimony, arsenic, copper, selenium, and zinc.

The ICP/MS sample duplicate, CCN = 6011103-DUP1 (WS-4D) was found to be inside control limits.

A five-fold serial dilution has not been provided. During the analysis the serial dilution was prepared incorrectly

The ICP/MS sample post digestion spike also was prepared incorrectly and has not been provided.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Kenneth Grzybowski
President
January 17, 2016

Liberty Analytical

Liberty Analytical's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is Liberty Analytical's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.). This policy is also applicable to non-CLP data packages.

Revision 7 (01/12/2011)

Liberty Analytical

INORGANIC DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. In the absence of specific qualifiers in the analytical method requested, the laboratory utilizes EPA CLP qualifiers. The qualifiers used are:

U : This flag indicates the compound was analyzed for, not detected and is reported as less than the Method Detection Limit (MDL) (or as defined by the client). The Reporting Limit (RL), or Limit of Quantitation (LOQ), and the MDL will be adjusted to reflect any dilution or concentration of the sample and, for soils, the percent moisture.

J : This flag indicates the reported result is an estimated value. The flag is used when an analyte is detected and the result is less than the adjusted RL/LOQ but equal to or greater than the MDL.

Q : This flag denotes that one or more quality control criteria have failed (e.g., LCS recovery, Continuing Calibration Verification, CCV, and interference check standards for ICP-AES/ICP-MS) and reanalyses can't be performed. The Q flag is applied to all specific analyte(s) in all samples associated with the failed quality control criteria.

B : This flag is used when the analyte is found in the associated method or calibration blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

D: This flag is applied to an analyte when the reported result is based on a dilution.

* This flag is applied to a target analyte when any QC acceptance criterion has not been met for that analyte. The flag appears on the reporting form of the associated QC analysis. The flag is applied if matrix spike recoveries are out of control limits and the sample result is ≤ 4X the spike added. The flag is also applied if duplicates are out of control. If both sample and duplicate values are ≥ 5X RL, then the RPD must be ≤ 20%. If either value (sample or duplicate) is < 5X RL, the absolute difference between the values has to be < CRQL to be in control. This flag is also applied to outliers in the serial dilution test. Any analytes with a sufficiently high concentration (minimally 10X RL after a 1:5 dilution) will have the flag applied if the dilution analysis doesn't agree within ± 10% of the original determination.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

The extensions: D, S, SD, L, and A are added to the end of the Client ID and represent the following:

D – Matrix Duplicate
S – Matrix Spike
SD – Matrix Spike Duplicate
L – Serial Dilution
A – Post Digestion Spike

Revision 3 (08-11-2015)

B. Chain of Custody Records

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the Work Order/SDG. The CoC documents shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp., Liberty Analytical 501 Madison Ave. Cary, NC 27513 (800) 833 5097 Fax (919) 379-4050 Attn: Cathy Dover

TKC 1/7/16

Client: Watauga County, NC **Attn:** Mr. J.V. Potter **Address:** 336 Landfill Road, Boone, NC 28607 **Phone:** (828) 264-5305 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** Watauga County Landfill **Location:** Watauga County, NC **Event:** 2016 Soil Sampling **DAA JN:** 6520-39 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** ~~BATCH~~ ~~Sample Collection for Project Complete?~~ YES **Carrier:** UPS **Tracking Number:** 1Z2373010197512129

Box 1: Matrix
SW Surface Water, GW Groundwater, L Leachate, S Soil, T Trip Blank, E Equipment Blank, P Product, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (Specify), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, AG Amber Glass, V VOA, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

GENERAL NOTES:
1. See attached Target Analyte Lists for 8260 and Inorganic Parameters.
2. Report soil results based on dry weight.
3. Report LOQ/MDL + estimated results.
4. Report results in mg/kg.
5. Reporting limits to meet NC P5RG limits as specified in e-mail dated 11/27/2015 (attached).

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Inorganics (Total) Methods 6010/6020	VOAs 5035A/8260C (MeOH Preserved)	VOAs 5035A/8260C w/ Ultra Pure Blank Water (DI Water)	% Moisture	8260C - 5 mL purge (See attached TA list)	COD SM5220D	BOD SM 5210B	Total Phosphorous - Method 365.4	Sample Depth	reg. SOIL	TKP	BOD COD SUB
Box 4 - Sample Type					G	G	G	G	G	G	G	G				
Box 3 - Filtered/Unfiltered					-	-	-	-	U	-	-	-				
Required pH of Sample					-	-	-	-	<2	-	-	-				
Box 2 - Preservative					H	G	G	H	A	H	H	H				
Box 5 - Sample Container Type					1-4oz CG	1-40ml V	2-40ml V	1-4oz CG	3-40ml V	1-8 oz CG						
WS-1	1/7	1200	S	5	X	X	X	X					Sample Depth: 1-3"	1601025-01	—	—
WS-2	1/7	1220	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-02	1601030-01	1601031-01
WS-3	1/7	1255	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-03	↓ -02	↓ -02
WS-4	1/7	1320	S	5	X	X	X	X					Sample Depth: 6-9"	-04	—	—
WS-5	1/7	1350	S	6	X	X	X	X		*			Sample Depth: 2-5"	-05	1601030-03	1601031-03
WS-6	1/7	1410	S	5	X	X	X	X					Sample Depth: 3-6"	-06	—	—
WS-7	1/7	1435	S	5	X	X	X	X					Sample Depth: 2-5"	-07	—	—
~~WS-8~~			~~S~~		~~X~~	~~X~~	~~X~~	~~X~~					~~Sample Depth:~~	—	—	—
WS-DUP	1/7	1230	S	5	X	X	X	X					Sample Depth: 3-6"	-08	—	—
WS-BG	1/7	1130	S	2	X			X					Sample Depth: 2-4"	-09	—	—
Trip Blank	1/7		T	3					X							
WS-4 MS	1/7	1320	S	4	X	X	X							1601025-04		
WS-4 MSD	1/7	1320	S	4	X	X	X							↓ -04		

Laboratory Provided 1601026-01

Clients Special Instructions:

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.3°C Received on Ice ✓ Yes ____ No
Describe problems, if any:

* received 8oz jar for WS-5, but not noted on COC for BOD, COD & Total P — per Karen this sample needs these parameters

Sampler Name (Print): Tyler Emery	Date: 1/7/16	#1 Relinquished by (Signature): Tyler Emery	Date: 1/7/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date: 1/8/16	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name: CompuChem / LIBERTY	Time: 0906	Company Name:	Time:	

TKC 1/5/2016 page 1 of 4 KW 1-5-16

Watauga 2016 Soil Sampling Event
JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Analyte List

Common name	CAS RN	
Antimony	(Total)	Inorganics Soil only
Arsenic	(Total)	
Barium	(Total)	
Beryllium	(Total)	
Cadmium	(Total)	
Chromium	(Total)	
Cobalt	(Total)	
Copper	(Total)	
Lead	(Total)	
Nickel	(Total)	
Selenium	(Total)	
Silver	(Total)	
Thallium	(Total)	
Vanadium	(Total)	
Zinc	(Total)	
Acetone	67-64-1	8260 Soil and trip blank
Acrylonitrile	107-13-1	
Benzene	71-43-2	
Bromochloromethane	74-97-5	
Bromodichloromethane	75-27-4	
Bromoform; Tribromomethane	75-25-2	
Carbon disulfide	75-15-0	
Carbon tetrachloride	56-23-5	
Chlorobenzene	108-90-7	
Chloroethane; Ethyl chloride	75-00-3	
Chloroform; Trichloromethane	67-66-3	
Dibromochloromethane; Chlorodibromomethane	124-48-1	
1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	
trans-1,4-Dichloro-2-butene	110-57-6	
1,1-Dichloroethane; Ethylidene chloride	75-34-3	
1,2-Dichloroethane; Ethlyene dichloride	107-06-2	
1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	
1,2-Dichlorpropane; Propylene dichloride	78-87-5	
cis-1,3-Dichlorpropene	10061-01-5	
trans-1,3-Dichlorpropene	10061-02-6	
Ethylbenzene	100-41-4	
2-hexanone; Methyl butyl ketone	591-78-6	
Methyl bromide; Bromomethane	74-83-9	
Methyl chloride; Chloromethane	74-87-3	
Methylene bromide Dibromomethane	74-95-3	
Methylene chloride; Dichloromethane	75-09-2	
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	
Methyl iodide; Iodomethane	74-88-4	
4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	
Styrene	100-42-5	
1,1,1,2-Tetrachloroethane	630-20-6	
1,1,2,2-Tetrachloroethane	79-34-5	
Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	
Toluene	108-88-3	
1,1,1-Trochlorethane; Methylchloroform	71-55-6	
1,1,2-Trichloroethane	79-00-5	
Trichloroethylene; Trichlorethene	79-01-6	
Trichlorofluoromethane; CFC-11	75-69-4	
1,2,3-Trichloropropane	96-18-4	
Vinyl acetate	108-05-4	
Vinyl chloride	75-01-4	
Xylenes	1330-20-7	

See page 4 of 4 for reporting limits.

Watauga 2016 Soil Sampling Event
JN 6520-39
1-5-16 KWS

Karen Weber

From: Cathy Dover <cdover@compuchemlabs.com>
Sent: Friday, November 27, 2015 2:27 PM
To: Karen Weber
Cc: Janet Frazier; Kathy Olsen
Subject: RE: Watauga Upcoming Soil Sampling - Special Project
Attachments: APP.I LIST AGAINST PSRG LIMITS.pdf

Hi Karen,

I went through all of our reporting limits for the APP. I VOA compounds and metals elements and there are few we would need to use the MDL to meet the lowest PSRG. We can meet all of the metals by using 6020A for the prep/analysis. There are two VOA compounds (1,2,3-trichloropropane & vinyl chloride) that have extremely low PSRG limits and our MDL is higher...

Chromium (7440-47-3) does not appear on the PSRG limit table.

I have attached the APP.I compound/element list with the RL/MDL info. Let me know if you need anything else.

Have a great weekend!

Cathy

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Karen Weber [mailto:KWeber@daa.com]
Sent: Tuesday, November 24, 2015 1:51 PM
To: Cathy Dover
Cc: Janet Frazier; Kathy Olsen
Subject: Watauga Upcoming Soil Sampling - Special Project

Watauga 2016 Soil Sampling Event JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Lab reporting limits + PSRG review

page 4 of 4

	Common name	CAS RN	RL mg/kg 6020A	RL mg/kg 6010C	Metals mg/kg PSRG/Low	6020A MDL mg/kg
*	Antimony	(Total)	1	3	0.9	0.115
*	Arsenic	(Total)	1	1	0.68	0.269
	Barium	(Total)	5	20		
	Beryllium	(Total)	0.5	0.5		
	Cadmium	(Total)	0.5	0.5		
7440-47-3 ←	Chromium	(Total)	6	1		
	Cobalt	(Total)	0.5	2		
	Copper	(Total)	1	0.5		
	Lead	(Total)	0.5	1		
	Nickel	(Total)	0.5	1		
	Selenium	(Total)	2.5	1		
	Silver	(Total)	0.5	0.5		
7440-28-0 *	Thallium	(Total)	0.5	3	0.28	0.0164
	Vanadium	(Total)	2.5	2		
	Zinc	(Total)	2.5	3		

FOR VOA: RL/PSRG/MDL (in mg/kg) ✓ if RL does not meet

	Common name	CAS RN	RL/PSRG/MDL
	Acetone	67-64-1	0.0125
	Acrylonitrile	107-13-1	0.050
	Benzene	71-43-2	0.005
	Bromochloromethane	74-97-5	0.005
	Bromodichloromethane	75-27-4	0.005
	Bromoform; Tribromomethane	75-25-2	0.005
	Carbon disulfide	75-15-0	0.005
	Carbon tetrachloride	56-23-5	0.005
	Chlorobenzene	108-90-7	0.005
	Chloroethane; Ethyl chloride	75-00-3	0.005
	Chloroform; Trichloromethane	67-66-3	0.005
	Dibromochloromethane; Chlorodibromomethane	124-48-1	0.005
	1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	0.005
	1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	0.005
	o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	0.005
	p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	0.005
*	trans-1,4-Dichloro-2-butene	110-57-6	0.020 / 0.0084 / MDL → 0.0018
	1,1-Dichloroethane; Ethylidene chloride	75-34-3	0.005
*	1,2-Dichloroethane; Ethlyene dichloride	107-06-2	0.005 / 0.002 / MDL → 0.00027
	1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	0.005
	cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	0.005
	trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	0.005
*	1,2-Dichlorpropane; Propylene dichloride	78-87-5	0.005 / 0.0032 / MDL → 0.00063
*	cis-1,3-Dichlorpropene	10061-01-5	0.005 / 0.0023 / MDL → 0.00039
*	trans-1,3-Dichlorpropene	10061-02-6	0.005 / 0.0023 / MDL → 0.00041
	Ethylbenzene	100-41-4	0.005
	2-hexanone; Methyl butyl ketone	591-78-6	0.0125
	Methyl bromide; Bromomethane	74-83-9	0.005
	Methyl chloride; Chloromethane	74-87-3	0.005
	Methylene bromide Dibromomethane	74-95-3	0.005
	Methylene chloride; Dichloromethane	75-09-2	0.005
	Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	0.0125
	Methyl iodide; Iodomethane	74-88-4	0.005
	4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	0.0125
	Styrene	100-42-5	0.005
	1,1,1,2-Tetrachloroethane	630-20-6	0.005
*	1,1,2,2-Tetrachloroethane	79-34-5	0.005 / 0.0012 / MDL → 0.00037
	Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	0.005
	Toluene	108-88-3	0.005
	1,1,1-Trichlorethane; Methylchloroform	71-55-6	0.005
*	1,1,2-Trichloroethane	79-00-5	0.005 / 0.0032 / MDL → 0.00072
	Trichloroethylene; Trichlorethene	79-01-6	0.005
	Trichlorofluoromethane; CFC-11	75-69-4	0.005
**	1,2,3-Trichloropropane	96-18-4	0.005 / 0.000032 / MDL → 0.00091
	Vinyl acetate	108-05-4	0.005
**	Vinyl chloride	75-01-4	0.005 / 0.00019 / MDL → 0.00042
	Xylenes	1330-20-7	0.005

* meets using MDL
** MDL ↑ than PSRG (lowest)

WORK ORDER

Printed: 1/13/2016 6:29:33PM

1601025

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601025** **CASE:**	**Status:**	**Reviewed**

Report To:

DRAPER ADEN ASSOCIATES
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540) 552-0444
Fax: -

Invoice To:

WATAUGA COUNTY, NC
MR. J.V. POLTER
842 WESTKING STREET/COURTHOUSE, SUITE 1
BOONE, NC 28607
Phone :-
Fax: -

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/08/2016 19:04

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?: **NO** Spike Level: **FULL Spike**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**

USE 1601025-04 (WS-4) FOR QC*VOA 5PPB SOIL=WATAUGASOIL.SUB*6020A
MTLS=Sb,As,Ba,Be,Cd,Cr,Co,Cu,Pb,Ni,Se,Ag,Tl,V & Zn*NEED LEVEL 2 & LEVEL 4*RPT. IN mg/kg

Analysis	Due	TAT	Expires	Received	Comments
1601025-01 WS-1 [Soil] Sampled 01/07/2016 12:00 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:00	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:00	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:00	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:00	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
1601025-02 WS-2 [Soil] Sampled 01/07/2016 12:20 Eastern					
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:20	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:20	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:20	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:20	01/08/2016 09:06	
1601025-03 WS-3 [Soil] Sampled 01/07/2016 12:55 Eastern					
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:55	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:55	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:55	01/08/2016 09:06	
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:55	01/08/2016 09:06	

WORK ORDER

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1601025

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601025** **CASE:**	**Status:**	**Batched**

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/08/2016 19:04

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?: **NO** Spike Level: **FULL Spike**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**

USE 1601025-04 (WS-4) FOR QC*VOA 5PPB SOIL=WATAUGASOIL.SUB*6020A
MTLS=Sb,As,Ba,Be,Cd,Cr,Co,Cu,Pb,Ni,Se,Ag,Tl,V & Zn*NEED LEVEL 2 & LEVEL 4*RPT. IN mg/kg

Analysis	Due	TAT	Expires	Received	Comments
1601025-04 WS-4 [Soil] Sampled 01/07/2016 13:20 Eastern					**USE FOR QC**
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 13:20	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 13:20	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 13:20	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 13:20	01/08/2016 09:06	
1601025-05 WS-5 [Soil] Sampled 01/07/2016 13:50 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 13:50	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 13:50	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 13:50	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 13:50	01/08/2016 09:06	
1601025-06 WS-6 [Soil] Sampled 01/07/2016 14:10 Eastern					
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 14:10	01/08/2016 09:06	
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 14:10	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 14:10	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 14:10	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
1601025-07 WS-7 [Soil] Sampled 01/07/2016 14:35 Eastern					
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 14:35	01/08/2016 09:06	
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 14:35	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 14:35	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 14:35	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
1601025-08 WS-DUP [Soil] Sampled 01/07/2016 12:30 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:30	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:30	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:30	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:30	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)

WORK ORDER

Printed: 1/13/2016 6:29:33PM

1601025

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601025** **CASE:**	**Status:**	**Reviewed**

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/08/2016 19:04

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?: **NO** Spike Level: **FULL Spike**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**

USE 1601025-04 (WS-4) FOR QC*VOA 5PPB SOIL=WATAUGASOIL.SUB*6020A
MTLS=Sb,As,Ba,Be,Cd,Cr,Co,Cu,Pb,Ni,Se,Ag,Tl,V & Zn*NEED LEVEL 2 & LEVEL 4*RPT. IN mg/kg

Analysis	Due	TAT	Expires	Received	Comments
1601025-09 WS-BG [Soil] Sampled 01/07/2016 11:30 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 11:30	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 11:30	01/08/2016 09:06	

C. Sample Preparation and Analysis Holding Time Data

(HOLDING TIME SUMMARY)

Sample collection, receipt, preparation and analysis dates with method holding time requirements.

HOLDING TIME SUMMARY

EPA 6020A

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

SDG: 1601025

Sample Name	Date Collected	Date Received	Date Prepared	Date Analyzed	Days to Analysis	Max Days to Analysis*	Q
WS-1	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-1	01/07/16	01/08/16	01/11/16	01/14/16	7.2	180	
WS-2	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-3	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-4	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-5	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-5	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-6	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-7	01/07/16	01/08/16	01/11/16	01/14/16	7.0	180	
WS-DUP	01/07/16	01/08/16	01/11/16	01/14/16	7.1	180	
WS-BG	01/07/16	01/08/16	01/11/16	01/14/16	7.2	180	
WS-BG	01/07/16	01/08/16	01/11/16	01/14/16	7.2	180	

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D. MDL

(MDL SUMMARY)

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Liberty Analytical **SDG:** 1601025

Client: DRAPER ADEN ASSOCIATES **Project:** WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil **Instrument:** PEMS

Analyte	MDL	RL	Units	Method
Antimony	0.115	1.00	mg/kg	EPA 6020A
Arsenic	0.169	1.00	mg/kg	EPA 6020A
Barium	0.11	5.00	mg/kg	EPA 6020A
Beryllium	0.0405	0.500	mg/kg	EPA 6020A
Cadmium	0.0332	0.500	mg/kg	EPA 6020A
Chromium	0.149	6.00	mg/kg	EPA 6020A
Cobalt	0.0198	0.500	mg/kg	EPA 6020A
Copper	0.0265	1.00	mg/kg	EPA 6020A
Lead	0.0127	0.500	mg/kg	EPA 6020A
Nickel	0.024	0.500	mg/kg	EPA 6020A
Selenium	0.131	2.50	mg/kg	EPA 6020A
Silver	0.0418	0.500	mg/kg	EPA 6020A
Thallium	0.0164	0.500	mg/kg	EPA 6020A
Vanadium	0.26	2.50	mg/kg	EPA 6020A
Zinc	0.627	2.50	mg/kg	EPA 6020A

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E. Laboratory Control Sample Results

(LCS/LCS DUPLICATE RECOVERY)

LCS/LCSD recovery, relative percent difference and quality control acceptance criteria.

LCS / LCS DUPLICATE SUMMARY

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011103-BS3 Matrix: Soil Client ID: MLCS03 Batch: 6011103

ANALYTE	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC.	Q	QC LIMITS REC.
Antimony	108.0	9.50 D	8.79		0 - 223.22
Arsenic	151.0	141 D	93.4		79.73 - 120.27
Barium	262.0	264 D	101		82.05 - 117.94
Beryllium	133.0	128 D	96.4		81.82 - 118.18
Cadmium	152.0	153 D	101		80.69 - 118.88
Chromium	117.0	121 D	104		78.45 - 121.38
Cobalt	68.70	71.8 D	105		81.78 - 118.22
Copper	68.60	71.4 D	104		82.44 - 117.55
Lead	254.0	240 D	94.6		80.56 - 119.53
Nickel	315.0	323 D	103		81.45 - 118.54
Selenium	162.0	149 D	91.8		75.51 - 124.24
Silver	44.30	45.2 D	102		61.25 - 138.75
Thallium	259.0	249 D	96.2		75.32 - 124.68
Vanadium	116.0	123 D	106		71.41 - 128.45
Zinc	306.0	298 D	97.5		78.01 - 121.55

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F. Matrix Spike Results

(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

MS/MSD recovery, relative percent difference and quality control acceptance criteria

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6020A

WS-4S

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011103-MS1 % Solid: 67.0 Matrix: Soil Lab Source ID: 1601025-04 Source Sample: WS-4

ANALYTE	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	MS CONCENTRATION (mg/kg dry)	MS % REC.	Q	QC LIMITS REC.
Antimony	160.5	1.40 U	2.66 D	1.66	*	75 - 125
Arsenic	160.5	4.10 D	108 D	64.7	*	75 - 125
Barium	80.24	320 D	384 D	79.7		75 - 125
Beryllium	80.24	1.19 D	67.4 D	82.6		75 - 125
Cadmium	80.24	1.56 D	69.9 D	85.2		75 - 125
Chromium	80.24	54.6 D	115 D	75.4		75 - 125
Cobalt	80.24	20.2 D	80.4 D	75.0		75 - 125
Copper	80.24	54.4 D	112 D	71.5	*	75 - 125
Lead	160.5	48.5 D	189 D	87.7		75 - 125
Nickel	80.24	34.1 D	95.5 D	76.6		75 - 125
Selenium	160.5	0.996 JD	105 D	64.7	*	75 - 125
Silver	80.24	0.274 JD	68.8 D	85.4		75 - 125
Thallium	160.5	0.476 JD	150 D	93.1		75 - 125
Vanadium	80.24	85.2 D	147 D	77.0		75 - 125
Zinc	160.5	325 D	403 D	48.6	*	75 - 125

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6020A

WS-4SD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011103-MSD1 % Solid: 67.0 Matrix: Soil Lab Source ID: 1601025-04 Source Sample: WS-4

ANALYTE	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Antimony	160.5	2.47 D	1.54	7.51	*	200	75 - 125
Arsenic	160.5	109 D	65.1	0.633	*	200	75 - 125
Barium	80.24	385 D	80.2	0.0972		200	75 - 125
Beryllium	80.24	66.4 D	81.3	1.55		200	75 - 125
Cadmium	80.24	68.8 D	83.8	1.56		200	75 - 125
Chromium	80.24	118 D	79.6	2.87		200	75 - 125
Cobalt	80.24	81.9 D	77.0	1.89		200	75 - 125
Copper	80.24	114 D	73.8	1.63	*	200	75 - 125
Lead	160.5	192 D	89.4	1.44		200	75 - 125
Nickel	80.24	96.0 D	77.2	0.560		200	75 - 125
Selenium	160.5	105 D	64.8	0.181	*	200	75 - 125
Silver	80.24	68.5 D	85.1	0.376		200	75 - 125
Thallium	160.5	152 D	94.4	1.35		200	75 - 125
Vanadium	80.24	149 D	79.0	1.07		200	75 - 125
Zinc	160.5	421 D	60.0	4.48	*	200	75 - 125

Liberty Analytical

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I. Duplicate Results

(DUPLICATES)

DUPLICATES

EPA 6020A

WS-4D

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011103-DUP1 % Solid: 68.0 Matrix: Soil Lab Source ID: 1601025-04 Source Sample: WS-4

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg dry)	DUPLICATE CONCENTRATION (mg/kg dry)	RPD %	Q	METHOD
Antimony	20	*1.40 U*	1.42 U			EPA 6020A
Arsenic	20	*4.10 D*	3.59 D	13.1		EPA 6020A
Barium	20	*320 D*	348 D	8.34		EPA 6020A
Beryllium	20	*1.19 D*	1.17 D	2.02		EPA 6020A
Cadmium	20	*1.56 D*	1.48 D	5.20		EPA 6020A
Chromium	20	*54.6 D*	58.9 D	7.64		EPA 6020A
Cobalt	20	*20.2 D*	23.0 D	12.9		EPA 6020A
Copper	20	*54.4 D*	54.2 D	0.427		EPA 6020A
Lead	20	*48.5 D*	51.0 D	5.17		EPA 6020A
Nickel	20	*34.1 D*	36.7 D	7.30		EPA 6020A
Selenium	20	*0.996 JD*	0.882 JD	12.2		EPA 6020A
Silver	20	*0.274 JD*	0.230 JD	17.2		EPA 6020A
Thallium	20	*0.476 JD*	0.335 JD	34.9		EPA 6020A
Vanadium	20	*85.2 D*	88.2 D	3.50		EPA 6020A
Zinc	20	*325 D*	336 D	3.30		EPA 6020A

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J. Batch Summary

(PREPARATION BATCH SUMMARY)

Sample names, cross-referenced with Lab Sample ID’s, with sample preparation details.

PREPARATION BATCH SUMMARY

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Batch: 6011103 Matrix: Soil Preparation: EPA 3050B MOD

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (g)	FINAL VOL/WT (mL)
WS-1	1601025-01	01/11/16 11:05	1.04	100
WS-1	1601025-01RE1	01/11/16 11:05	1.04	100
WS-2	1601025-02	01/11/16 11:05	1.02	100
WS-3	1601025-03	01/11/16 11:05	1.00	100
WS-4	1601025-04	01/11/16 11:05	1.05	100
WS-5	1601025-05	01/11/16 11:05	1.00	100
WS-5	1601025-05RE1	01/11/16 11:05	1.00	100
WS-6	1601025-06	01/11/16 11:05	1.03	100
WS-7	1601025-07	01/11/16 11:05	1.01	100
WS-DUP	1601025-08	01/11/16 11:05	1.02	100
WS-BG	1601025-09	01/11/16 11:05	1.02	100
WS-BG	1601025-09RE1	01/11/16 11:05	1.02	100
PBSUB	6011103-BLK1	01/11/16 11:05	1.00	100
MLCS03	6011103-BS3	01/11/16 11:05	1.00	100
WS-4D	6011103-DUP1	01/11/16 11:05	1.04	100
WS-4S	6011103-MS1	01/11/16 11:05	1.01	100
WS-4SD	6011103-MSD1	01/11/16 11:05	1.01	100

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K. Analysis Sequence Summary

(ANALYSIS SEQUENCE SUMMARY)

ANALYSIS SEQUENCE SUMMARY

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Calibration: 6011701 Instrument: PEMS

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
TUNE	6A14005-TUN1	6A14005_P-001	01/14/16 09:40:36
S0	6A14005-CAL1	6A14005_P-002	01/14/16 13:22:30
S 6020-MS1	6A14005-CAL2	6A14005_P-003	01/14/16 13:24:15
S 6020-MS2	6A14005-CAL3	6A14005_P-004	01/14/16 13:25:58
S 6020-MS3	6A14005-CAL4	6A14005_P-005	01/14/16 13:27:41
S 6020-MS4	6A14005-CAL5	6A14005_P-006	01/14/16 13:29:23
S 6020-MS5	6A14005-CAL6	6A14005_P-007	01/14/16 13:31:06
LLICV	6A14005-CRL1	6A14005_P-008	01/14/16 13:34:30
ICV	6A14005-ICV1	6A14005_P-009	01/14/16 13:36:14
ICB	6A14005-ICB1	6A14005_P-010	01/14/16 13:37:57
ICSA	6A14005-IFA1	6A14005_P-011	01/14/16 13:39:41
ICSAB	6A14005-IFB1	6A14005_P-012	01/14/16 13:41:23
LLCCV	6A14005-CRL2	6A14005_P-013	01/14/16 13:43:07
CCV	6A14005-CCV1	6A14005_P-014	01/14/16 13:44:50
CCB	6A14005-CCB1	6A14005_P-015	01/14/16 13:46:33
CCV	6A14005-CCV2	6A14005_P-026	01/14/16 14:07:10
CCB	6A14005-CCB2	6A14005_P-027	01/14/16 14:08:53
LLCCV	6A14005-CRL3	6A14005_P-030	01/14/16 14:14:03
CCV	6A14005-CCV3	6A14005_P-031	01/14/16 14:15:47
CCB	6A14005-CCB3	6A14005_P-032	01/14/16 14:17:30
LLCCV	6A14005-CRL4	6A14005_P-034	01/14/16 14:25:42
CCV	6A14005-CCV4	6A14005_P-035	01/14/16 14:27:26
CCB	6A14005-CCB4	6A14005_P-036	01/14/16 14:29:08
PBSUB	6011103-BLK1	6A14005_P-037	01/14/16 15:09:00
WS-4	1601025-04	6A14005_P-039	01/14/16 15:12:25
WS-4D	6011103-DUP1	6A14005_P-040	01/14/16 15:14:08
WS-4S	6011103-MS1	6A14005_P-041	01/14/16 15:15:51
WS-4SD	6011103-MSD1	6A14005_P-042	01/14/16 15:17:34
WS-1	1601025-01	6A14005_P-045	01/14/16 15:22:42

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ANALYSIS SEQUENCE SUMMARY

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Calibration: 6011701 Instrument: PEMS

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
WS-2	1601025-02	6A14005_P-046	01/14/16 15:24:25
CCV	6A14005-CCV5	6A14005_P-047	01/14/16 15:26:09
CCB	6A14005-CCB5	6A14005_P-048	01/14/16 15:27:52
WS-3	1601025-03	6A14005_P-049	01/14/16 15:29:36
WS-5	1601025-05	6A14005_P-050	01/14/16 15:31:19
WS-6	1601025-06	6A14005_P-051	01/14/16 15:33:02
WS-7	1601025-07	6A14005_P-052	01/14/16 15:34:45
WS-DUP	1601025-08	6A14005_P-053	01/14/16 15:36:27
WS-BG	1601025-09	6A14005_P-054	01/14/16 15:38:10
LLCCV	6A14005-CRL5	6A14005_P-055	01/14/16 15:39:53
CCV	6A14005-CCV6	6A14005_P-056	01/14/16 15:41:37
CCB	6A14005-CCB6	6A14005_P-057	01/14/16 15:43:20
MLCS03	6011103-BS3	6A14005_P-059	01/14/16 16:00:47
WS-1	1601025-01RE1	6A14005_P-060	01/14/16 16:02:30
WS-5	1601025-05RE1	6A14005_P-061	01/14/16 16:04:13
WS-BG	1601025-09RE1	6A14005_P-062	01/14/16 16:05:56
LLCCV	6A14005-CRL6	6A14005_P-064	01/14/16 16:12:09
CCV	6A14005-CCV7	6A14005_P-065	01/14/16 16:13:53
CCB	6A14005-CCB7	6A14005_P-066	01/14/16 16:15:35

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L. Target Element Results

(ANALYSIS DATA SHEETS)

ANALYSIS DATA SHEET

WS-1

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-01 % Solid: 81.6 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.135	1.18	5	U	EPA 6020A	6A14005	1/14/16 15:22
7440-38-2	Arsenic	2.01	0.199	1.18	5	D	EPA 6020A	6A14005	1/14/16 15:22
7440-39-3	Barium	409	0.259	11.8	10	D	EPA 6020A	6A14005	1/14/16 16:02
7440-41-7	Beryllium	1.29	0.0477	0.589	5	D	EPA 6020A	6A14005	1/14/16 15:22
7440-43-9	Cadmium	0.488	0.0391	0.589	5	JD	EPA 6020A	6A14005	1/14/16 15:22
7440-47-3	Chromium	65.3	0.176	7.07	5	D	EPA 6020A	6A14005	1/14/16 15:22
7440-48-4	Cobalt	27.9	0.0233	0.589	5	D	EPA 6020A	6A14005	1/14/16 15:22
7440-50-8	Copper	28.9	0.0312	1.18	5	D	EPA 6020A	6A14005	1/14/16 15:22
7439-92-1	Lead	6.95	0.0150	0.589	5	D	EPA 6020A	6A14005	1/14/16 15:22
7440-02-0	Nickel	39.8	0.0283	0.589	5	D	EPA 6020A	6A14005	1/14/16 15:22
7782-49-2	Selenium	0.684	0.154	2.95	5	JD	EPA 6020A	6A14005	1/14/16 15:22
7440-22-4	Silver		0.0492	0.589	5	U	EPA 6020A	6A14005	1/14/16 15:22
7440-28-0	Thallium	0.319	0.0193	0.589	5	JD	EPA 6020A	6A14005	1/14/16 15:22
7440-62-2	Vanadium	96.4	0.306	2.95	5	D	EPA 6020A	6A14005	1/14/16 15:22
7440-66-6	Zinc	99.8	0.739	2.95	5	D	EPA 6020A	6A14005	1/14/16 15:22

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ANALYSIS DATA SHEET

WS-2

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-02 % Solid: 85.5 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.132	1.15	5	U	EPA 6020A	6A14005	1/14/16 15:24
7440-38-2	Arsenic	2.11	0.194	1.15	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-39-3	Barium	242	0.126	5.73	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-41-7	Beryllium	0.825	0.0464	0.573	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-43-9	Cadmium	0.805	0.0381	0.573	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-47-3	Chromium	36.4	0.171	6.88	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-48-4	Cobalt	21.0	0.0227	0.573	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-50-8	Copper	50.4	0.0304	1.15	5	D	EPA 6020A	6A14005	1/14/16 15:24
7439-92-1	Lead	25.1	0.0146	0.573	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-02-0	Nickel	24.0	0.0275	0.573	5	D	EPA 6020A	6A14005	1/14/16 15:24
7782-49-2	Selenium	0.620	0.150	2.87	5	JD	EPA 6020A	6A14005	1/14/16 15:24
7440-22-4	Silver	0.0908	0.0479	0.573	5	JD	EPA 6020A	6A14005	1/14/16 15:24
7440-28-0	Thallium	0.199	0.0188	0.573	5	JD	EPA 6020A	6A14005	1/14/16 15:24
7440-62-2	Vanadium	59.4	0.298	2.87	5	D	EPA 6020A	6A14005	1/14/16 15:24
7440-66-6	Zinc	173	0.719	2.87	5	D	EPA 6020A	6A14005	1/14/16 15:24

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ANALYSIS DATA SHEET

WS-3

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-03 % Solid: 66.7 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.173	1.50	5	U	EPA 6020A	6A14005	1/14/16 15:29
7440-38-2	Arsenic	2.27	0.254	1.50	5	D	EPA 6020A	6A14005	1/14/16 15:29
7440-39-3	Barium	155	0.165	7.50	5	D	EPA 6020A	6A14005	1/14/16 15:29
7440-41-7	Beryllium	0.470	0.0607	0.750	5	JD	EPA 6020A	6A14005	1/14/16 15:29
7440-43-9	Cadmium	0.874	0.0498	0.750	5	D	EPA 6020A	6A14005	1/14/16 15:29
7440-47-3	Chromium	28.0	0.224	9.00	5	D	EPA 6020A	6A14005	1/14/16 15:29
7440-48-4	Cobalt	9.45	0.0297	0.750	5	D	EPA 6020A	6A14005	1/14/16 15:29
7440-50-8	Copper	53.5	0.0397	1.50	5	D	EPA 6020A	6A14005	1/14/16 15:29
7439-92-1	Lead	29.9	0.0191	0.750	5	D	EPA 6020A	6A14005	1/14/16 15:29
7440-02-0	Nickel	19.0	0.0360	0.750	5	D	EPA 6020A	6A14005	1/14/16 15:29
7782-49-2	Selenium	0.511	0.197	3.75	5	JD	EPA 6020A	6A14005	1/14/16 15:29
7440-22-4	Silver	0.210	0.0627	0.750	5	JD	EPA 6020A	6A14005	1/14/16 15:29
7440-28-0	Thallium	0.170	0.0246	0.750	5	JD	EPA 6020A	6A14005	1/14/16 15:29
7440-62-2	Vanadium	46.2	0.390	3.75	5	D	EPA 6020A	6A14005	1/14/16 15:29
7440-66-6	Zinc	228	0.940	3.75	5	D	EPA 6020A	6A14005	1/14/16 15:29

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ANALYSIS DATA SHEET

WS-4

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-04 % Solid: 67.9 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.161	1.40	5	U	EPA 6020A	6A14005	1/14/16 15:12
7440-38-2	Arsenic	4.10	0.237	1.40	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-39-3	Barium	320	0.154	7.02	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-41-7	Beryllium	1.19	0.0568	0.702	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-43-9	Cadmium	1.56	0.0466	0.702	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-47-3	Chromium	54.6	0.209	8.42	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-48-4	Cobalt	20.2	0.0278	0.702	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-50-8	Copper	54.4	0.0372	1.40	5	D	EPA 6020A	6A14005	1/14/16 15:12
7439-92-1	Lead	48.5	0.0178	0.702	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-02-0	Nickel	34.1	0.0337	0.702	5	D	EPA 6020A	6A14005	1/14/16 15:12
7782-49-2	Selenium	0.996	0.184	3.51	5	JD	EPA 6020A	6A14005	1/14/16 15:12
7440-22-4	Silver	0.274	0.0587	0.702	5	JD	EPA 6020A	6A14005	1/14/16 15:12
7440-28-0	Thallium	0.476	0.0230	0.702	5	JD	EPA 6020A	6A14005	1/14/16 15:12
7440-62-2	Vanadium	85.2	0.365	3.51	5	D	EPA 6020A	6A14005	1/14/16 15:12
7440-66-6	Zinc	325	0.880	3.51	5	D	EPA 6020A	6A14005	1/14/16 15:12

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ANALYSIS DATA SHEET

WS-5

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-05 % Solid: 69.6 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.165	1.44	5	U	EPA 6020A	6A14005	1/14/16 15:31
7440-38-2	Arsenic	3.04	0.243	1.44	5	D	EPA 6020A	6A14005	1/14/16 15:31
7440-39-3	Barium	368	0.316	14.4	10	D	EPA 6020A	6A14005	1/14/16 16:04
7440-41-7	Beryllium	1.86	0.0582	0.719	5	D	EPA 6020A	6A14005	1/14/16 15:31
7440-43-9	Cadmium	0.998	0.0477	0.719	5	D	EPA 6020A	6A14005	1/14/16 15:31
7440-47-3	Chromium	45.4	0.214	8.62	5	D	EPA 6020A	6A14005	1/14/16 15:31
7440-48-4	Cobalt	23.7	0.0285	0.719	5	D	EPA 6020A	6A14005	1/14/16 15:31
7440-50-8	Copper	41.6	0.0381	1.44	5	D	EPA 6020A	6A14005	1/14/16 15:31
7439-92-1	Lead	13.9	0.0183	0.719	5	D	EPA 6020A	6A14005	1/14/16 15:31
7440-02-0	Nickel	35.7	0.0345	0.719	5	D	EPA 6020A	6A14005	1/14/16 15:31
7782-49-2	Selenium	1.00	0.188	3.59	5	JD	EPA 6020A	6A14005	1/14/16 15:31
7440-22-4	Silver		0.0601	0.719	5	U	EPA 6020A	6A14005	1/14/16 15:31
7440-28-0	Thallium	0.298	0.0236	0.719	5	JD	EPA 6020A	6A14005	1/14/16 15:31
7440-62-2	Vanadium	119	0.374	3.59	5	D	EPA 6020A	6A14005	1/14/16 15:31
7440-66-6	Zinc	160	0.901	3.59	5	D	EPA 6020A	6A14005	1/14/16 15:31

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ANALYSIS DATA SHEET

WS-6

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-06 % Solid: 66.1 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.169	1.47	5	U	EPA 6020A	6A14005	1/14/16 15:33
7440-38-2	Arsenic	4.15	0.248	1.47	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-39-3	Barium	288	0.161	7.34	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-41-7	Beryllium	1.68	0.0594	0.734	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-43-9	Cadmium	1.22	0.0487	0.734	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-47-3	Chromium	49.0	0.219	8.81	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-48-4	Cobalt	29.2	0.0291	0.734	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-50-8	Copper	41.5	0.0389	1.47	5	D	EPA 6020A	6A14005	1/14/16 15:33
7439-92-1	Lead	22.1	0.0186	0.734	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-02-0	Nickel	33.9	0.0352	0.734	5	D	EPA 6020A	6A14005	1/14/16 15:33
7782-49-2	Selenium	1.09	0.192	3.67	5	JD	EPA 6020A	6A14005	1/14/16 15:33
7440-22-4	Silver	0.0835	0.0614	0.734	5	JD	EPA 6020A	6A14005	1/14/16 15:33
7440-28-0	Thallium	0.324	0.0241	0.734	5	JD	EPA 6020A	6A14005	1/14/16 15:33
7440-62-2	Vanadium	111	0.382	3.67	5	D	EPA 6020A	6A14005	1/14/16 15:33
7440-66-6	Zinc	187	0.920	3.67	5	D	EPA 6020A	6A14005	1/14/16 15:33

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ANALYSIS DATA SHEET

WS-7

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-07 % Solid: 70.8 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.161	1.40	5	U	EPA 6020A	6A14005	1/14/16 15:34
7440-38-2	Arsenic	2.67	0.236	1.40	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-39-3	Barium	310	0.154	6.99	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-41-7	Beryllium	2.03	0.0566	0.699	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-43-9	Cadmium	0.733	0.0464	0.699	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-47-3	Chromium	46.8	0.208	8.39	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-48-4	Cobalt	31.7	0.0277	0.699	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-50-8	Copper	31.3	0.0371	1.40	5	D	EPA 6020A	6A14005	1/14/16 15:34
7439-92-1	Lead	10.9	0.0178	0.699	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-02-0	Nickel	32.9	0.0336	0.699	5	D	EPA 6020A	6A14005	1/14/16 15:34
7782-49-2	Selenium	1.27	0.183	3.50	5	JD	EPA 6020A	6A14005	1/14/16 15:34
7440-22-4	Silver		0.0585	0.699	5	U	EPA 6020A	6A14005	1/14/16 15:34
7440-28-0	Thallium	0.365	0.0229	0.699	5	JD	EPA 6020A	6A14005	1/14/16 15:34
7440-62-2	Vanadium	118	0.364	3.50	5	D	EPA 6020A	6A14005	1/14/16 15:34
7440-66-6	Zinc	85.4	0.877	3.50	5	D	EPA 6020A	6A14005	1/14/16 15:34

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

WS-DUP

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-08 % Solid: 76.1 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.148	1.29	5	U	EPA 6020A	6A14005	1/14/16 15:36
7440-38-2	Arsenic	2.77	0.218	1.29	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-39-3	Barium	246	0.142	6.44	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-41-7	Beryllium	0.846	0.0522	0.644	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-43-9	Cadmium	0.991	0.0428	0.644	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-47-3	Chromium	62.1	0.192	7.73	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-48-4	Cobalt	22.0	0.0255	0.644	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-50-8	Copper	42.3	0.0342	1.29	5	D	EPA 6020A	6A14005	1/14/16 15:36
7439-92-1	Lead	31.2	0.0164	0.644	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-02-0	Nickel	27.2	0.0309	0.644	5	D	EPA 6020A	6A14005	1/14/16 15:36
7782-49-2	Selenium	0.612	0.169	3.22	5	JD	EPA 6020A	6A14005	1/14/16 15:36
7440-22-4	Silver	0.112	0.0539	0.644	5	JD	EPA 6020A	6A14005	1/14/16 15:36
7440-28-0	Thallium	0.209	0.0211	0.644	5	JD	EPA 6020A	6A14005	1/14/16 15:36
7440-62-2	Vanadium	65.9	0.335	3.22	5	D	EPA 6020A	6A14005	1/14/16 15:36
7440-66-6	Zinc	202	0.808	3.22	5	D	EPA 6020A	6A14005	1/14/16 15:36

Liberty Analytical

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ANALYSIS DATA SHEET

WS-BG

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601025-09 % Solid: 66.4 Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg dry)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7440-36-0	Antimony		0.170	1.48	5	U	EPA 6020A	6A14005	1/14/16 15:38
7440-38-2	Arsenic	2.16	0.249	1.48	5	D	EPA 6020A	6A14005	1/14/16 15:38
7440-39-3	Barium	401	0.325	14.8	10	D	EPA 6020A	6A14005	1/14/16 16:05
7440-41-7	Beryllium	1.16	0.0598	0.738	5	D	EPA 6020A	6A14005	1/14/16 15:38
7440-43-9	Cadmium	0.500	0.0490	0.738	5	JD	EPA 6020A	6A14005	1/14/16 15:38
7440-47-3	Chromium	34.3	0.220	8.86	5	D	EPA 6020A	6A14005	1/14/16 15:38
7440-48-4	Cobalt	25.2	0.0292	0.738	5	D	EPA 6020A	6A14005	1/14/16 15:38
7440-50-8	Copper	31.3	0.0391	1.48	5	D	EPA 6020A	6A14005	1/14/16 15:38
7439-92-1	Lead	8.20	0.0187	0.738	5	D	EPA 6020A	6A14005	1/14/16 15:38
7440-02-0	Nickel	28.1	0.0354	0.738	5	D	EPA 6020A	6A14005	1/14/16 15:38
7782-49-2	Selenium	0.460	0.193	3.69	5	JD	EPA 6020A	6A14005	1/14/16 15:38
7440-22-4	Silver		0.0617	0.738	5	U	EPA 6020A	6A14005	1/14/16 15:38
7440-28-0	Thallium	0.274	0.0242	0.738	5	JD	EPA 6020A	6A14005	1/14/16 15:38
7440-62-2	Vanadium	92.4	0.384	3.69	5	D	EPA 6020A	6A14005	1/14/16 15:38
7440-66-6	Zinc	109	0.926	3.69	5	D	EPA 6020A	6A14005	1/14/16 15:38

Liberty Analytical

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M. Low Level Initial and Continuing Calibration Check Results

(LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK)

LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	QC Limts
LLICV	6A14005-CRL1	Antimony	2.000	2.27	113	ug/L		70 - 130
LLICV	6A14005-CRL1	Arsenic	1.000	1.05	105	ug/L		70 - 130
LLICV	6A14005-CRL1	Barium	10.00	10.6	106	ug/L		70 - 130
LLICV	6A14005-CRL1	Beryllium	1.000	1.03	103	ug/L		70 - 130
LLICV	6A14005-CRL1	Cadmium	1.000	1.10	110	ug/L		70 - 130
LLICV	6A14005-CRL1	Chromium	2.000	2.25	112	ug/L		70 - 130
LLICV	6A14005-CRL1	Cobalt	1.000	1.14	114	ug/L		70 - 130
LLICV	6A14005-CRL1	Copper	2.000	2.34	117	ug/L		70 - 130
LLICV	6A14005-CRL1	Lead	1.000	1.10	110	ug/L		70 - 130
LLICV	6A14005-CRL1	Manganese	1.000	1.14	114	ug/L		70 - 130
LLICV	6A14005-CRL1	Nickel	1.000	1.18	118	ug/L		70 - 130
LLICV	6A14005-CRL1	Selenium	5.000	5.11	102	ug/L		70 - 130
LLICV	6A14005-CRL1	Silver	1.000	1.25	125	ug/L		70 - 130
LLICV	6A14005-CRL1	Thallium	1.000	1.10	110	ug/L		70 - 130
LLICV	6A14005-CRL1	Vanadium	5.000	5.53	111	ug/L		70 - 130
LLICV	6A14005-CRL1	Zinc	2.000	2.18	109	ug/L		70 - 130
LLCCV	6A14005-CRL2	Antimony	2.000	2.18	109	ug/L		70 - 130
LLCCV	6A14005-CRL2	Arsenic	1.000	1.03	103	ug/L		70 - 130
LLCCV	6A14005-CRL2	Barium	10.00	10.8	108	ug/L		70 - 130
LLCCV	6A14005-CRL2	Beryllium	1.000	0.990	99	ug/L	J	70 - 130
LLCCV	6A14005-CRL2	Cadmium	1.000	1.08	108	ug/L		70 - 130
LLCCV	6A14005-CRL2	Chromium	2.000	2.18	109	ug/L		70 - 130
LLCCV	6A14005-CRL2	Cobalt	1.000	1.09	109	ug/L		70 - 130
LLCCV	6A14005-CRL2	Copper	2.000	2.26	113	ug/L		70 - 130
LLCCV	6A14005-CRL2	Lead	1.000	1.03	103	ug/L		70 - 130
LLCCV	6A14005-CRL2	Manganese	1.000	1.10	110	ug/L		70 - 130
LLCCV	6A14005-CRL2	Nickel	1.000	1.15	115	ug/L		70 - 130
LLCCV	6A14005-CRL2	Selenium	5.000	5.02	100	ug/L		70 - 130
LLCCV	6A14005-CRL2	Silver	1.000	1.09	109	ug/L		70 - 130
LLCCV	6A14005-CRL2	Thallium	1.000	1.02	102	ug/L		70 - 130
LLCCV	6A14005-CRL2	Vanadium	5.000	5.50	110	ug/L		70 - 130
LLCCV	6A14005-CRL2	Zinc	2.000	2.13	107	ug/L		70 - 130
LLCCV	6A14005-CRL3	Antimony	2.000	2.13	107	ug/L		70 - 130
LLCCV	6A14005-CRL3	Arsenic	1.000	1.03	103	ug/L		70 - 130
LLCCV	6A14005-CRL3	Barium	10.00	10.6	106	ug/L		70 - 130
LLCCV	6A14005-CRL3	Beryllium	1.000	0.984	98	ug/L	J	70 - 130

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LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	QC Limts
LLCCV	6A14005-CRL3	Cadmium	1.000	1.04	104	ug/L		70 - 130
LLCCV	6A14005-CRL3	Chromium	2.000	2.20	110	ug/L		70 - 130
LLCCV	6A14005-CRL3	Cobalt	1.000	1.08	108	ug/L		70 - 130
LLCCV	6A14005-CRL3	Copper	2.000	2.26	113	ug/L		70 - 130
LLCCV	6A14005-CRL3	Lead	1.000	1.03	103	ug/L		70 - 130
LLCCV	6A14005-CRL3	Manganese	1.000	1.10	110	ug/L		70 - 130
LLCCV	6A14005-CRL3	Nickel	1.000	1.07	107	ug/L		70 - 130
LLCCV	6A14005-CRL3	Selenium	5.000	5.09	102	ug/L		70 - 130
LLCCV	6A14005-CRL3	Silver	1.000	1.08	108	ug/L		70 - 130
LLCCV	6A14005-CRL3	Thallium	1.000	1.04	104	ug/L		70 - 130
LLCCV	6A14005-CRL3	Vanadium	5.000	5.43	109	ug/L		70 - 130
LLCCV	6A14005-CRL3	Zinc	2.000	2.11	106	ug/L		70 - 130
LLCCV	6A14005-CRL4	Antimony	2.000	2.18	109	ug/L		70 - 130
LLCCV	6A14005-CRL4	Arsenic	1.000	1.03	103	ug/L		70 - 130
LLCCV	6A14005-CRL4	Barium	10.00	10.6	106	ug/L		70 - 130
LLCCV	6A14005-CRL4	Beryllium	1.000	0.945	95	ug/L	J	70 - 130
LLCCV	6A14005-CRL4	Cadmium	1.000	1.08	108	ug/L		70 - 130
LLCCV	6A14005-CRL4	Chromium	2.000	2.17	108	ug/L		70 - 130
LLCCV	6A14005-CRL4	Cobalt	1.000	1.09	109	ug/L		70 - 130
LLCCV	6A14005-CRL4	Copper	2.000	2.22	111	ug/L		70 - 130
LLCCV	6A14005-CRL4	Lead	1.000	1.05	105	ug/L		70 - 130
LLCCV	6A14005-CRL4	Manganese	1.000	1.17	117	ug/L		70 - 130
LLCCV	6A14005-CRL4	Nickel	1.000	1.11	111	ug/L		70 - 130
LLCCV	6A14005-CRL4	Selenium	5.000	5.08	102	ug/L		70 - 130
LLCCV	6A14005-CRL4	Silver	1.000	1.10	110	ug/L		70 - 130
LLCCV	6A14005-CRL4	Thallium	1.000	1.04	104	ug/L		70 - 130
LLCCV	6A14005-CRL4	Vanadium	5.000	5.43	109	ug/L		70 - 130
LLCCV	6A14005-CRL4	Zinc	2.000	2.08	104	ug/L		70 - 130
LLCCV	6A14005-CRL5	Antimony	2.000	2.01	100	ug/L		70 - 130
LLCCV	6A14005-CRL5	Arsenic	1.000	1.00	100	ug/L		70 - 130
LLCCV	6A14005-CRL5	Barium	10.00	10.2	102	ug/L		70 - 130
LLCCV	6A14005-CRL5	Beryllium	1.000	0.904	90	ug/L	J	70 - 130
LLCCV	6A14005-CRL5	Cadmium	1.000	0.982	98	ug/L	J	70 - 130
LLCCV	6A14005-CRL5	Chromium	2.000	2.16	108	ug/L		70 - 130
LLCCV	6A14005-CRL5	Cobalt	1.000	1.07	107	ug/L		70 - 130
LLCCV	6A14005-CRL5	Copper	2.000	2.23	112	ug/L		70 - 130

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LOW LEVEL INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	QC Limts
LLCCV	6A14005-CRL5	Lead	1.000	0.996	100	ug/L	J	70 - 130
LLCCV	**6A14005-CRL5**	**Manganese**	**1.000**	**1.39**	139	**ug/L**	B	**70 - 130**
LLCCV	6A14005-CRL5	Nickel	1.000	1.07	107	ug/L		70 - 130
LLCCV	6A14005-CRL5	Selenium	5.000	4.93	99	ug/L	J	70 - 130
LLCCV	6A14005-CRL5	Silver	1.000	1.01	101	ug/L		70 - 130
LLCCV	6A14005-CRL5	Thallium	1.000	0.994	99	ug/L	J	70 - 130
LLCCV	6A14005-CRL5	Vanadium	5.000	5.34	107	ug/L		70 - 130
LLCCV	6A14005-CRL5	Zinc	2.000	2.20	110	ug/L		70 - 130
LLCCV	6A14005-CRL6	Antimony	2.000	2.07	104	ug/L		70 - 130
LLCCV	6A14005-CRL6	Arsenic	1.000	0.959	96	ug/L	J	70 - 130
LLCCV	6A14005-CRL6	Barium	10.00	10.3	103	ug/L		70 - 130
LLCCV	6A14005-CRL6	Beryllium	1.000	0.946	95	ug/L	J	70 - 130
LLCCV	6A14005-CRL6	Cadmium	1.000	1.02	102	ug/L		70 - 130
LLCCV	6A14005-CRL6	Chromium	2.000	2.14	107	ug/L		70 - 130
LLCCV	6A14005-CRL6	Cobalt	1.000	1.05	105	ug/L		70 - 130
LLCCV	6A14005-CRL6	Copper	2.000	2.18	109	ug/L		70 - 130
LLCCV	6A14005-CRL6	Lead	1.000	1.00	100	ug/L		70 - 130
LLCCV	6A14005-CRL6	Manganese	1.000	1.12	112	ug/L		70 - 130
LLCCV	6A14005-CRL6	Nickel	1.000	1.07	107	ug/L		70 - 130
LLCCV	6A14005-CRL6	Selenium	5.000	4.62	92	ug/L	J	70 - 130
LLCCV	6A14005-CRL6	Silver	1.000	0.998	100	ug/L	J	70 - 130
LLCCV	6A14005-CRL6	Thallium	1.000	0.982	98	ug/L	J	70 - 130
LLCCV	6A14005-CRL6	Vanadium	5.000	5.31	106	ug/L		70 - 130
LLCCV	6A14005-CRL6	Zinc	2.000	2.14	107	ug/L		70 - 130

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N. Initial and Continuing Calibration Results

(INITIAL CALIBRATION DATA)
(INITIAL AND CONTINUING CALIBRATION CHECK)

INITIAL CALIBRATION DATA

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 6011701 Instrument: PEMS

Calibration Date: 1/14/2016 9:40:40

Compound	QC Sample	Lab ID	Area	Conc (ug/L)
Antimony	CAL1	S0	237.503	0
Antimony	CAL2	S 6020-MS1	18190.22	2
Antimony	CAL3	S 6020-MS2	36839.05	4
Antimony	CAL4	S 6020-MS3	1144418	125
Antimony	CAL5	S 6020-MS4	2172355	250
Antimony	CAL6	S 6020-MS5	4356875	500
Arsenic	CAL1	S0	-247.05	0
Arsenic	CAL2	S 6020-MS1	2049.232	1
Arsenic	CAL3	S 6020-MS2	4538.303	2
Arsenic	CAL4	S 6020-MS3	289660.8	125
Arsenic	CAL5	S 6020-MS4	580168.1	250
Arsenic	CAL6	S 6020-MS5	1142503	500
Barium	CAL1	S0	38.889	0
Barium	CAL2	S 6020-MS1	46302.99	10
Barium	CAL3	S 6020-MS2	93307.35	20
Barium	CAL4	S 6020-MS3	579415.4	125
Barium	CAL5	S 6020-MS4	1156012	250
Barium	CAL6	S 6020-MS5	2244948	500
Beryllium	CAL1	S0	1.667	0
Beryllium	CAL2	S 6020-MS1	460.566	1
Beryllium	CAL3	S 6020-MS2	891.707	2
Beryllium	CAL4	S 6020-MS3	52796.21	125
Beryllium	CAL5	S 6020-MS4	105047.4	250
Beryllium	CAL6	S 6020-MS5	207001.5	500
Cadmium	CAL1	S0	5.633	0
Cadmium	CAL2	S 6020-MS1	2903.568	1
Cadmium	CAL3	S 6020-MS2	5668.437	2

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Cadmium	CAL4	S 6020-MS3	359700	125
Cadmium	CAL5	S 6020-MS4	714245.8	250
Cadmium	CAL6	S 6020-MS5	1409010	500
Chromium	CAL1	S0	10727.42	0
Chromium	CAL2	S 6020-MS1	41987.91	2
Chromium	CAL3	S 6020-MS2	73500.06	4
Chromium	CAL4	S 6020-MS3	1859594	125
Chromium	CAL5	S 6020-MS4	3631207	250
Chromium	CAL6	S 6020-MS5	7212488	500
Cobalt	CAL1	S0	97.778	0
Cobalt	CAL2	S 6020-MS1	19842.09	1
Cobalt	CAL3	S 6020-MS2	38777.38	2
Cobalt	CAL4	S 6020-MS3	2240720	125
Cobalt	CAL5	S 6020-MS4	4493982	250
Cobalt	CAL6	S 6020-MS5	8966221	500
Copper	CAL1	S0	181.483	0
Copper	CAL2	S 6020-MS1	19441.29	2
Copper	CAL3	S 6020-MS2	38166.82	4
Copper	CAL4	S 6020-MS3	1146474	125
Copper	CAL5	S 6020-MS4	2137808	250
Copper	CAL6	S 6020-MS5	4239512	500
Lead	CAL1	S0	173.612	0
Lead	CAL2	S 6020-MS1	23083.84	1
Lead	CAL3	S 6020-MS2	46380	2
Lead	CAL4	S 6020-MS3	2775548	125
Lead	CAL5	S 6020-MS4	5468114	250
Lead	CAL6	S 6020-MS5	1.089636E+07	500
Manganese	CAL1	S0	1230.631	0
Manganese	CAL2	S 6020-MS1	25663.73	1
Manganese	CAL3	S 6020-MS2	50056.44	2
Manganese	CAL4	S 6020-MS3	2802147	125
Manganese	CAL5	S 6020-MS4	5591872	250
Manganese	CAL6	S 6020-MS5	1.10937E+07	500
Nickel	CAL1	S0	62.963	0
Nickel	CAL2	S 6020-MS1	4418.58	1

Nickel	CAL3	S 6020-MS2	8834.482	2
Nickel	CAL4	S 6020-MS3	515027	125
Nickel	CAL5	S 6020-MS4	1011021	250
Nickel	CAL6	S 6020-MS5	1922436	500
Selenium	CAL1	S0	56.296	0
Selenium	CAL2	S 6020-MS1	1199.887	5
Selenium	CAL3	S 6020-MS2	2348.425	10
Selenium	CAL4	S 6020-MS3	28752.64	125
Selenium	CAL5	S 6020-MS4	57513.07	250
Selenium	CAL6	S 6020-MS5	115260.1	500
Silver	CAL1	S0	705.58	0
Silver	CAL2	S 6020-MS1	13780.85	1
Silver	CAL3	S 6020-MS2	27211.3	2
Silver	CAL4	S 6020-MS3	1634098	125
Silver	CAL5	S 6020-MS4	3111117	250
Silver	CAL6	S 6020-MS5	6237035	500
Thallium	CAL1	S0	111.112	0
Thallium	CAL2	S 6020-MS1	24791.92	1
Thallium	CAL3	S 6020-MS2	48858.62	2
Thallium	CAL4	S 6020-MS3	2817969	125
Thallium	CAL5	S 6020-MS4	5720497	250
Thallium	CAL6	S 6020-MS5	1.161959E+07	500
Vanadium	CAL1	S0	3618.884	0
Vanadium	CAL2	S 6020-MS1	91508.67	5
Vanadium	CAL3	S 6020-MS2	181469.1	10
Vanadium	CAL4	S 6020-MS3	2025482	125
Vanadium	CAL5	S 6020-MS4	4013927	250
Vanadium	CAL6	S 6020-MS5	8087673	500
Zinc	CAL1	S0	385.193	0
Zinc	CAL2	S 6020-MS1	5081.858	2
Zinc	CAL3	S 6020-MS2	9527.713	4
Zinc	CAL4	S 6020-MS3	283521.9	125
Zinc	CAL5	S 6020-MS4	558488.3	250
Zinc	CAL6	S 6020-MS5	1090688	500

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA (Continued)

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 6011701 Instrument: PEMS

Calibration Date: 1/14/2016 9:40:40

Compound	Slope	Intercept	Linear r	Linear Limit	Q
Antimony	0.001847	0	0.9999	0.998	
Arsenic	0.001162	0	0.9999	0.998	
Barium	0.0009560	0	0.9999	0.998	
Beryllium	0.001118	0	0.9999	0.998	
Cadmium	0.0007362	0	0.9999	0.998	
Chromium	0.007313	0	0.9999	0.998	
Cobalt	0.009141	0	0.9999	0.998	
Copper	0.004370	0	0.9995	0.998	
Lead	0.009622	0	0.9999	0.998	
Manganese	0.01123	0	0.9999	0.998	
Nickel	0.001983	0	0.9995	0.998	
Selenium	0.0001174	0	0.9999	0.998	
Silver	0.003434	0	0.9999	0.998	
Thallium	0.01024	0	0.9999	0.998	
Vanadium	0.008212	0	0.9999	0.998	
Zinc	0.001117	0	0.9998	0.998	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

N. Initial and Continuing Calibration Results

(INITIAL CALIBRATION DATA)
(INITIAL AND CONTINUING CALIBRATION CHECK)

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
ICV	6A14005-ICV1	Antimony	220.0	213	97	ug/L		+/-10
ICV	6A14005-ICV1	Arsenic	220.0	217	98	ug/L		+/-10
ICV	6A14005-ICV1	Barium	110.0	111	101	ug/L		+/-10
ICV	6A14005-ICV1	Beryllium	110.0	107	97	ug/L		+/-10
ICV	6A14005-ICV1	Cadmium	110.0	109	99	ug/L		+/-10
ICV	6A14005-ICV1	Chromium	110.0	111	101	ug/L		+/-10
ICV	6A14005-ICV1	Cobalt	110.0	110	100	ug/L		+/-10
ICV	6A14005-ICV1	Copper	110.0	115	105	ug/L		+/-10
ICV	6A14005-ICV1	Lead	220.0	213	97	ug/L		+/-10
ICV	6A14005-ICV1	Manganese	110.0	107	97	ug/L		+/-10
ICV	6A14005-ICV1	Nickel	110.0	114	104	ug/L		+/-10
ICV	6A14005-ICV1	Selenium	220.0	213	97	ug/L		+/-10
ICV	6A14005-ICV1	Silver	110.0	112	102	ug/L		+/-10
ICV	6A14005-ICV1	Thallium	220.0	212	97	ug/L		+/-10
ICV	6A14005-ICV1	Vanadium	110.0	109	100	ug/L		+/-10
ICV	6A14005-ICV1	Zinc	220.0	216	98	ug/L		+/-10
CCV	6A14005-CCV1	Antimony	300.0	296	99	ug/L		+/-10
CCV	6A14005-CCV1	Arsenic	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV1	Barium	300.0	307	102	ug/L		+/-10
CCV	6A14005-CCV1	Beryllium	300.0	304	101	ug/L		+/-10
CCV	6A14005-CCV1	Cadmium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV1	Chromium	300.0	301	100	ug/L		+/-10
CCV	6A14005-CCV1	Cobalt	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV1	Copper	300.0	303	101	ug/L		+/-10
CCV	6A14005-CCV1	Lead	300.0	296	99	ug/L		+/-10
CCV	6A14005-CCV1	Manganese	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV1	Nickel	300.0	309	103	ug/L		+/-10
CCV	6A14005-CCV1	Selenium	300.0	294	98	ug/L		+/-10
CCV	6A14005-CCV1	Silver	300.0	308	103	ug/L		+/-10
CCV	6A14005-CCV1	Thallium	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV1	Vanadium	300.0	303	101	ug/L		+/-10
CCV	6A14005-CCV1	Zinc	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV2	Antimony	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV2	Arsenic	300.0	295	98	ug/L		+/-10
CCV	6A14005-CCV2	Barium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV2	Beryllium	300.0	286	95	ug/L		+/-10
CCV	6A14005-CCV2	Cadmium	300.0	307	102	ug/L		+/-10
CCV	6A14005-CCV2	Chromium	300.0	303	101	ug/L		+/-10
CCV	6A14005-CCV2	Cobalt	300.0	301	100	ug/L		+/-10

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
CCV	6A14005-CCV2	Copper	300.0	298	100	ug/L		+/-10
CCV	6A14005-CCV2	Lead	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV2	Manganese	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV2	Nickel	300.0	306	102	ug/L		+/-10
CCV	6A14005-CCV2	Selenium	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV2	Silver	300.0	306	102	ug/L		+/-10
CCV	6A14005-CCV2	Thallium	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV2	Vanadium	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV2	Zinc	300.0	297	99	ug/L		+/-10
CCV	6A14005-CCV3	Antimony	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV3	Arsenic	300.0	301	100	ug/L		+/-10
CCV	6A14005-CCV3	Barium	300.0	303	101	ug/L		+/-10
CCV	6A14005-CCV3	Beryllium	300.0	292	97	ug/L		+/-10
CCV	6A14005-CCV3	Cadmium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV3	Chromium	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV3	Cobalt	300.0	303	101	ug/L		+/-10
CCV	6A14005-CCV3	Copper	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV3	Lead	300.0	295	98	ug/L		+/-10
CCV	6A14005-CCV3	Manganese	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV3	Nickel	300.0	310	103	ug/L		+/-10
CCV	6A14005-CCV3	Selenium	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV3	Silver	300.0	301	100	ug/L		+/-10
CCV	6A14005-CCV3	Thallium	300.0	293	98	ug/L		+/-10
CCV	6A14005-CCV3	Vanadium	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV3	Zinc	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV4	Antimony	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV4	Arsenic	300.0	296	99	ug/L		+/-10
CCV	6A14005-CCV4	Barium	300.0	304	101	ug/L		+/-10
CCV	6A14005-CCV4	Beryllium	300.0	290	97	ug/L		+/-10
CCV	6A14005-CCV4	Cadmium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV4	Chromium	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV4	Cobalt	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV4	Copper	300.0	297	99	ug/L		+/-10
CCV	6A14005-CCV4	Lead	300.0	297	99	ug/L		+/-10
CCV	6A14005-CCV4	Manganese	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV4	Nickel	300.0	304	101	ug/L		+/-10
CCV	6A14005-CCV4	Selenium	300.0	295	98	ug/L		+/-10
CCV	6A14005-CCV4	Silver	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV4	Thallium	300.0	296	99	ug/L		+/-10

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
CCV	6A14005-CCV4	Vanadium	300.0	295	98	ug/L		+/-10
CCV	6A14005-CCV4	Zinc	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV5	Antimony	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV5	Arsenic	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV5	Barium	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV5	Beryllium	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV5	Cadmium	300.0	301	100	ug/L		+/-10
CCV	6A14005-CCV5	Chromium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV5	Cobalt	300.0	306	102	ug/L		+/-10
CCV	6A14005-CCV5	Copper	300.0	308	103	ug/L		+/-10
CCV	6A14005-CCV5	Lead	300.0	292	97	ug/L		+/-10
CCV	6A14005-CCV5	Manganese	300.0	306	102	ug/L		+/-10
CCV	6A14005-CCV5	Nickel	300.0	309	103	ug/L		+/-10
CCV	6A14005-CCV5	Selenium	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV5	Silver	300.0	300	100	ug/L		+/-10
CCV	6A14005-CCV5	Thallium	300.0	295	98	ug/L		+/-10
CCV	6A14005-CCV5	Vanadium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV5	Zinc	300.0	303	101	ug/L		+/-10
CCV	6A14005-CCV6	Antimony	300.0	290	97	ug/L		+/-10
CCV	6A14005-CCV6	Arsenic	300.0	296	99	ug/L		+/-10
CCV	6A14005-CCV6	Barium	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV6	Beryllium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV6	Cadmium	300.0	297	99	ug/L		+/-10
CCV	6A14005-CCV6	Chromium	300.0	301	100	ug/L		+/-10
CCV	6A14005-CCV6	Cobalt	300.0	308	103	ug/L		+/-10
CCV	6A14005-CCV6	Copper	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV6	Lead	300.0	292	97	ug/L		+/-10
CCV	6A14005-CCV6	Manganese	300.0	304	101	ug/L		+/-10
CCV	6A14005-CCV6	Nickel	300.0	311	104	ug/L		+/-10
CCV	6A14005-CCV6	Selenium	300.0	295	98	ug/L		+/-10
CCV	6A14005-CCV6	Silver	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV6	Thallium	300.0	293	98	ug/L		+/-10
CCV	6A14005-CCV6	Vanadium	300.0	303	101	ug/L		+/-10
CCV	6A14005-CCV6	Zinc	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV7	Antimony	300.0	299	100	ug/L		+/-10
CCV	6A14005-CCV7	Arsenic	300.0	301	100	ug/L		+/-10
CCV	6A14005-CCV7	Barium	300.0	306	102	ug/L		+/-10
CCV	6A14005-CCV7	Beryllium	300.0	309	103	ug/L		+/-10
CCV	6A14005-CCV7	Cadmium	300.0	308	103	ug/L		+/-10

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units	Q	Control Limit
CCV	6A14005-CCV7	Chromium	300.0	305	102	ug/L		+/-10
CCV	6A14005-CCV7	Cobalt	300.0	310	103	ug/L		+/-10
CCV	6A14005-CCV7	Copper	300.0	302	101	ug/L		+/-10
CCV	6A14005-CCV7	Lead	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV7	Manganese	300.0	309	103	ug/L		+/-10
CCV	6A14005-CCV7	Nickel	300.0	314	105	ug/L		+/-10
CCV	6A14005-CCV7	Selenium	300.0	296	99	ug/L		+/-10
CCV	6A14005-CCV7	Silver	300.0	310	103	ug/L		+/-10
CCV	6A14005-CCV7	Thallium	300.0	298	99	ug/L		+/-10
CCV	6A14005-CCV7	Vanadium	300.0	301	100	ug/L		+/-10
CCV	6A14005-CCV7	Zinc	300.0	302	101	ug/L		+/-10

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Q. ICP-AES and ICP-MS Instrument Results

(ICP INTERFERENCE CHECK SAMPLE)
(ICP-AES AND ICP-MS LINEAR RANGES)
(ICP-AES INTERELEMENT CORRECTION FACTORS)
(ICP-MS TUNE)
(ICPMS Internal Standards Relative Intensity Summary)

ICP Interference Check Sample

ICP INTERFERENCE CHECK SAMPLE

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	True	Found	%R	Units
ICSA	6A14005-IFA1	Antimony		0.11	4	ug/L
ICSA	6A14005-IFA1	Arsenic		0.02	2	ug/L
ICSA	6A14005-IFA1	Barium		0.02	20	ug/L
ICSA	6A14005-IFA1	Beryllium		0.01	2	ug/L
ICSA	6A14005-IFA1	Cadmium		0.02	2	ug/L
ICSA	6A14005-IFA1	Chromium		0.09	4	ug/L
ICSA	6A14005-IFA1	Cobalt		0.02	2	ug/L
ICSA	6A14005-IFA1	Copper		0.09	4	ug/L
ICSA	6A14005-IFA1	Lead		0.03	2	ug/L
ICSA	6A14005-IFA1	Manganese		0.14	2	ug/L
ICSA	6A14005-IFA1	Nickel		0.11	2	ug/L
ICSA	6A14005-IFA1	Selenium		0.07	10	ug/L
ICSA	6A14005-IFA1	Silver		0.03	2	ug/L
ICSA	6A14005-IFA1	Thallium		0.02	2	ug/L
ICSA	6A14005-IFA1	Vanadium		-0.01	10	ug/L
ICSA	6A14005-IFA1	Zinc		0.09	4	ug/L
ICSAB	6A14005-IFB1	Antimony		0.07	4	ug/L
ICSAB	6A14005-IFB1	Arsenic	25.00	24.70	99	ug/L
ICSAB	6A14005-IFB1	Barium		0.01	20	ug/L
ICSAB	6A14005-IFB1	Beryllium		0.00	2	ug/L
ICSAB	6A14005-IFB1	Cadmium	25.00	24.88	100	ug/L
ICSAB	6A14005-IFB1	Chromium	50.00	51.75	104	ug/L
ICSAB	6A14005-IFB1	Cobalt	50.00	51.25	102	ug/L
ICSAB	6A14005-IFB1	Copper	50.00	52.71	105	ug/L
ICSAB	6A14005-IFB1	Lead		0.02	2	ug/L
ICSAB	6A14005-IFB1	Manganese	50.00	51.58	103	ug/L
ICSAB	6A14005-IFB1	Nickel	50.00	52.10	104	ug/L
ICSAB	6A14005-IFB1	Selenium	25.00	23.95	96	ug/L
ICSAB	6A14005-IFB1	Silver	12.50	12.81	102	ug/L
ICSAB	6A14005-IFB1	Thallium		0.01	2	ug/L
ICSAB	6A14005-IFB1	Vanadium	50.00	52.83	106	ug/L
ICSAB	6A14005-IFB1	Zinc	25.00	24.84	99	ug/L

* The absence of an entry in the “True” column denotes the lack of a true value for that analyte. The entry in the “%R” column represents a Control Limit, established as +/- 2 times analyte Limit Reporting Limit.

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ICP-MS Tune

ICP-MS Tune

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Date: 01/14/16 ICP-MS Instrument ID: PEMS

Element - Mass	Avg. Measured Mass (amu)	Average Peak Width (amu)	%Height	%RSD
Be - 9	9.025	0.715	10	1.357
Mg - 24	23.975	0.669	10	1.037
Mg - 25	25.025	0.680	10	0.432
Mg - 26	25.975	0.713	10	0.714
Co - 59	58.925	0.699	10	0.52
In - 113	112.925	0.690	10	0.671
In - 115	114.925	0.741	10	0.373
Pb - 206	205.975	0.658	10	0.49
Pb - 207	206.975	0.645	10	0.367
Pb - 208	207.925	0.650	10	0.505

Comments:

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ICPMS Internal Standards Relative Intensity Summary

ICPMS Internal Standards Relative Intensity Summary

EPA 6020A

Client: DRAPER ADEN ASSOCIATES

Work Order: 1601025

Sequence: 6A14005

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: PEMS

		Internal Standards %RI For:				
Sample No.	**Time**	**Lithium6**	**Scandium45**	**Indium115**	**Terbium159**	**Bismuth209**
S0	1/14/16 13:22	100	100	100	100	100
S 6020-MS1	1/14/16 13:24	96	93	90	92	93
S 6020-MS2	1/14/16 13:25	98	96	94	95	96
S 6020-MS3	1/14/16 13:27	94	95	93	95	93
S 6020-MS4	1/14/16 13:29	93	95	93	96	93
S 6020-MS5	1/14/16 13:31	93	94	95	99	92
LLICV	1/14/16 13:34	96	97	97	99	98
ICV	1/14/16 13:36	97	99	100	104	99
ICB	1/14/16 13:37	92	96	98	98	98
ICSA	1/14/16 13:39	96	100	97	100	96
ICSAB	1/14/16 13:41	93	99	97	100	96
LLCCV	1/14/16 13:43	96	97	95	96	97
CCV	1/14/16 13:44	94	98	95	100	95
CCB	1/14/16 13:46	93	97	94	97	97
CCV	1/14/16 14:07	101	90	88	93	91
CCB	1/14/16 14:08	103	91	92	96	97
LLCCV	1/14/16 14:14	104	92	91	94	96
CCV	1/14/16 14:15	97	92	92	97	94
CCB	1/14/16 14:17	95	93	95	97	97
LLCCV	1/14/16 14:25	102	89	87	90	91
CCV	1/14/16 14:27	99	93	92	96	93
CCB	1/14/16 14:29	102	95	95	97	98
PBSUB	1/14/16 15:09	118	96	97	102	92
WS-4	1/14/16 15:12	96	108	94	100	85
WS-4D	1/14/16 15:14	95	107	93	100	84
WS-4S	1/14/16 15:15	92	106	93	98	85
WS-4SD	1/14/16 15:17	94	105	94	101	85
WS-1	1/14/16 15:22	89	108	93	98	83
WS-2	1/14/16 15:24	90	103	95	102	87

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ICPMS Internal Standards Relative Intensity Summary

EPA 6020A

Client: DRAPER ADEN ASSOCIATES

Work Order: 1601025

Sequence: 6A14005

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: PEMS

		Internal Standards %RI For:				
Sample No.	**Time**	**Lithium6**	**Scandium45**	**Indium115**	**Terbium159**	**Bismuth209**
CCV	1/14/16 15:26	94	96	96	100	96
CCB	1/14/16 15:27	97	102	99	102	102
WS-3	1/14/16 15:29	96	102	95	101	91
WS-5	1/14/16 15:31	89	113	91	96	82
WS-6	1/14/16 15:33	89	110	89	96	82
WS-7	1/14/16 15:34	90	111	89	94	82
WS-DUP	1/14/16 15:36	92	101	92	100	87
WS-BG	1/14/16 15:38	91	102	92	99	85
LLCCV	1/14/16 15:39	98	96	96	100	100
CCV	1/14/16 15:41	97	97	98	103	99
CCB	1/14/16 15:43	100	97	97	101	100
MLCS03	1/14/16 16:00	94	97	92	97	94
WS-1	1/14/16 16:02	93	100	91	96	86
WS-5	1/14/16 16:04	97	105	92	99	88
WS-BG	1/14/16 16:05	96	101	93	100	90
LLCCV	1/14/16 16:12	93	95	91	94	95
CCV	1/14/16 16:13	94	97	94	98	93
CCB	1/14/16 16:15	100	98	96	97	99

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R. Method and Instrument Blank Results

(BLANKS)

BLANKS

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	Found	MDL	RL	Units	Q	Method
ICB	6A14005-ICB1	Antimony	0.337	0.0260	2.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Arsenic	0.0539	0.140	1.00	ug/L	U	EPA 6020A
ICB	6A14005-ICB1	Barium	0.0245	0.100	10.0	ug/L	U	EPA 6020A
ICB	6A14005-ICB1	Beryllium	0.0373	0.0330	1.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Cadmium	0.0230	0.0110	1.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Chromium	0.0542	0.0680	2.00	ug/L	U	EPA 6020A
ICB	6A14005-ICB1	Cobalt	0.0274	0.00950	1.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Copper	0.0279	0.120	2.00	ug/L	U	EPA 6020A
ICB	6A14005-ICB1	Lead	0.0482	0.0210	1.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Manganese	0.0265	0.0320	1.00	ug/L	U	EPA 6020A
ICB	6A14005-ICB1	Nickel	0.0291	0.00910	1.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Selenium	0.108	0.0900	5.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Silver	0.0801	0.00800	1.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Thallium	0.0477	0.0150	1.00	ug/L	J	EPA 6020A
ICB	6A14005-ICB1	Vanadium	0.0445	0.0560	5.00	ug/L	U	EPA 6020A
ICB	6A14005-ICB1	Zinc	0.0542	0.120	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB1	Antimony	0.179	0.0260	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Arsenic	0.0402	0.140	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB1	Barium	0.0491	0.100	10.0	ug/L	U	EPA 6020A
CCB	6A14005-CCB1	Beryllium	0.0425	0.0330	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Cadmium	0.0459	0.0110	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Chromium	0.0586	0.0680	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB1	Cobalt	0.0450	0.00950	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Copper	0.0564	0.120	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB1	Lead	0.0483	0.0210	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Manganese	0.0433	0.0320	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Nickel	0.0438	0.00910	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Selenium	0.0657	0.0900	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB1	Silver	0.129	0.00800	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Thallium	0.0498	0.0150	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB1	Vanadium	0.0503	0.0560	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB1	Zinc	0.129	0.120	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Antimony	0.197	0.0260	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Arsenic	0.0512	0.140	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB2	Barium	0.0701	0.100	10.0	ug/L	U	EPA 6020A
CCB	6A14005-CCB2	Beryllium	0.0369	0.0330	1.00	ug/L	J	EPA 6020A

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BLANKS

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	Found	MDL	RL	Units	Q	Method
CCB	6A14005-CCB2	Cadmium	0.0446	0.0110	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Chromium	0.0385	0.0680	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB2	Cobalt	0.0481	0.00950	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Copper	0.0568	0.120	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB2	Lead	0.0543	0.0210	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Manganese	0.0571	0.0320	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Nickel	0.0561	0.00910	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Selenium	0.0789	0.0900	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB2	Silver	0.0881	0.00800	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Thallium	0.0565	0.0150	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB2	Vanadium	0.0489	0.0560	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB2	Zinc	0.138	0.120	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Antimony	0.168	0.0260	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Arsenic	0.0497	0.140	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB3	Barium	0.0543	0.100	10.0	ug/L	U	EPA 6020A
CCB	6A14005-CCB3	Beryllium	0.0514	0.0330	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Cadmium	0.0451	0.0110	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Chromium	0.0321	0.0680	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB3	Cobalt	0.0471	0.00950	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Copper	0.0556	0.120	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB3	Lead	0.0500	0.0210	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Manganese	0.0468	0.0320	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Nickel	0.0493	0.00910	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Selenium	0.0883	0.0900	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB3	Silver	0.0893	0.00800	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Thallium	0.0562	0.0150	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB3	Vanadium	0.0446	0.0560	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB3	Zinc	0.101	0.120	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB4	Antimony	0.160	0.0260	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Arsenic	0.0500	0.140	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB4	Barium	0.0433	0.100	10.0	ug/L	U	EPA 6020A
CCB	6A14005-CCB4	Beryllium	0.0306	0.0330	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB4	Cadmium	0.0389	0.0110	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Chromium	0.0371	0.0680	2.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB4	Cobalt	0.0414	0.00950	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Copper	0.0859	0.120	2.00	ug/L	U	EPA 6020A

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EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	Found	MDL	RL	Units	Q	Method
CCB	6A14005-CCB4	Lead	0.0466	0.0210	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Manganese	0.0489	0.0320	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Nickel	0.0366	0.00910	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Selenium	0.0995	0.0900	5.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Silver	0.0900	0.00800	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Thallium	0.0473	0.0150	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB4	Vanadium	0.0433	0.0560	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB4	Zinc	0.112	0.120	2.00	ug/L	U	EPA 6020A
PBSUB	6011103-BLK1	Antimony		0.0230	0.200	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Arsenic		0.0338	0.200	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Barium	0.0278	0.0220	1.00	mg/kg wet	J	EPA 6020A
PBSUB	6011103-BLK1	Beryllium		0.00810	0.100	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Cadmium		0.00664	0.100	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Chromium	0.143	0.0298	1.20	mg/kg wet	J	EPA 6020A
PBSUB	6011103-BLK1	Cobalt		0.00396	0.100	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Copper	0.0217	0.00530	0.200	mg/kg wet	J	EPA 6020A
PBSUB	6011103-BLK1	Lead	0.0152	0.00254	0.100	mg/kg wet	J	EPA 6020A
PBSUB	6011103-BLK1	Nickel	0.0120	0.00480	0.100	mg/kg wet	J	EPA 6020A
PBSUB	6011103-BLK1	Selenium		0.0262	0.500	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Silver		0.00836	0.100	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Thallium		0.00328	0.100	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Vanadium		0.0520	0.500	mg/kg wet	U	EPA 6020A
PBSUB	6011103-BLK1	Zinc	0.168	0.125	0.500	mg/kg wet	J	EPA 6020A
CCB	6A14005-CCB5	Antimony	0.127	0.0260	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Arsenic	0.0744	0.140	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB5	Barium	0.175	0.100	10.0	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Beryllium	0.0785	0.0330	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Cadmium	0.0749	0.0110	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Chromium	0.0864	0.0680	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Cobalt	0.0678	0.00950	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Copper	0.156	0.120	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Lead	0.0982	0.0210	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Manganese	0.296	0.0320	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Nickel	0.118	0.00910	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Selenium	0.123	0.0900	5.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Silver	0.0553	0.00800	1.00	ug/L	J	EPA 6020A

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BLANKS

EPA 6020A

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A14005 Instrument ID: PEMS

Client ID	Lab Sample ID	Analyte	Found	MDL	RL	Units	Q	Method
CCB	6A14005-CCB5	Thallium	0.0982	0.0150	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Vanadium	0.0964	0.0560	5.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB5	Zinc	0.255	0.120	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Antimony	0.138	0.0260	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Arsenic	0.0524	0.140	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB6	Barium	0.125	0.100	10.0	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Beryllium	0.0622	0.0330	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Cadmium	0.0549	0.0110	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Chromium	0.0988	0.0680	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Cobalt	0.0728	0.00950	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Copper	0.156	0.120	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Lead	0.0638	0.0210	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Manganese	0.233	0.0320	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Nickel	0.0788	0.00910	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Selenium	0.0633	0.0900	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB6	Silver	0.0598	0.00800	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Thallium	0.0663	0.0150	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Vanadium	0.0946	0.0560	5.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB6	Zinc	0.193	0.120	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Antimony	0.127	0.0260	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Arsenic	0.0460	0.140	1.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB7	Barium	0.0558	0.100	10.0	ug/L	U	EPA 6020A
CCB	6A14005-CCB7	Beryllium	0.0522	0.0330	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Cadmium	0.0509	0.0110	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Chromium	0.0765	0.0680	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Cobalt	0.0487	0.00950	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Copper	0.129	0.120	2.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Lead	0.0532	0.0210	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Manganese	0.0708	0.0320	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Nickel	0.0574	0.00910	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Selenium	0.0788	0.0900	5.00	ug/L	U	EPA 6020A
CCB	6A14005-CCB7	Silver	0.0407	0.00800	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Thallium	0.0579	0.0150	1.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Vanadium	0.0566	0.0560	5.00	ug/L	J	EPA 6020A
CCB	6A14005-CCB7	Zinc	0.153	0.120	2.00	ug/L	J	EPA 6020A

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S. Run Logs/Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the quarterly verification of method and instrument parameters submitted as a part of each data package.

Raw data shall be labeled with Client Identification numbers and appropriate codes in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, , Laboratory Control Sample, and post digestion spike
- diluted and undiluted sample and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes (indicating standard solutions used, final spike concentrations, and volumes involved).
- instrument used, any instrument adjustments, data corrections or other apparent anomalies on the measurement record, including all data voided or data not used and a brief written explanation
- time and date of each analysis (instrument run logs can be submitted if they contain this information)

Raw Data for:

Instrument: PEMS

File Name: 6A14005_P-037

Sequence: 6A14005

Analysis: 6020A ICP MS (UPDATE IV)

ICPMS Run Log

Analysis: **6020A ICP MS DOD QSM 5.0** **Instrument:** PEMS

Operator(s): BWL **Date/Time** 01/14/16 - 13:22 **to** 01/14/16 - 18:53 **File Name:** 6A14005.rep

Work Order
1601011
1601024
1601025
1601032

Batch
6010611
6011103
6011202
6011301
6A14005

Reagents
5H24006
5K09003
5L02010
5L02016

Comments / Maintenance
None

Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Comments
TUN1	6A14005-CCBD	CALIB STD	1	01/14/16	09:40:36		
6A14005-CAL1	S0	CALIB STD	1	01/14/16	13:22:30	5I10001	
6A14005-CAL2	S 6020-MS1	CALIB STD	1	01/14/16	13:24:15	5I10002	
6A14005-CAL3	S 6020-MS2	CALIB STD	1	01/14/16	13:25:58	5I10003	
6A14005-CAL4	S 6020-MS3	CALIB STD	1	01/14/16	13:27:41	5I10004	
6A14005-CAL5	S 6020-MS4	CALIB STD	1	01/14/16	13:29:23	5I10005	
6A14005-CAL6	S 6020-MS5	CALIB STD	1	01/14/16	13:31:06	5I10006	
6A14005-CRL1	LLICV	ICV	1	01/14/16	13:34:30	5I10002	
6A14005-ICV1	ICV	ICV	1	01/14/16	13:36:14	5H05007	
6A14005-ICB1	ICB	ICB	1	01/14/16	13:37:57	5I10001	
6A14005-IFA1	ICSA	ICS	1	01/14/16	13:39:41	6A15001	
6A14005-IFB1	ICSAB	ICS	1	01/14/16	13:41:23	6A15002	
6A14005-CRL2	LLCCV	CCV	1	01/14/16	13:43:07	5I10002	
6A14005-CCV1	CCV	CCV	1	01/14/16	13:44:50	5I10008	
6A14005-CCB1	CCB	CCB	1	01/14/16	13:46:33	5I10001	
6010611-BLK1	PBWTY	PBW	1	01/14/16	13:49:59		
6010611-BS1	MLCSTY	SAMPLE	1	01/14/16	13:51:44		
1601011-01	MW-103	SAMPLE	1	01/14/16	13:53:27		
6010611-DUP1	MW-103D	SAMPLE	1	01/14/16	13:55:09		
6010611-MS1	MW-103S	SAMPLE	1	01/14/16	13:56:52		
6010611-MSD1	MW-103SD	SAMPLE	1	01/14/16	13:58:35		
6A14005-SRD1	MW-103L	SAMPLE	5	01/14/16	14:00:18		
6010611-PS1	MW-103R	SAMPLE	1	01/14/16	14:02:00		
1601011-02	MW-105	SAMPLE	1	01/14/16	14:03:43		
1601011-03	MW-107	SAMPLE	1	01/14/16	14:05:26		
6A14005-CCV2	CCV	CCV	1	01/14/16	14:07:10	5I10008	
6A14005-CCB2	CCB	CCB	1	01/14/16	14:08:53	5I10001	
1601011-04	MW-108	SAMPLE	1	01/14/16	14:10:37		
1601011-05	MW-109	SAMPLE	1	01/14/16	14:12:20		
6A14005-CRL3	LLCCV	CCV	1	01/14/16	14:14:03	5I10002	
6A14005-CCV3	CCV	CCV	1	01/14/16	14:15:47	5I10008	
6A14005-CCB3	CCB	CCB	1	01/14/16	14:17:30	5I10001	
1601011-06RE1	MW-110 3X	SAMPLE	3	01/14/16	14:23:58		
6A14005-CRL4	LLCCV	CCV	1	01/14/16	14:25:42	5I10002	

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: Susan W Bass Date: 1/17/2016

Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Comments
6A14005-CCV4	CCV	CCV	1	01/14/16	14:27:26	5I10008	
6A14005-CCB4	CCB	CCB	1	01/14/16	14:29:08	5I10001	
6011103-BLK1	PBSUB	PBS	1	01/14/16	15:09:00		
6011103-BS1	MLCSUB	SAMPLE	1	01/14/16	15:10:42		
1601025-04	WS-4 5X	SAMPLE	5	01/14/16	15:12:25		
6011103-DUP1	WS-4D 5X	SAMPLE	5	01/14/16	15:14:08		
6011103-MS1	WS-4S 5X	SAMPLE	5	01/14/16	15:15:51		
6011103-MSD1	WS-4SD 5X	SAMPLE	5	01/14/16	15:17:34		
6A14005-SRD2	WS-4L	SAMPLE	25	01/14/16	15:19:16		
6011103-PS1	WS-4R 5X	SAMPLE	5	01/14/16	15:20:59		
1601025-01	WS-1 5X	SAMPLE	5	01/14/16	15:22:42		
1601025-02	WS-2 5X	SAMPLE	5	01/14/16	15:24:25		
6A14005-CCV5	CCV	CCV	1	01/14/16	15:26:09	5I10008	
6A14005-CCB5	CCB	CCB	1	01/14/16	15:27:52	5I10001	
1601025-03	WS-3 5X	SAMPLE	5	01/14/16	15:29:36		
1601025-05	WS-5 5X	SAMPLE	5	01/14/16	15:31:19		
1601025-06	WS-6 5X	SAMPLE	5	01/14/16	15:33:02		
1601025-07	WS-7 5X	SAMPLE	5	01/14/16	15:34:45		
1601025-08	WS-DUP 5X	SAMPLE	5	01/14/16	15:36:27		
1601025-09	WS-BG 5X	SAMPLE	5	01/14/16	15:38:10		
6A14005-CRL5	LLCCV	CCV	1	01/14/16	15:39:53	5I10002	
6A14005-CCV6	CCV	CCV	1	01/14/16	15:41:37	5I10008	
6A14005-CCB6	CCB	CCB	1	01/14/16	15:43:20	5I10001	
6011103-BS2	MLCSUB 2X	SAMPLE	2	01/14/16	15:59:05		
6011103-BS3	MLCSUB 20X	SAMPLE	20	01/14/16	16:00:47		
1601025-01RE1	WS-1 10X	SAMPLE	10	01/14/16	16:02:30		
1601025-05RE1	WS-5 10X	SAMPLE	10	01/14/16	16:04:13		
1601025-09RE1	WS-BG 10X	SAMPLE	10	01/14/16	16:05:56		
6A14005-IBL1	IBL	BLANK	1	01/14/16	16:10:25		
6A14005-CRL6	LLCCV	CCV	1	01/14/16	16:12:09	5I10002	
6A14005-CCV7	CCV	CCV	1	01/14/16	16:13:53	5I10008	
6A14005-CCB7	CCB	CCB	1	01/14/16	16:15:35	5I10001	
6011301-BLK1	PBSUE	PBS	1	01/14/16	16:33:38		
6011301-BS1	MLCSUE	SAMPLE	1	01/14/16	16:35:21		
6011301-BS2	MLCSUE 10X	SAMPLE	10	01/14/16	16:37:03		
6011301-BSD1	MLCSDUE	SAMPLE	1	01/14/16	16:38:46		
6011301-BSD2	MLCSDUE 10X	SAMPLE	10	01/14/16	16:40:28		
1601032-01	BORING16	SAMPLE	1	01/14/16	16:42:11		
6A14005-SRD3	BORING16L	SAMPLE	5	01/14/16	16:43:53		
1601032-02	BORING30	SAMPLE	1	01/14/16	16:45:36		
1601032-03	BORING28	SAMPLE	1	01/14/16	16:47:18		
6A14005-CRL7	LLCCV	CCV	1	01/14/16	16:49:02	5I10002	
6A14005-CCV8	CCV	CCV	1	01/14/16	16:50:46	5I10008	
6A14005-CCB8	CCB	CCB	1	01/14/16	16:52:29	5I10001	
6011301-BLK2	PBSUE	PBS	1	01/14/16	16:57:57		
IBL2	BLANK	BLANK	1	01/14/16	17:03:19		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: Susan W Bass Date: 1/17/2016

Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Comments
6A14005-CRL8	LLCCV	CCV	1	01/14/16	17:05:03	5I10002	
6A14005-CCV9	CCV	CCV	1	01/14/16	17:06:47	5I10008	
6A14005-CCB9	CCB	CCB	1	01/14/16	17:08:29	5I10001	
6011202-BLK1	PBSUC	PBS	1	01/14/16	17:37:11		
6011202-BS1	MLCSUC	SAMPLE	1	01/14/16	17:38:53		
1601024-02	BORING11B-1	SAMPLE	1	01/14/16	18:10:19		
1601024-03	BORING11A	SAMPLE	1	01/14/16	18:12:02		
1601024-04	BORING21	SAMPLE	1	01/14/16	18:13:44		
6A14005-CCVB	6A14005-CCVB	CCV	1	01/14/16	18:15:29		
6A14005-CCBB	6A14005-CCBB	CCB	1	01/14/16	18:17:11		
1601024-05	BORING24	SAMPLE	1	01/14/16	18:18:56		
1601024-06	BORING23	SAMPLE	1	01/14/16	18:20:38		
1601024-07	BORING26	SAMPLE	1	01/14/16	18:22:21		
1601024-08	BORING25	SAMPLE	1	01/14/16	18:24:03		
1601024-09	BORING22	SAMPLE	1	01/14/16	18:25:46		
1601024-10	BORING11B-2	SAMPLE	1	01/14/16	18:27:29		
1601024-11	BORING31	SAMPLE	1	01/14/16	18:29:11		
1601024-12	BORING29	SAMPLE	1	01/14/16	18:30:54		
1601024-13	BORING33	SAMPLE	1	01/14/16	18:32:36		
6011202-BS2	MLCSUC 10X	SAMPLE	10	01/14/16	17:40:36		
6011202-BSD1	MLCSDUC	SAMPLE	1	01/14/16	17:42:19		
6011202-BSD2	MLCSDUC 10X	SAMPLE	10	01/14/16	17:44:02		
6A14005-IBL2	IBL	BLANK	1	01/14/16	17:48:28		
6A14005-CRL9	6A14005-CRL9	CCV	1	01/14/16	17:50:12		
6A14005-CCVA	6A14005-CCVA	CCV	1	01/14/16	17:51:55		
6A14005-CCBA	6A14005-CCBA	CCB	1	01/14/16	17:53:38		
6011202-BLK1	PBSUC	PBS	1	01/14/16	17:58:20		
6011202-BS1	MLCSUC	SAMPLE	1	01/14/16	18:00:03		
6011202-BS2	MLCSUC 10X	SAMPLE	10	01/14/16	18:01:46		
6011202-BSD1	MLCSDUC	SAMPLE	1	01/14/16	18:03:28		
6011202-BSD2	MLCSDUC 10X	SAMPLE	10	01/14/16	18:05:11		
1601024-01	BORING10	SAMPLE	1	01/14/16	18:06:54		
6A14005-SRD4	BORING10L	SAMPLE	5	01/14/16	18:08:36		
1601024-14	BORING32	SAMPLE	1	01/14/16	18:34:19		
6A14005-CCVC	6A14005-CCVC	CCV	1	01/14/16	18:36:03		
6A14005-CCBC	6A14005-CCBC	CCB	1	01/14/16	18:37:46		
1601024-15	BORING11C	SAMPLE	1	01/14/16	18:39:30		
1601024-16	BORING1	SAMPLE	1	01/14/16	18:41:13		
1601024-17	BORING3	SAMPLE	1	01/14/16	18:42:55		
1601024-18	BORING15	SAMPLE	1	01/14/16	18:44:38		
1601024-19	BORING2	SAMPLE	1	01/14/16	18:46:20		
1601024-20	BORING12	SAMPLE	1	01/14/16	18:48:03		
6A14005-CRLA	6A14005-CRLA	CCV	1	01/14/16	18:49:46		
6A14005-CCVD	6A14005-CCVD	CCV	1	01/14/16	18:51:30		
6A14005-CCBD	6A14005-CCBD	CCB	1	01/14/16	18:53:12		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: Susan W Bass Date: 1/17/2016

Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Comments

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: Susan W Bass Date: 1/17/2016

Sample ID: TUN1

Tuning Report Summary

Date/Time: 01/14/16 09:40:36

Element	Mass	Exact_Mass	Measured Mass	Meas. Peak_Width	Meas. Intensity Mean	Meas. Intensity Rsd
BERYLLIUM	9	9.012	9.025	0.715	3597.727	1.357
Replicates		3624.657	3516.818	3587.643	3622.256	3637.261
MAGNESIUM	24	23.985	23.975	0.669	70852.942	1.037
Replicates		70926.439	70236.596	70411.217	70604.976	72085.483
MAGNESIUM	25	24.986	25.025	0.680	13147.277	0.432
Replicates		13117.798	13130.014	13133.218	13107.985	13247.369
MAGNESIUM	26	25.983	25.975	0.713	16217.661	0.714
Replicates		16186.890	16233.966	16045.062	16260.209	16362.175
COBALT	59	58.933	58.925	0.699	245034.953	0.520
Replicates		246139.198	246127.311	243619.818	245587.684	243700.755
INDIUM	113	112.904	112.925	0.690	18823.447	0.671
Replicates		18883.842	18630.518	18936.391	18903.727	18762.758
INDIUM	115	114.904	114.925	0.741	445554.742	0.373
Replicates		445657.968	443495.733	447886.793	444568.759	446164.457
LEAD	206	205.975	205.975	0.658	90193.808	0.490
Replicates		90665.961	90324.492	90507.132	89841.571	89629.884
LEAD	207	206.976	206.975	0.645	75131.020	0.367
Replicates		75348.404	75431.225	75107.401	74734.825	75033.247
LEAD	208	207.977	207.925	0.650	186989.168	0.505
Replicates		187440.180	187981.194	187492.141	186362.314	185670.013

Calibration Report

Date/Time: 01/14/16 13:31:06

ElemName	Mass	Curve_Type	Slope	Intercept	Corr_Coeff
LITHIUM	6	LINEAR THRU ZERO	0.0000000	0.0000000	0.0000000
BERYLLIUM	9	LINEAR THRU ZERO	0.0011181	0.0000000	0.9999987
SCANDIUM	45	LINEAR THRU ZERO	0.0000000	0.0000000	0.0000000
VANADIUM	51	LINEAR THRU ZERO	0.0082120	0.0000000	0.9999807
CHROMIUM	52	LINEAR THRU ZERO	0.0073133	0.0000000	0.9999684
MANGANESE	55	LINEAR THRU ZERO	0.0112338	0.0000000	0.9999914
COBALT	59	LINEAR THRU ZERO	0.0091415	0.0000000	0.9999567
NICKEL	60	LINEAR THRU ZERO	0.0019834	0.0000000	0.9995501
COPPER	63	LINEAR THRU ZERO	0.0043708	0.0000000	0.9995506
COPPER	65	LINEAR THRU ZERO	0.0021620	0.0000000	0.9995995
ZINC	66	LINEAR THRU ZERO	0.0011174	0.0000000	0.9998745
ARSENIC	75	LINEAR THRU ZERO	0.0011626	0.0000000	0.9999905
SELENIUM	82	LINEAR THRU ZERO	0.0001174	0.0000000	0.9999844
SILVER	107	LINEAR THRU ZERO	0.0034348	0.0000000	0.9999192
SILVER	109	LINEAR THRU ZERO	0.0032627	0.0000000	0.9999240
CADMIUM	111	LINEAR THRU ZERO	0.0007362	0.0000000	0.9999518
INDIUM	113	LINEAR THRU ZERO	0.0000000	0.0000000	0.0000000
INDIUM	115	LINEAR THRU ZERO	0.0000000	0.0000000	0.0000000
ANTIMONY	121	LINEAR THRU ZERO	0.0018479	0.0000000	0.9999506
BARIUM	135	LINEAR THRU ZERO	0.0005647	0.0000000	0.9999529
BARIUM	137	LINEAR THRU ZERO	0.0009560	0.0000000	0.9999926
TERBIUM	159	LINEAR THRU ZERO	0.0000000	0.0000000	0.0000000
THALLIUM	205	LINEAR THRU ZERO	0.0102438	0.0000000	0.9999483
LEAD	206	LINEAR THRU ZERO	0.0032947	0.0000000	0.9999784
LEAD	207	LINEAR THRU ZERO	0.0060869	0.0000000	0.9999832
LEAD	208	LINEAR THRU ZERO	0.0096220	0.0000000	0.9999740
BISMUTH	209	LINEAR THRU ZERO	0.0000000	0.0000000	0.0000000
KRYPTON	83	LINEAR THRU ZERO	0.0000000	0.0000000	0.0000000

Error Summary Report

6011103-BS1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011103-BS1	MLCSUB	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	CO	59	CO 59 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE
6011103-BS1	MLCSUB	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		15:10:42	SAMPLE

6011103-DUP1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011103-DUP1	WS-4D 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:14:08	SAMPLE

6011103-MS1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011103-MS1	WS-4S 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:15:51	SAMPLE
6011103-MS1	WS-4S 5X	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		15:15:51	SAMPLE
6011103-MS1	WS-4S 5X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		15:15:51	SAMPLE

6011103-MSD1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011103-MSD1	WS-4SD 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:17:34	SAMPLE
6011103-MSD1	WS-4SD 5X	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		15:17:34	SAMPLE
6011103-MSD1	WS-4SD 5X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		15:17:34	SAMPLE

6A14005-SRD2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6A14005-SRD2	WS-4L	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:19:16	SAMPLE

6011103-PS1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011103-PS1	WS-4R 5X	LI	6	LI 6 INT STD FOR SAMPLE	INT STD OUT OF CONTROL	Y	15:20:59	SAMPLE
6011103-PS1	WS-4R 5X	SC	45	SC 45 INT STD FOR SAMPI	INT STD OUT OF CONTROL	Y	15:20:59	SAMPLE
6011103-PS1	WS-4R 5X	IN	115	IN 115 INT STD FOR SAMP	INT STD OUT OF CONTROL	Y	15:20:59	SAMPLE
6011103-PS1	WS-4R 5X	TB	159	TB 159 INT STD FOR SAMI	INT STD OUT OF CONTROL	Y	15:20:59	SAMPLE
6011103-PS1	WS-4R 5X	BI	209	BI 209 INT STD FOR SAMP	INT STD OUT OF CONTROL	Y	15:20:59	SAMPLE

1601025-01

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-01	WS-1 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:22:42	SAMPLE
1601025-01	WS-1 5X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		15:22:42	SAMPLE

1601025-02

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-02	WS-2 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:24:25	SAMPLE

1601025-05

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-05	WS-5 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:31:19	SAMPLE
1601025-05	WS-5 5X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		15:31:19	SAMPLE

1601025-06

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-06	WS-6 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:33:02	SAMPLE

1601025-07

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-07	WS-7 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:34:45	SAMPLE

1601025-08

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-08	WS-DUP 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:36:27	SAMPLE

1601025-09

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-09	WS-BG 5X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:38:10	SAMPLE
1601025-09	WS-BG 5X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		15:38:10	SAMPLE

6A14005-CRL5

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6A14005-CRL5	LLCCV	MN	55	QC STD 6	LLCCV IS OUT OF CONTROL		15:39:53	CCV

6011103-BS2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011103-BS2	MLCSUB 2X	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE
6011103-BS2	MLCSUB 2X	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		15:59:05	SAMPLE

1601025-01RE1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601025-01RE1	WS-1 10X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		16:02:30	SAMPLE

6011301-BLK1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011301-BLK1	PBSUE	LI	6	LI 6 INT STD FOR SAMPLE	INT STD OUT OF CONTROL	Y	16:33:38	PBS

6011301-BS1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011301-BS1	MLCSUE	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	CO	59	CO 59 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE
6011301-BS1	MLCSUE	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		16:35:21	SAMPLE

6011301-BS2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011301-BS2	MLCSUE 10X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		16:37:03	SAMPLE

6011301-BSD1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011301-BSD1	MLCSDUE	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	CO	59	CO 59 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE
6011301-BSD1	MLCSDUE	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		16:38:46	SAMPLE

6011301-BSD2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011301-BSD2	MLCSDUE 10X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		16:40:28	SAMPLE

6011202-BLK1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BLK1	PBSUC	LI	6	LI 6 INT STD FOR SAMPLE	INT STD OUT OF CONTROL	Y	17:37:11	PBS

6011202-BS1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BS1	MLCSUC	LI	6	LI 6 INT STD FOR SAMPLE	INT STD OUT OF CONTROL	Y	17:38:53	SAMPLE

6011202-BS2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BS2	MLCSUC 10X	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	CO	59	CO 59 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE
6011202-BS2	MLCSUC 10X	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		17:40:36	SAMPLE

6011202-BSD1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BSD1	MLCSDUC	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		17:42:19	SAMPLE

6011202-BSD2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BSD2	MLCSDUC 10X	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	CO	59	CO 59 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE
6011202-BSD2	MLCSDUC 10X	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		17:44:02	SAMPLE

6A14005-CRL9

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6A14005-CRL9	6A14005-CRL9	ZN	66	QC STD 6	LLCCV IS OUT OF CONTROL		17:50:12	CCV

6011202-BS1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BS1	MLCSUC	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	CO	59	CO 59 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE
6011202-BS1	MLCSUC	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		18:00:03	SAMPLE

6011202-BS2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BS2	MLCSUC 10X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		18:01:46	SAMPLE

6011202-BSD1

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BSD1	MLCSDUC	BE	9	BE 9 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	V	51	V 51 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	CR	52	CR 52 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	CO	59	CO 59 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	NI	60	NI 60 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	ZN	66	ZN 66 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	AS	75	AS 75 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	SE	82	SE 82 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	CD	111	CD 111 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	BA	137	BA 137 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	TL	205	TL 205 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE
6011202-BSD1	MLCSDUC	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		18:03:28	SAMPLE

6011202-BSD2

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
6011202-BSD2	MLCSDUC 10X	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		18:05:11	SAMPLE

1601024-03

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601024-03	BORING11A	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		18:12:02	SAMPLE

1601024-13

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601024-13	BORING33	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		18:32:36	SAMPLE
1601024-13	BORING33	PB	208	PB 208 UPPER, S, EEE	LDR EXCEEDED		18:32:36	SAMPLE

1601024-17

Sample ID	Client ID	Elem	Mass	Measurement Type	Out Of Limits Message	Int	Time	Type
1601024-17	BORING3	MN	55	MN 55 UPPER, S, EEE	LDR EXCEEDED		18:42:55	SAMPLE
1601024-17	BORING3	IN	115	IN 115 INT STD FOR SAMP	INT STD OUT OF CONTROL	Y	18:42:55	SAMPLE
1601024-17	BORING3	BI	209	BI 209 INT STD FOR SAMP	INT STD OUT OF CONTROL	Y	18:42:55	SAMPLE

Sample Summary

Sample ID: **TUN1** Client ID: Date/Time: 01/14/16 09:40:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
BERYLLIUM	9		3597.727	1.357				
Replicates				3624.657		3516.818		3587.643
MAGNESIUM	24		70852.942	1.037				
Replicates				70926.439		70236.596		70411.217
MAGNESIUM	25		13147.277	0.432				
Replicates				13117.798		13130.014		13133.218
MAGNESIUM	26		16217.661	0.714				
Replicates				16186.890		16233.966		16045.062
COBALT	59		245034.953	0.520				
Replicates				246139.198		246127.311		243619.818
INDIUM	113		18823.447	0.671				
Replicates				18883.842		18630.518		18936.391
INDIUM	115		445554.742	0.373				
Replicates				445657.968		443495.733		447886.793
LEAD	206		90193.808	0.490				
Replicates				90665.961		90324.492		90507.132
LEAD	207		75131.020	0.367				
Replicates				75348.404		75431.225		75107.401
LEAD	208		186989.168	0.505				
Replicates				187440.180		187981.194		187492.141

Sample ID: **6A14005-CAL1** Client ID: S0 Date/Time: 01/14/16 13:22:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
LITHIUM	6	Y	400117.897	14.828		0		PPB
Replicates			332232.061		442040.385		426081.246	
BERYLLIUM	9		1.667	100.000		0		PPB
Replicates			3.333		1.667		0.000	
SCANDIUM	45	Y	2088818.095	13.342		0		PPB
Replicates			1767355.044		2262580.359		2236518.881	
VANADIUM	51		3618.884	0.834		0		PPB
Replicates			3652.910		3608.479		3595.264	
CHROMIUM	52		10727.418	1.028		0		PPB
Replicates			10847.547		10704.059		10630.648	
MANGANESE	55		1230.631	5.184		0		PPB
Replicates			1279.248		1254.245		1158.400	
COBALT	59		97.778	33.849		0		PPB
Replicates			135.001		86.667		71.667	
NICKEL	60		62.963	21.763		0		PPB
Replicates			69.445		72.222		47.222	
COPPER	63		181.483	13.719		0		PPB
Replicates			197.224		152.779		194.446	

Sample ID: **6A14005-CAL1** Client ID: S0 Date/Time: 01/14/16 13:22:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
COPPER	65		88.889	17.399		0		PPB
Replicates			91.667		102.778		72.222	
ZINC	66		385.193	4.164		0		PPB
Replicates			394.452		366.673		394.452	
ARSENIC	75		-247.050	13.754		0		PPB
Replicates			-208.154		-270.964		-262.034	
SELENIUM	82		56.296	18.628		0		PPB
Replicates			67.778		47.222		53.889	
SILVER	107		739.843	13.757		0		PPB
Replicates			836.146		750.028		633.353	
SILVER	109		705.580	3.075		0		PPB
Replicates			730.582		694.469		691.691	
CADMIUM	111		5.633	38.663		0		PPB
Replicates			3.183		7.350		6.366	
INDIUM	113		177532.156	8.639		0		PPB
Replicates			159918.554		187928.586		184749.329	
INDIUM	115	Y	4069744.314	8.724		0		PPB
Replicates			3668775.168		4344221.003		4196236.773	
ANTIMONY	121		237.503	7.647		0		PPB
Replicates			216.669		245.836		250.003	
BARIUM	135		23.889	17.558		0		PPB
Replicates			23.333		20.000		28.333	
BARIUM	137		38.889	10.785		0		PPB
Replicates			43.333		35.000		38.333	
TERBIUM	159	Y	4757482.203	7.519		0		PPB
Replicates			4344424.459		4964011.075		4964011.075	
THALLIUM	205		111.112	34.027		0		PPB
Replicates			154.168		83.334		95.834	
LEAD	206		45.833	39.626		0		PPB
Replicates			66.667		33.333		37.500	
LEAD	207		86.111	21.819		0		PPB
Replicates			104.167		66.667		87.500	
LEAD	208		173.612	12.080		0		PPB
Replicates			170.834		154.167		195.835	
BISMUTH	209	Y	2453794.835	5.595		0		PPB
Replicates			2295979.093		2519713.685		2545691.728	
KRYPTON	83		46.111	5.521		0		MG/L
Replicates			48.333		43.333		46.667	

Sample ID: **6A14005-CAL2** Client ID: S 6020-MS1 Date/Time: 01/14/16 13:24:15

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
LITHIUM	6	Y	382845.007	16.018	382845.007	0		PPB
Replicates			313971.044		403031.278		431532.700	

Sample ID: **6A14005-CAL2** Client ID: S 6020-MS1 Date/Time: 01/14/16 13:24:15

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
BERYLLIUM	9		460.566	17.530	0.001	1.00000	7.51	PPB
Replicates			370.007	0.979562	525.014	1.083155	486.679	0.937283
SCANDIUM	45	Y	1936471.095	11.579	1936471.095	0		PPB
Replicates			1686931.523		2121025.767		2001455.997	
VANADIUM	51		91508.668	11.232	0.046	5.00000	1.54	PPB
Replicates			79748.911	5.000492	98773.205	4.922981	96003.887	5.076527
CHROMIUM	52		41987.909	9.253	0.017	2.00000	3.23	PPB
Replicates			37664.129	2.072703	45185.188	1.949297	43114.409	1.978000
MANGANESE	55		25663.732	11.455	0.013	1.00000	0.22	PPB
Replicates			22404.236	1.002115	28114.466	1.000068	26472.493	0.997817
COBALT	59		19842.085	12.276	0.010	1.00000	0.85	PPB
Replicates			17109.624	0.990374	21785.371	1.002999	20631.261	1.006627
NICKEL	60		4418.580	13.388	0.002	1.00000	2.01	PPB
Replicates			3772.934	0.981344	4934.551	1.021341	4548.256	0.997315
COPPER	63		19441.291	12.274	0.010	2.00000	0.98	PPB
Replicates			16752.910	1.979345	21308.790	2.002560	20262.174	2.018095
COPPER	65		9294.174	12.094	0.005	2.00000	0.56	PPB
Replicates			8042.121	1.987296	10216.327	2.008067	9624.073	2.004637
ZINC	66		5081.858	11.713	0.002	2.00000	1.79	PPB
Replicates			4453.769	2.012878	5637.700	2.027506	5154.106	1.959615
ARSENIC	75		2049.232	13.015	0.001	1.00000	1.67	PPB
Replicates			1746.874	0.981752	2251.083	1.003692	2149.738	1.014556
SELENIUM	82		1199.887	11.177	0.001	5.00000	0.79	PPB
Replicates			1048.388	5.013933	1303.418	4.955288	1247.856	5.030779
SILVER	107		14542.105	9.044	0.004	1.00000	5.63	PPB
Replicates			13030.707	0.984335	15169.831	0.953181	15425.777	1.062485
SILVER	109		13780.853	10.357	0.004	1.00000	6.67	PPB
Replicates			12149.042	0.968175	14396.467	0.955139	14797.051	1.076686
CADMIUM	111		2903.568	8.500	0.001	1.00000	1.35	PPB
Replicates			2676.820	1.013939	3166.458	0.999165	2867.427	0.986896
INDIUM	113		164396.471	9.278	0.001	0		PPB
Replicates			149221.778		179725.682		164241.952	
INDIUM	115	Y	3682746.268	9.106	3682746.268	0		PPB
Replicates			3347052.275		4017727.962		3683458.567	
ANTIMONY	121		18190.224	8.725	0.004	2.00000	3.81	PPB
Replicates			16388.418	1.955731	19381.263	1.956298	18800.991	2.087971
BARIUM	135		27000.460	8.351	0.006	10.00000	1.58	PPB
Replicates			24640.320	9.908788	29132.373	9.908989	27228.686	10.182222
BARIUM	137		46302.993	8.277	0.011	10.00000	1.83	PPB
Replicates			42233.998	9.903091	49843.912	9.885517	46831.068	10.211392
TERBIUM	159	Y	4399973.604	8.435	4399973.604	0		PPB
Replicates			4051944.213		4790536.646		4357439.953	
THALLIUM	205		24791.921	7.535	0.011	1.00000	4.92	PPB
Replicates			22650.624	0.988188	25636.987	0.957747	26088.152	1.054064

Sample ID: **6A14005-CAL2** Client ID: S 6020-MS1 Date/Time: 01/14/16 13:24:15

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
LEAD	206		8076.889	9.035	0.004	1.00000	1.33	PPB
Replicates			7348.532	0.985536	8808.044	1.011800	8074.092	1.002663
LEAD	207		14708.273	9.931	0.006	1.00000	2.75	PPB
Replicates			13146.046	0.968485	16039.825	1.012245	14938.947	1.019270
LEAD	208		23083.840	8.251	0.010	1.00000	2.58	PPB
Replicates			20946.479	0.982327	24601.019	0.988096	23704.021	1.029577
BISMUTH	209	Y	2287354.522	7.746	2287354.522	0		PPB
Replicates			2112880.838		2467131.622		2282051.106	
KRYPTON	83		47.222	10.189	1.111	0		MG/L
Replicates			50.000		50.000		41.667	

Sample ID: **6A14005-CAL3** Client ID: S 6020-MS2 Date/Time: 01/14/16 13:25:58

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
LITHIUM	6	Y	392131.162	15.490	392131.162	0		PPB
Replicates			322282.612		432569.413		421541.459	
BERYLLIUM	9		891.707	13.143	0.002	1.97902	4.31	PPB
Replicates			758.362	2.041581	938.377	1.881843	978.381	2.013650
SCANDIUM	45	Y	2014648.647	12.925	2014648.647	0		PPB
Replicates			1726658.270		2233461.389		2083826.283	
VANADIUM	51		181469.087	13.453	0.088	9.93763	2.26	PPB
Replicates			153497.839	9.809599	198490.695	9.806509	192418.728	10.196772
CHROMIUM	52		73500.063	10.729	0.031	3.95577	2.79	PPB
Replicates			64613.070	4.064671	79662.715	3.843964	76224.405	3.958686
MANGANESE	55		50056.443	10.522	0.024	1.98338	2.65	PPB
Replicates			44134.679	2.037225	54217.412	1.932336	51817.238	1.980578
COBALT	59		38777.381	11.644	0.019	1.97610	2.45	PPB
Replicates			33592.997	1.994983	41849.051	1.921161	40890.096	2.012159
NICKEL	60		8834.482	9.963	0.004	1.98818	3.31	PPB
Replicates			7833.623	2.051827	9487.832	1.920328	9181.991	1.992387
COPPER	63		38166.825	11.237	0.019	3.95792	2.97	PPB
Replicates			33227.333	4.013932	40944.764	3.822988	40328.377	4.036838
COPPER	65		18341.932	10.630	0.009	3.96279	3.97	PPB
Replicates			16090.713	4.046984	19452.234	3.781066	19482.849	4.060318
ZINC	66		9527.713	9.674	0.005	3.94443	3.62	PPB
Replicates			8511.954	4.105670	10310.869	3.834701	9760.316	3.892930
ARSENIC	75		4538.303	6.190	0.002	2.00582	6.98	PPB
Replicates			4214.079	2.151950	4709.687	1.872827	4691.143	1.992684
SELENIUM	82		2348.425	7.486	0.001	9.92860	6.02	PPB
Replicates			2146.897	10.551776	2470.305	9.360443	2428.073	9.873582
SILVER	107		29243.017	10.643	0.007	1.99682	6.01	PPB
Replicates			25652.304	1.908146	30908.805	1.948815	31167.941	2.133485
SILVER	109		27211.303	10.217	0.007	1.98958	5.33	PPB
Replicates			24000.990	1.911729	28833.174	1.946545	28799.745	2.110464

Sample ID: **6A14005-CAL3** Client ID: S 6020-MS2 Date/Time: 01/14/16 13:25:58

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
CADMIUM	111		5668.437	12.609	0.001	1.97556	8.06	PPB
Replicates			4849.513	1.844261	5989.333	1.929748	6166.464	2.152682
INDIUM	113		170620.726	9.208	0.001	0		PPB
Replicates			153477.126		184329.181		174055.870	
INDIUM	115	Y	3814060.030	8.275	3814060.030	0		PPB
Replicates			3499225.144		4130412.621		3812542.324	
ANTIMONY	121		36839.055	10.445	0.008	3.99524	3.17	PPB
Replicates			32636.504	3.861239	40188.929	4.011288	37691.733	4.113201
BARIUM	135		53256.537	8.364	0.012	19.85198	2.70	PPB
Replicates			48274.574	19.610323	56854.497	19.479667	54640.539	20.465937
BARIUM	137		93307.349	8.008	0.021	19.93887	1.18	PPB
Replicates			85505.671	19.911296	100398.139	19.718790	94018.237	20.186526
TERBIUM	159	Y	4503671.890	8.526	4503671.890	0		PPB
Replicates			4131559.743		4898491.571		4480964.356	
THALLIUM	205		48858.622	9.182	0.021	1.98378	4.98	PPB
Replicates			43678.516	1.919609	51486.369	1.934175	51410.982	2.097544
LEAD	206		15737.446	9.348	0.007	1.97967	2.64	PPB
Replicates			14134.983	1.925850	17026.984	1.983134	16050.370	2.030035
LEAD	207		29232.682	8.012	0.012	1.98830	1.47	PPB
Replicates			26734.582	1.968308	31378.942	1.974755	29584.523	2.021829
LEAD	208		46380.001	7.536	0.020	1.99271	0.52	PPB
Replicates			42874.525	1.993615	49864.905	1.981887	46400.574	2.002625
BISMUTH	209	Y	2348648.097	7.858	2348648.097	0		PPB
Replicates			2169792.575		2538440.829		2337710.889	
KRYPTON	83		50.000	16.667	3.889	0		MG/L
Replicates			58.334		50.000		41.667	

Sample ID: **6A14005-CAL4** Client ID: S 6020-MS3 Date/Time: 01/14/16 13:27:41

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
LITHIUM	6	Y	375647.478	11.802	375647.478	0		PPB
Replicates			327444.642		414681.729		384816.064	
BERYLLIUM	9		52796.207	10.875	0.141	124.99910	0.98	PPB
Replicates			46559.806	126.364468	57863.593	124.005789	53965.220	124.627042
SCANDIUM	45	Y	1975446.409	11.398	1975446.409	0		PPB
Replicates			1731242.033		2174823.064		2020274.131	
VANADIUM	51		2025481.665	10.463	1.024	124.91645	1.17	PPB
Replicates			1800121.683	126.582274	2220749.092	124.305724	2055574.219	123.861342
CHROMIUM	52		1859593.515	12.390	0.935	124.99020	1.04	PPB
Replicates			1611133.408	123.654469	2066190.008	126.250093	1901457.131	125.066037
MANGANESE	55		2802146.723	12.038	1.417	124.99675	1.16	PPB
Replicates			2427095.937	123.602388	3080765.934	124.891926	2898578.299	126.495948
COBALT	59		2240719.917	12.164	1.134	124.99709	0.84	PPB
Replicates			1943521.007	123.787422	2479016.310	125.690020	2299622.435	125.513821

Sample ID: **6A14005-CAL4** Client ID: S 6020-MS3 Date/Time: 01/14/16 13:27:41

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
NICKEL	60		515026.990	12.623	0.260	124.99783	1.32	PPB
Replicates			445693.399	123.544810	574623.517	126.796382	524764.054	124.652306
COPPER	63		1146473.952	11.949	0.580	124.99545	0.91	PPB
Replicates			1001904.610	124.689280	1274357.662	126.249231	1163159.583	124.047837
COPPER	65		559389.656	11.698	0.283	124.99804	0.73	PPB
Replicates			487089.079	124.226436	614554.219	124.767071	576525.671	126.000623
ZINC	66		283521.879	10.491	0.143	124.99887	1.91	PPB
Replicates			253292.742	127.315184	312754.350	125.136829	284518.546	122.544610
ARSENIC	75		289660.763	10.672	0.147	124.99951	0.76	PPB
Replicates			255945.551	125.957180	316665.604	124.055328	296371.134	124.986018
SELENIUM	82		28752.644	9.675	0.015	125.00943	1.96	PPB
Replicates			25802.690	127.833508	31328.441	123.544979	29126.801	123.649801
SILVER	107		1715007.413	10.385	0.455	124.99879	2.73	PPB
Replicates			1515507.526	122.516723	1857999.808	123.596822	1771514.906	128.882827
SILVER	109		1634097.942	10.346	0.433	124.99964	3.77	PPB
Replicates			1440564.744	122.197745	1753024.917	122.360587	1708704.165	130.440585
CADMIUM	111		359699.960	9.679	0.095	125.00066	0.45	PPB
Replicates			323643.749	124.709593	393127.635	124.649065	362328.496	125.643318
INDIUM	113		521006.233	9.762	0.095	0		PPB
Replicates			469877.509		571599.022		521542.168	
INDIUM	115	Y	3770068.966	9.709	3770068.966	0		PPB
Replicates			3400040.918		4132009.658		3778156.321	
ANTIMONY	121		1144417.508	10.121	0.253	124.99943	3.06	PPB
Replicates			1026169.039	121.222241	1257665.492	124.910812	1149417.994	128.865228
BARIUM	135		335154.836	11.151	0.074	124.98284	3.69	PPB
Replicates			297103.933	119.898199	371811.016	126.152806	336549.559	128.897515
BARIUM	137		579415.420	9.798	0.128	124.95022	2.30	PPB
Replicates			523548.891	122.095473	637044.940	124.905599	577652.429	127.849583
TERBIUM	159	Y	4516785.614	9.030	4516785.614	0		PPB
Replicates			4178219.060		4969610.193		4402527.588	
THALLIUM	205		2817968.884	8.611	1.237	124.99771	3.90	PPB
Replicates			2552399.946	122.690829	3028115.501	121.700921	2873391.207	130.601384
LEAD	206		978999.708	8.878	0.430	125.00074	2.07	PPB
Replicates			892669.785	123.572202	1066491.113	123.436999	977838.225	127.993020
LEAD	207		1795453.313	8.545	0.788	125.00039	2.31	PPB
Replicates			1640876.038	123.827334	1947690.790	122.890638	1797793.111	128.283207
LEAD	208		2775548.089	6.459	1.220	124.99952	3.86	PPB
Replicates			2583489.067	125.944189	2938494.340	119.771438	2804660.859	129.282926
BISMUTH	209	Y	2279668.916	9.290	2279668.916	0		PPB
Replicates			2101978.406		2514027.728		2223000.615	
KRYPTON	83		61.667	10.811	15.556	0		MG/L
Replicates			68.334		61.667		55.000	

Sample ID: **6A14005-CAL5** Client ID: S 6020-MS4 Date/Time: 01/14/16 13:29:23

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
LITHIUM	6	Y	373814.081	18.834	373814.081	0		PPB
Replicates			294603.225		397581.153		429257.864	
BERYLLIUM	9		105047.380	17.216	0.282	250.06118	2.44	PPB
Replicates			84303.865	254.063846	113331.921	253.080867	117506.355	243.038840
SCANDIUM	45	Y	1979680.575	14.838	1979680.575	0		PPB
Replicates			1641591.351		2125175.220		2172275.154	
VANADIUM	51		4013926.813	15.139	2.025	249.38227	1.25	PPB
Replicates			3312283.570	248.244743	4368663.909	252.917212	4360832.959	246.984853
CHROMIUM	52		3631206.620	15.098	1.829	248.85666	2.94	PPB
Replicates			3003657.521	248.237295	4017037.357	256.467252	3872924.983	241.865437
MANGANESE	55		5591871.266	15.434	2.822	249.78779	1.74	PPB
Replicates			4595867.874	247.721079	6119299.061	254.782709	6060446.863	246.859575
COBALT	59		4493981.462	15.390	2.269	250.03553	1.50	PPB
Replicates			3695494.170	248.093115	4905092.426	254.366504	4881357.791	247.646980
NICKEL	60		1011021.129	15.998	0.510	248.94056	1.78	PPB
Replicates			824252.850	245.055253	1105011.502	253.770751	1103799.036	247.995670
COPPER	63		2137807.797	15.149	1.079	246.31183	0.62	PPB
Replicates			1764216.454	245.214905	2310330.469	248.050333	2338876.467	245.670249
COPPER	65		1095377.045	15.760	0.553	248.79094	1.13	PPB
Replicates			896276.109	245.743851	1186546.661	251.302450	1203308.364	249.326524
ZINC	66		558488.286	14.060	0.282	249.16669	2.43	PPB
Replicates			468192.855	251.644075	610783.390	253.583859	596488.613	242.272122
ARSENIC	75		580168.114	13.056	0.294	250.01959	2.63	PPB
Replicates			492846.909	255.604050	628198.466	251.666584	619458.967	242.788152
SELENIUM	82		57513.071	12.381	0.029	250.01426	2.73	PPB
Replicates			49323.005	257.881380	60981.483	246.275035	62234.724	245.886360
SILVER	107		3311345.253	16.229	0.875	248.08851	5.72	PPB
Replicates			2701315.168	235.645243	3517890.378	245.076839	3714830.213	263.543445
SILVER	109		3111116.811	14.410	0.824	247.43378	4.09	PPB
Replicates			2601533.809	240.546162	3286942.445	242.713981	3444874.180	259.041184
CADMIUM	111		714245.789	11.680	0.190	249.66442	0.99	PPB
Replicates			619175.794	251.107302	775248.550	251.084111	748313.025	246.801847
INDIUM	113		865724.599	12.162	0.186	0		PPB
Replicates			745363.627		940759.246		911050.924	
INDIUM	115	Y	3769514.447	12.024	3769514.447	0		PPB
Replicates			3247875.991		4066928.560		3993738.788	
ANTIMONY	121		2172354.706	10.687	0.475	246.77726	2.69	PPB
Replicates			1911054.812	253.645272	2354915.986	246.268263	2251093.319	240.418246
BARIUM	135		666824.744	12.955	0.146	249.07498	1.03	PPB
Replicates			567075.403	248.017757	717339.610	247.199427	716059.219	252.007742
BARIUM	137		1156011.544	12.527	0.253	249.18814	0.17	PPB
Replicates			989541.436	249.666820	1252880.319	249.067539	1225612.876	248.830064
TERBIUM	159	Y	4577982.992	12.674	4577982.992	0		PPB
Replicates			3910689.270		4963323.464		4859936.241	

Sample ID: **6A14005-CAL5** Client ID: S 6020-MS4 Date/Time: 01/14/16 13:29:23

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
THALLIUM	205		5720496.598	13.481	2.498	250.47749	4.78	PPB
Replicates			4839528.264	240.914216	6048465.930	246.621178	6273495.599	263.897072
LEAD	206		1863590.463	9.515	0.816	247.37462	0.96	PPB
Replicates			1661192.327	250.058386	1991622.851	245.557933	1937956.210	246.507529
LEAD	207		3500142.147	10.084	1.532	248.56179	0.77	PPB
Replicates			3094165.169	249.280775	3734007.751	246.402967	3672253.520	250.001630
LEAD	208		5468113.640	10.348	2.392	249.01845	1.10	PPB
Replicates			4815486.566	248.832347	5821286.195	246.383162	5767568.160	251.839827
BISMUTH	209	Y	2285685.250	10.417	2285685.250	0		PPB
Replicates			2014237.305		2459150.416		2383668.030	
KRYPTON	83		58.889	8.646	12.778	0		MG/L
Replicates			60.000		63.334		53.333	

Sample ID: **6A14005-CAL6** Client ID: S 6020-MS5 Date/Time: 01/14/16 13:31:06

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
LITHIUM	6	Y	371505.777	16.256	371505.777	0		PPB
Replicates			301962.938		410773.623		401780.769	
BERYLLIUM	9		207001.543	13.846	0.559	499.12017	3.85	PPB
Replicates			175016.588	517.487803	230354.619	500.689886	215633.423	479.182809
SCANDIUM	45	Y	1972580.773	13.130	1972580.773	0		PPB
Replicates			1692870.977		2204124.027		2020747.314	
VANADIUM	51		8087672.851	12.148	4.102	501.21102	1.92	PPB
Replicates			6980052.924	503.580949	8854183.388	490.616441	8428782.243	509.435677
CHROMIUM	52		7212487.803	12.512	3.653	499.29203	0.66	PPB
Replicates			6239769.371	503.042117	8022576.138	496.740776	7375117.900	498.093201
MANGANESE	55		11093698.017	12.363	5.627	499.52669	1.15	PPB
Replicates			9574568.319	502.013602	12240905.28	492.943129	11465620.44	503.623326
COBALT	59		8966221.191	12.643	4.547	500.27508	1.28	PPB
Replicates			7702093.880	500.531650	9892494.405	493.760471	9304075.288	506.533128
NICKEL	60		1922436.027	12.358	0.975	494.06598	1.21	PPB
Replicates			1658799.308	496.407492	2119956.379	487.258009	1988552.395	498.532443
COPPER	63		4239511.549	12.861	2.150	497.70950	1.13	PPB
Replicates			3632952.159	496.857667	4688981.793	492.536636	4396600.696	503.734192
COPPER	65		2097958.940	12.374	1.064	494.84810	1.67	PPB
Replicates			1806409.661	496.135016	2304087.289	486.037783	2183379.871	502.371506
ZINC	66		1090687.875	11.269	0.554	497.29771	1.95	PPB
Replicates			957486.429	507.831815	1199712.332	488.704896	1114864.865	495.356413
ARSENIC	75		1142503.329	11.615	0.580	498.48561	1.98	PPB
Replicates			993901.484	504.597800	1249176.962	487.098681	1184431.541	503.760338
SELENIUM	82		115260.148	10.996	0.059	500.65968	3.31	PPB
Replicates			100747.178	508.865537	124145.856	481.591781	120887.409	511.521732
SILVER	107		6565435.444	10.761	1.706	495.95089	3.51	PPB
Replicates			5751842.269	488.475396	7024323.465	483.547638	6920140.597	515.829639

Sample ID: **6A14005-CAL6** Client ID: S 6020-MS5 Date/Time: 01/14/16 13:31:06

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
SILVER	109		6237035.137	10.217	1.621	496.81307	2.51	PPB
Replicates			5510754.615	493.389143	6702349.871	486.412198	6498000.924	510.637872
CADMIUM	111		1409009.481	10.193	0.366	495.67648	0.33	PPB
Replicates			1258118.197	497.525653	1544028.697	494.935849	1424881.551	494.567923
INDIUM	113		1548928.279	10.656	0.359	0		PPB
Replicates			1377937.212		1707316.632		1561530.994	
INDIUM	115	Y	3848576.996	10.456	3848576.996	0		PPB
Replicates			3422988.665		4222852.803		3899889.519	
ANTIMONY	121		4356874.578	9.429	0.928	495.56603	2.61	PPB
Replicates			3912484.876	499.110009	4722832.694	481.223298	4435306.163	506.364775
BARIUM	135		1332838.216	10.205	0.284	496.45446	2.64	PPB
Replicates			1183895.544	494.840634	1450477.729	484.243951	1364141.375	510.278801
BARIUM	137		2244947.811	10.775	0.478	492.87779	2.14	PPB
Replicates			1984264.406	489.091359	2462172.332	484.741460	2288406.695	504.800566
TERBIUM	159	Y	4699608.278	11.227	4699608.278	0		PPB
Replicates			4184407.559		5238809.896		4675607.381	
THALLIUM	205		11619589.837	10.808	5.151	503.83131	4.36	PPB
Replicates			10185727.43	485.890293	12524378.05	497.247692	12148664.02	528.355939
LEAD	206		3725799.111	9.896	1.652	500.20987	1.25	PPB
Replicates			3342067.826	493.539110	4077358.282	501.136008	3757971.226	505.954506
LEAD	207		6880799.812	10.159	3.050	498.80131	1.44	PPB
Replicates			6154009.663	490.784411	7548244.001	501.012964	6940145.772	504.606567
LEAD	208		10896355.709	10.393	4.830	500.64301	1.93	PPB
Replicates			9696121.260	490.166785	11945955.95	502.617094	11046989.91	509.145162
BISMUTH	209	Y	2254369.015	9.167	2254369.015	0		PPB
Replicates			2050439.638		2463636.584		2249030.822	
KRYPTON	83		87.223	16.251	41.111	0		MG/L
Replicates			76.667		81.667		103.334	

Sample ID: **6A14005-CRL1** Client ID: LLICV Date/Time: 01/14/16 13:34:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	385231.962	17.081	385231.962	0		PPB
Replicates			312822.545		441368.321		401505.019	
QC Calculated Values				96.280				
BERYLLIUM	9		443.343	14.132	0.001	1.02797	4.19	PPB
Replicates			378.340	1.076128	503.346	1.014504	448.343	0.993286
QC Calculated Values			102.797					
SCANDIUM	45	Y	2019432.478	13.222	2019432.478	0		PPB
Replicates			1725212.720		2246346.534		2086738.180	
QC Calculated Values				96.678				

Sample ID: **6A14005-CRL1** Client ID: LLICV Date/Time: 01/14/16 13:34:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
VANADIUM	51		94886.241	13.219	0.045	5.52946	1.74	PPB
Replicates			80611.910	5.497492	104146.992	5.453145	99899.823	5.637747
QC Calculated Values			110.589					
CHROMIUM	52		43438.113	10.126	0.016	2.24639	4.31	PPB
Replicates			38575.929	2.354024	47140.852	2.166169	44597.559	2.218969
QC Calculated Values			112.319					
MANGANESE	55		26988.073	11.419	0.013	1.13614	2.92	PPB
Replicates			23452.469	1.154434	29104.793	1.097848	28406.957	1.156133
QC Calculated Values			113.614					
COBALT	59		21016.159	11.939	0.010	1.14113	1.60	PPB
Replicates			18189.862	1.154796	22981.377	1.120363	21877.238	1.148239
QC Calculated Values			114.113					
NICKEL	60		4752.990	10.792	0.002	1.17988	3.00	PPB
Replicates			4167.535	1.208551	5123.534	1.140241	4967.900	1.190838
QC Calculated Values			117.988					
COPPER	63		20565.742	11.058	0.010	2.34257	2.31	PPB
Replicates			18044.042	2.401498	22461.308	2.294996	21191.875	2.331222
QC Calculated Values			117.129					
COPPER	65		9874.362	11.721	0.005	2.25693	1.68	PPB
Replicates			8578.678	2.292292	10805.835	2.216906	10238.572	2.261586
QC Calculated Values			112.846					
ZINC	66		5262.503	9.069	0.002	2.18410	4.90	PPB
Replicates			4717.779	2.290483	5607.127	2.076274	5462.603	2.185545
QC Calculated Values			109.205					
ARSENIC	75		2229.460	10.833	0.001	1.05323	4.70	PPB
Replicates			2009.768	1.102648	2488.066	1.053382	2190.544	1.003663
QC Calculated Values			105.323					
SELENIUM	82		1256.005	8.859	0.001	5.11171	4.83	PPB
Replicates			1132.286	5.383860	1347.869	4.902332	1287.861	5.048933
QC Calculated Values			102.234					
SILVER	107		17741.778	11.053	0.004	1.25780	5.03	PPB
Replicates			15481.419	1.222024	18987.454	1.220498	18756.463	1.330884
QC Calculated Values			125.780					
SILVER	109		16699.241	11.582	0.004	1.24723	5.92	PPB
Replicates			14466.011	1.202743	17815.856	1.206455	17815.856	1.332505
QC Calculated Values			124.723					
CADMIUM	111		3211.648	9.018	0.001	1.10404	3.62	PPB
Replicates			2880.301	1.102480	3416.541	1.064920	3338.101	1.144733
QC Calculated Values			110.404					
INDIUM	113		174493.057	10.167	0.001	0		PPB
Replicates			156735.415		192217.288		174526.466	

Sample ID: **6A14005-CRL1** Client ID: LLICV Date/Time: 01/14/16 13:34:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	115	Y	3935483.956	10.225	3935483.956	0		PPB
Replicates			3530457.555		4335180.244		3940814.068	
QC Calculated Values				96.701				
ANTIMONY	121		20295.723	10.393	0.004	2.26722	3.86	PPB
Replicates			17920.209	2.190259	21949.062	2.249036	21017.898	2.362357
QC Calculated Values			113.361					
BARIUM	135		28422.285	10.292	0.006	10.51383	1.71	PPB
Replicates			25449.008	10.306199	31297.233	10.622731	28520.613	10.612572
QC Calculated Values			105.138					
BARIUM	137		48623.094	9.630	0.010	10.61154	1.56	PPB
Replicates			43723.713	10.442449	53053.696	10.619361	49091.872	10.772814
QC Calculated Values			106.115					
TERBIUM	159	Y	4720138.378	8.841	4720138.378	0		PPB
Replicates			4315151.877		5148781.971		4696481.286	
QC Calculated Values				99.215				
THALLIUM	205		27301.292	8.659	0.011	1.10097	2.59	PPB
Replicates			24759.781	1.086960	29434.924	1.082173	27709.170	1.133779
QC Calculated Values			110.097					
LEAD	206		8637.085	9.759	0.004	1.07612	1.91	PPB
Replicates			7778.024	1.055705	9462.808	1.075750	8670.424	1.096898
QC Calculated Values			107.612					
LEAD	207		16144.094	10.622	0.007	1.08567	2.51	PPB
Replicates			14396.880	1.055196	17824.636	1.094320	16210.766	1.107503
QC Calculated Values			108.567					
LEAD	208		25798.767	7.819	0.011	1.10002	1.19	PPB
Replicates			23908.791	1.109510	27922.607	1.085026	25564.905	1.105537
QC Calculated Values			110.002					
BISMUTH	209	Y	2416636.149	8.999	2416636.149	0		PPB
Replicates			2219036.094		2649656.065		2381216.287	
QC Calculated Values				98.486				
KRYPTON	83		50.000	17.638	3.889	0		MG/L
Replicates			60.000		46.667		43.333	

Sample ID: **6A14005-ICV1** Client ID: ICV Date/Time: 01/14/16 13:36:14

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	388132.756	13.244	388132.756	0		PPB
Replicates			330339.211		428755.312		405303.747	
QC Calculated Values				97.005				

Sample ID: **6A14005-ICV1** Client ID: ICV Date/Time: 01/14/16 13:36:14

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
BERYLLIUM	9		46621.574	14.350	0.120	107.14657	1.77	PPB
Replicates			39340.565	106.326850	52497.438	109.317953	48026.719	105.794892
QC Calculated Values			97.406					
SCANDIUM	45	Y	2069967.101	13.025	2069967.101	0		PPB
Replicates			1765218.138		2277503.831		2167179.334	
QC Calculated Values				99.098				
VANADIUM	51		1854704.168	11.705	0.895	109.41431	1.99	PPB
Replicates			1616164.082	111.655839	2040713.179	109.269580	1907235.242	107.317503
QC Calculated Values			99.468					
CHROMIUM	52		1685584.702	12.761	0.809	110.62670	1.28	PPB
Replicates			1448683.399	111.458720	1868660.651	111.431921	1739410.054	108.989461
QC Calculated Values			100.570					
MANGANESE	55		2495971.910	12.431	1.206	107.05475	1.24	PPB
Replicates			2152504.485	108.193504	2756003.472	107.367918	2579407.773	105.602818
QC Calculated Values			97.322					
COBALT	59		2057871.077	10.462	0.997	109.65730	3.63	PPB
Replicates			1828455.083	113.950793	2255494.687	108.946486	2089663.460	106.074618
QC Calculated Values			99.688					
NICKEL	60		465816.653	11.851	0.225	114.12830	1.76	PPB
Replicates			404918.606	116.196750	512569.219	114.003172	479962.135	112.184980
QC Calculated Values			103.753					
COPPER	63		1028713.541	11.892	0.497	115.17334	1.48	PPB
Replicates			892480.332	117.041369	1129159.913	114.771480	1064500.378	113.707184
QC Calculated Values			104.703					
COPPER	65		503148.851	11.737	0.243	113.14365	1.66	PPB
Replicates			437475.518	115.214093	551880.797	112.650910	520090.237	111.565944
QC Calculated Values			102.858					
ZINC	66		497367.073	11.336	0.241	216.03015	2.76	PPB
Replicates			436674.976	222.018322	548109.403	215.987187	507316.840	210.084945
QC Calculated Values			98.196					
ARSENIC	75		520159.403	10.365	0.252	216.58421	3.08	PPB
Replicates			460485.752	224.260645	565352.387	213.405388	534640.072	212.086590
QC Calculated Values			98.447					
SELENIUM	82		51330.797	8.882	0.025	212.73445	4.57	PPB
Replicates			46261.761	223.958553	55096.922	206.716360	52633.707	207.528444
QC Calculated Values			96.697					
SILVER	107		1557559.963	10.559	0.385	111.78873	4.50	PPB
Replicates			1372249.826	109.431505	1686178.706	108.365095	1614251.357	117.569593
QC Calculated Values			101.626					

Sample ID: **6A14005-ICV1** Client ID: ICV Date/Time: 01/14/16 13:36:14

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	109		1481179.683	10.527	0.366	112.07151	4.34	PPB
Replicates			1306105.708	109.806911	1605083.676	108.749100	1532349.664	117.658524
QC Calculated Values			101.883					
CADMIUM	111		324876.597	9.572	0.080	108.65044	2.82	PPB
Replicates			291646.937	108.338234	353279.572	105.759981	329703.282	111.853092
QC Calculated Values			98.773					
INDIUM	113		494131.003	9.320	0.078	0		PPB
Replicates			449248.692		541271.051		491873.265	
INDIUM	115	Y	4051824.384	10.911	4051824.384	0		PPB
Replicates			3643923.802		4521583.933		3989965.416	
QC Calculated Values				99.560				
ANTIMONY	121		1961116.577	6.387	0.398	212.57151	3.59	PPB
Replicates			1843192.273	214.538205	2092612.687	204.155116	1947544.772	219.021203
QC Calculated Values			96.623					
BARIUM	135		304429.785	9.373	0.062	107.95790	4.11	PPB
Replicates			274806.416	104.802418	331734.271	106.041376	306748.669	113.029908
QC Calculated Values			98.144					
BARIUM	137		530423.336	9.192	0.108	110.90669	2.62	PPB
Replicates			484182.925	108.891738	581352.900	109.588674	525734.182	114.239647
QC Calculated Values			100.824					
TERBIUM	159	Y	4934361.944	9.559	4934361.944	0		PPB
Replicates			4585775.916		5471075.065		4746234.852	
QC Calculated Values				103.718				
THALLIUM	205		5286107.313	8.849	2.170	212.21846	2.38	PPB
Replicates			4773525.158	207.640592	5689908.513	211.385067	5394888.267	217.629710
QC Calculated Values			96.463					
LEAD	206		1717448.487	7.917	0.705	213.53130	0.65	PPB
Replicates			1578959.436	212.619399	1850739.420	212.849687	1722646.606	215.124811
QC Calculated Values			97.060					
LEAD	207		3236827.050	8.153	1.329	217.30436	0.52	PPB
Replicates			2972208.127	216.141183	3500027.271	217.383019	3238245.751	218.388865
QC Calculated Values			98.775					
LEAD	208		5009968.065	8.122	2.057	213.21156	1.17	PPB
Replicates			4583141.236	211.267493	5393443.783	212.339839	5053319.176	216.027361
QC Calculated Values			96.914					
BISMUTH	209	Y	2435363.292	7.897	2435363.292	0		PPB
Replicates			2248613.505		2632806.853		2424669.519	
QC Calculated Values				99.249				
KRYPTON	83		53.333	5.413	7.222	0		MG/L
Replicates			56.667		51.667		51.667	

Sample ID: **6A14005-ICB1** Client ID: ICB Date/Time: 01/14/16 13:37:57

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	367135.369	14.906	367135.369	0		PPB
Replicates			304810.743		407330.313		389265.052	
QC Calculated Values				91.757				
BERYLLIUM	9		16.111	36.330	0.000	0.03726	55.36	PPB
Replicates			21.667	0.059747	16.667	0.032813	10.000	0.019218
SCANDIUM	45	Y	2010182.229	14.303	2010182.229	0		PPB
Replicates			1723669.046		2298687.882		2008189.759	
QC Calculated Values				96.235				
VANADIUM	51		4144.852	5.224	0.000	0.04449	105.44	PPB
Replicates			4362.318	0.097544	4142.979	0.008531	3929.258	0.027383
CHROMIUM	52		10949.327	2.638	0.000	0.05418	230.15	PPB
Replicates			11258.000	0.190757	10904.275	-0.053566	10685.706	0.025341
MANGANESE	55		1745.987	9.394	0.000	0.02646	69.51	PPB
Replicates			1933.520	0.047278	1675.140	0.012391	1629.299	0.019722
COBALT	59		575.017	25.148	0.000	0.02737	46.23	PPB
Replicates			738.361	0.041977	523.347	0.019897	463.344	0.020234
NICKEL	60		171.298	17.491	0.000	0.02911	47.96	PPB
Replicates			205.558	0.045146	158.335	0.019625	150.001	0.022571
COPPER	63		407.416	16.053	0.000	0.02791	48.97	PPB
Replicates			475.011	0.043690	402.786	0.020454	344.450	0.019597
COPPER	65		195.372	9.467	0.000	0.02571	16.10	PPB
Replicates			186.113	0.030418	216.669	0.024040	183.335	0.022662
ZINC	66		484.271	13.627	0.000	0.05422	89.90	PPB
Replicates			527.792	0.109392	516.680	0.036254	408.342	0.017003
ARSENIC	75		-114.326	39.193	0.000	0.05392	25.05	PPB
Replicates			-64.521	0.069465	-151.368	0.045046	-127.088	0.047251
SELENIUM	82		78.519	3.897	0.000	0.10757	39.58	PPB
Replicates			75.556	0.144424	78.334	0.060961	81.667	0.117329
SILVER	107		1682.550	10.412	0.000	0.07053	23.74	PPB
Replicates			1794.605	0.089497	1772.379	0.064261	1480.665	0.057824
SILVER	109		1727.928	10.191	0.000	0.08007	15.60	PPB
Replicates			1750.153	0.093215	1891.846	0.078650	1541.786	0.068357
CADMIUM	111		72.753	38.452	0.000	0.02296	43.84	PPB
Replicates			92.579	0.032317	84.925	0.024254	40.754	0.012310
INDIUM	113		169642.766	11.218	-0.001	0		PPB
Replicates			151746.852		189635.356		167546.091	
INDIUM	115	Y	3984861.029	9.448	3984861.029	0		PPB
Replicates			3665236.962		4399856.230		3889489.895	
QC Calculated Values				97.914				
ANTIMONY	121		3169.961	20.422	0.001	0.33704	24.60	PPB
Replicates			3704.853	0.424120	3354.729	0.327948	2450.300	0.259056
BARIUM	135		85.556	17.569	0.000	0.02319	19.54	PPB
Replicates			86.667	0.025766	100.001	0.025849	70.000	0.017960

Sample ID: **6A14005-ICB1** Client ID: ICB Date/Time: 01/14/16 13:37:57

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		148.890	31.589	0.000	0.02451	43.91	PPB
Replicates			181.668	0.034275	170.001	0.026288	95.000	0.012971
TERBIUM	159	Y	4672038.352	7.304	4672038.352	0		PPB
Replicates			4387498.376		5050355.370		4578261.310	
QC Calculated Values				98.204				
THALLIUM	205		1272.308	29.083	0.000	0.04773	36.68	PPB
Replicates			1658.471	0.067520	1237.577	0.041435	920.876	0.034247
LEAD	206		433.343	22.673	0.000	0.04909	27.90	PPB
Replicates			516.680	0.063734	458.344	0.046928	325.005	0.036600
LEAD	207		786.127	25.256	0.000	0.04783	30.13	PPB
Replicates			941.689	0.062560	854.185	0.047184	562.508	0.033757
LEAD	208		1279.219	28.345	0.000	0.04816	37.07	PPB
Replicates			1637.583	0.067953	1287.548	0.043233	912.526	0.033281
BISMUTH	209	Y	2407646.424	8.475	2407646.424	0		PPB
Replicates			2254664.615		2639327.446		2328947.212	
QC Calculated Values				98.119				
KRYPTON	83		45.000	20.621	-1.111	0		MG/L
Replicates			43.333		55.000		36.667	

Sample ID: **6A14005-IFA1** Client ID: ICSA Date/Time: 01/14/16 13:39:41

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	384163.098	15.892	384163.098	0		PPB
Replicates			314211.763		426726.226		411551.305	
QC Calculated Values				96.012				
BERYLLIUM	9		6.111	15.746	0.000	0.01090	38.92	PPB
Replicates			6.667	0.015225	5.000	0.006743	6.667	0.010744
SCANDIUM	45	Y	2086180.635	14.552	2086180.635	0		PPB
Replicates			1762390.961		2364387.558		2131763.387	
QC Calculated Values				99.874				
VANADIUM	51		3413.267	5.065	-0.000	-0.00952	258.91	PPB
Replicates			3326.062	0.018907	3612.369	-0.025009	3301.372	-0.022463
CHROMIUM	52		11864.258	1.758	0.001	0.08622	131.71	PPB
Replicates			11811.972	0.214104	12093.975	-0.002813	11686.825	0.047368
MANGANESE	55		4630.266	19.591	0.002	0.14415	14.58	PPB
Replicates			3596.480	0.128852	5001.250	0.135471	5293.067	0.168112
COBALT	59		391.674	1.534	0.000	0.01584	21.94	PPB
Replicates			396.675	0.019612	385.007	0.012765	393.341	0.015149
NICKEL	60		500.939	8.489	0.000	0.10714	7.42	PPB
Replicates			452.788	0.114888	533.348	0.099010	516.680	0.107519
COPPER	63		980.604	2.249	0.000	0.09034	18.97	PPB
Replicates			988.938	0.109805	997.272	0.077542	955.601	0.083673

Sample ID: **6A14005-IFA1** Client ID: ICSA Date/Time: 01/14/16 13:39:41

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
COPPER	65		370.377	11.651	0.000	0.06301	4.32	PPB
Replicates			322.227	0.065226	405.564	0.059970	383.341	0.063826
ZINC	66		587.980	11.003	0.000	0.09222	61.72	PPB
Replicates			633.353	0.157146	616.686	0.068633	513.902	0.050891
ARSENIC	75		-190.811	6.879	0.000	0.02137	80.42	PPB
Replicates			-201.535	0.003368	-176.174	0.037604	-194.725	0.023139
SELENIUM	82		72.593	2.688	0.000	0.07073	52.91	PPB
Replicates			70.556	0.111916	74.445	0.038790	72.778	0.061493
SILVER	107		1011.162	3.059	0.000	0.02243	46.94	PPB
Replicates			1044.499	0.033519	983.382	0.012563	1005.606	0.021218
SILVER	109		1003.754	8.277	0.000	0.02567	51.13	PPB
Replicates			1077.836	0.040824	1019.496	0.018358	913.931	0.017831
CADMIUM	111		61.223	91.287	0.000	0.02011	97.10	PPB
Replicates			71.077	0.025492	1.063	-0.001544	111.529	0.036375
INDIUM	113		169970.457	9.773	-0.000	0		PPB
Replicates			154835.323		187741.793		167334.254	
INDIUM	115	Y	3944456.760	10.834	3944456.760	0		PPB
Replicates			3515821.073		4370507.411		3947041.794	
QC Calculated Values				96.921				
ANTIMONY	121		1222.297	2.735	0.000	0.11068	8.06	PPB
Replicates			1187.571	0.119128	1254.245	0.101353	1225.075	0.111570
BARIUM	135		55.000	28.907	0.000	0.01119	36.44	PPB
Replicates			46.667	0.009986	73.334	0.015738	45.000	0.007852
BARIUM	137		110.001	19.871	0.000	0.01537	27.96	PPB
Replicates			113.334	0.018449	130.001	0.017203	86.667	0.010462
TERBIUM	159	Y	4770333.980	9.271	4770333.980	0		PPB
Replicates			4348795.700		5230755.024		4731451.216	
QC Calculated Values				100.270				
THALLIUM	205		523.625	6.383	0.000	0.01738	15.29	PPB
Replicates			558.349	0.020446	520.847	0.015662	491.679	0.016046
LEAD	206		300.005	13.249	0.000	0.03299	17.81	PPB
Replicates			279.171	0.032847	275.004	0.027183	345.839	0.038927
LEAD	207		536.118	14.126	0.000	0.03160	20.05	PPB
Replicates			512.507	0.032434	475.006	0.024893	620.843	0.037484
LEAD	208		843.077	8.707	0.000	0.02997	19.69	PPB
Replicates			925.027	0.036340	783.352	0.024688	820.852	0.028891
BISMUTH	209	Y	2360054.788	7.221	2360054.788	0		PPB
Replicates			2195509.794		2535780.427		2348874.145	
QC Calculated Values				96.180				
KRYPTON	83		55.556	18.083	9.444	0		MG/L
Replicates			65.000		45.000		56.667	

Sample ID: **6A14005-IFB1** Client ID: ICSAB Date/Time: 01/14/16 13:41:23

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	372284.986	20.667	372284.986	0		PPB
Replicates			291737.695		380093.845		445023.417	
QC Calculated Values				93.044				
BERYLLIUM	9		2.778	69.282	0.000	0.00380	177.45	PPB
Replicates			5.000	0.011583	1.667	0.000196	1.667	-0.000375
SCANDIUM	45	Y	2067300.675	14.360	2067300.675	0		PPB
Replicates			1729810.629		2184068.337		2288023.059	
QC Calculated Values				98.970				
VANADIUM	51		897128.916	13.984	0.432	52.83366	0.55	PPB
Replicates			755173.417	53.129798	943094.442	52.548452	993118.889	52.822732
QC Calculated Values			105.667					
CHROMIUM	52		793426.339	14.339	0.379	51.75170	0.15	PPB
Replicates			663839.624	51.746231	839523.685	51.831092	876915.707	51.677782
QC Calculated Values			103.503					
MANGANESE	55		1203393.687	15.211	0.581	51.57689	1.01	PPB
Replicates			996718.607	51.096965	1268360.854	51.499282	1345101.599	52.134430
QC Calculated Values			103.154					
COBALT	59		963949.207	15.190	0.466	51.24804	0.93	PPB
Replicates			797212.619	50.697034	1023016.787	51.525735	1071618.216	51.521363
QC Calculated Values			102.496					
NICKEL	60		212561.720	14.126	0.103	52.09776	1.66	PPB
Replicates			179403.303	52.527573	220365.475	51.100984	237916.383	52.664715
QC Calculated Values			104.196					
COPPER	63		470265.855	13.240	0.228	52.71012	1.23	PPB
Replicates			399255.937	53.419900	496020.783	52.563132	515520.846	52.147332
QC Calculated Values			105.420					
COPPER	65		226272.305	14.259	0.109	50.87743	0.70	PPB
Replicates			189299.923	50.863680	240783.802	51.241070	248733.189	50.527535
QC Calculated Values			101.755					
ZINC	66		57449.625	12.634	0.028	24.83978	2.32	PPB
Replicates			49084.056	25.319960	61192.209	24.998546	62072.610	24.200829
QC Calculated Values			99.359					
ARSENIC	75		59074.692	12.682	0.029	24.69951	1.82	PPB
Replicates			50544.255	25.209602	62092.958	24.531127	64586.864	24.357799
QC Calculated Values			98.798					
SELENIUM	82		5824.673	11.317	0.003	23.94985	3.66	PPB
Replicates			5064.060	24.812714	6180.243	23.975837	6229.718	23.061013
QC Calculated Values			95.799					
SILVER	107		174477.506	11.046	0.044	12.88084	2.06	PPB
Replicates			152602.786	13.085075	181872.306	12.977370	188957.425	12.580079
QC Calculated Values			103.047					

Sample ID: **6A14005-IFB1** Client ID: ICSAB Date/Time: 01/14/16 13:41:23

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	109		164683.477	11.499	0.042	12.81138	1.28	PPB
Replicates			143615.586	12.981786	170146.390	12.798265	180288.455	12.654084
QC Calculated Values			102.491					
CADMIUM	111		72087.230	10.814	0.018	24.88333	1.99	PPB
Replicates			63437.271	25.426689	74253.710	24.767576	78570.710	24.455723
QC Calculated Values			99.533					
INDIUM	113		239386.377	12.144	0.017	0		PPB
Replicates			207101.744		247568.710		263488.676	
INDIUM	115	Y	3927814.705	12.697	3927814.705	0		PPB
Replicates			3376943.602		4057914.810		4348585.703	
QC Calculated Values				96.513				
ANTIMONY	121		854.203	7.036	0.000	0.06893	4.43	PPB
Replicates			787.531	0.072444	870.871	0.067392	904.208	0.066948
BARIUM	135		61.111	15.021	0.000	0.01359	18.90	PPB
Replicates			56.667	0.014579	55.000	0.010677	71.667	0.015523
BARIUM	137		83.334	12.490	0.000	0.00952	4.94	PPB
Replicates			71.667	0.008992	86.667	0.009651	91.667	0.009902
TERBIUM	159	Y	4781024.694	10.007	4781024.694	0		PPB
Replicates			4242510.688		4943480.976		5157082.418	
QC Calculated Values				100.495				
THALLIUM	205		395.841	21.752	0.000	0.01213	33.40	PPB
Replicates			420.842	0.015417	300.005	0.007604	466.678	0.013370
LEAD	206		218.058	14.594	0.000	0.02268	26.06	PPB
Replicates			225.003	0.027191	245.836	0.024870	183.335	0.015991
LEAD	207		419.449	3.489	0.000	0.02351	10.72	PPB
Replicates			404.171	0.026126	433.338	0.023320	420.838	0.021096
LEAD	208		715.293	13.839	0.000	0.02415	13.84	PPB
Replicates			666.680	0.025983	650.012	0.020297	829.187	0.026181
BISMUTH	209	Y	2359081.047	10.794	2359081.047	0		PPB
Replicates			2074174.597		2438545.342		2564523.201	
QC Calculated Values				96.140				
KRYPTON	83		48.333	19.199	2.222	0		MG/L
Replicates			58.334		46.667		40.000	

Sample ID: **6A14005-CRL2** Client ID: LLCCV Date/Time: 01/14/16 13:43:07

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	382219.208	15.983	382219.208	0		PPB
Replicates			312005.953		423190.635		411461.035	
QC Calculated Values				95.527				

Sample ID: **6A14005-CRL2** Client ID: LLCCV Date/Time: 01/14/16 13:43:07

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BERYLLIUM	9		423.342	12.394	0.001	0.98971	4.78	PPB
Replicates			365.007	1.040798	466.678	0.980878	438.343	0.947461
QC Calculated Values			98.971					
SCANDIUM	45	Y	2023301.313	13.148	2023301.313	0		PPB
Replicates			1735581.668		2260360.038		2073962.232	
QC Calculated Values				96.863				
VANADIUM	51		94575.506	13.350	0.045	5.49941	3.10	PPB
Replicates			80109.009	5.427979	103376.476	5.376375	100241.033	5.693882
QC Calculated Values			109.988					
CHROMIUM	52		42549.401	11.087	0.016	2.17783	3.10	PPB
Replicates			37558.734	2.255668	46934.886	2.135935	43154.582	2.141874
QC Calculated Values			108.891					
MANGANESE	55		26321.141	13.759	0.012	1.10202	3.22	PPB
Replicates			22174.558	1.081864	28862.425	1.081199	27926.440	1.143010
QC Calculated Values			110.202					
COBALT	59		20132.755	14.590	0.010	1.08818	3.15	PPB
Replicates			16787.412	1.058968	22289.814	1.079726	21321.038	1.125840
QC Calculated Values			108.818					
NICKEL	60		4661.283	12.865	0.002	1.15216	0.86	PPB
Replicates			3998.021	1.151758	5165.223	1.142421	4820.606	1.162288
QC Calculated Values			115.216					
COPPER	63		19954.446	15.007	0.010	2.25986	4.05	PPB
Replicates			16519.188	2.183609	22013.091	2.234731	21331.060	2.361245
QC Calculated Values			112.993					
COPPER	65		9736.259	11.297	0.005	2.22147	2.16	PPB
Replicates			8509.174	2.259858	10633.428	2.167574	10066.175	2.236989
QC Calculated Values			111.074					
ZINC	66		5156.892	9.230	0.002	2.13301	5.90	PPB
Replicates			4717.779	2.275809	5662.714	2.084463	5090.184	2.038748
QC Calculated Values			106.650					
ARSENIC	75		2195.853	14.625	0.001	1.03455	6.97	PPB
Replicates			1834.269	1.009778	2305.425	0.978049	2447.864	1.115833
QC Calculated Values			103.455					
SELENIUM	82		1235.632	8.964	0.001	5.01616	6.02	PPB
Replicates			1107.839	5.229821	1295.084	4.670744	1303.974	5.147917
QC Calculated Values			100.323					
SILVER	107		15283.965	9.635	0.004	1.10076	3.52	PPB
Replicates			13587.002	1.081101	16227.044	1.075722	16037.850	1.145445
QC Calculated Values			110.076					

Sample ID: **6A14005-CRL2** Client ID: LLCCV Date/Time: 01/14/16 13:43:07

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
SILVER	109		14399.341	11.581	0.004	1.09305	8.41	PPB
Replicates			12594.037	1.054961	14721.940	1.026301	15882.046	1.197890
QC Calculated Values			109.305					
CADMIUM	111		3083.447	6.838	0.001	1.08340	2.73	PPB
Replicates			2880.602	1.117481	3301.498	1.067217	3068.240	1.065510
QC Calculated Values			108.340					
INDIUM	113		171474.260	10.047	0.001	0		PPB
Replicates			154412.189		188862.604		171147.988	
INDIUM	115	Y	3851597.713	9.088	3851597.713	0		PPB
Replicates			3483508.616		4180205.450		3891079.074	
QC Calculated Values				94.640				
ANTIMONY	121		18858.130	8.626	0.004	2.17950	3.34	PPB
Replicates			16985.246	2.201903	19919.820	2.098215	19669.325	2.238373
QC Calculated Values			108.975					
BARIUM	135		27708.624	10.648	0.006	10.59414	0.39	PPB
Replicates			24553.440	10.546172	30399.470	10.615627	28172.963	10.620610
QC Calculated Values			105.941					
BARIUM	137		47774.572	9.786	0.010	10.77974	2.11	PPB
Replicates			42469.994	10.757820	51296.229	10.563699	49557.494	11.017709
QC Calculated Values			107.797					
TERBIUM	159	Y	4569600.686	10.316	4569600.686	0		PPB
Replicates			4068643.337		5004432.779		4635725.943	
QC Calculated Values				96.051				
THALLIUM	205		24928.405	8.527	0.010	1.01518	2.46	PPB
Replicates			22546.221	0.999870	26631.247	1.001711	25607.746	1.043945
QC Calculated Values			101.518					
LEAD	206		8357.692	12.179	0.003	1.05048	5.06	PPB
Replicates			7223.441	0.990425	9191.722	1.069385	8657.913	1.091629
QC Calculated Values			105.048					
LEAD	207		15208.661	10.548	0.006	1.03306	3.60	PPB
Replicates			13421.195	0.993728	16523.576	1.037920	15681.212	1.067539
QC Calculated Values			103.306					
LEAD	208		24007.400	8.037	0.010	1.03354	2.30	PPB
Replicates			21847.489	1.023986	25560.953	1.016068	24613.756	1.060553
QC Calculated Values			103.354					
BISMUTH	209	Y	2391353.636	8.220	2391353.636	0		PPB
Replicates			2195874.947		2588988.467		2389197.493	
QC Calculated Values				97.455				
KRYPTON	83		51.111	31.334	5.000	0		MG/L
Replicates			68.334		36.667		48.333	

Sample ID: **6A14005-CCV1** Client ID: CCV Date/Time: 01/14/16 13:44:50

ElemName	Mass	Internal	Meas. Int Mean	Meas. Int Rsd	Net Int Mean	Conc Mean	Conc Rsd	Units
			(Intensity 1)	(Conc 1)	(Intensity 2)	(Conc 2)	(Intensity 3)	(Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	374652.607	15.560	374652.607	0		PPB
Replicates			307521.881		403914.185		412521.755	
QC Calculated Values				93.636				
BERYLLIUM	9		127080.346	13.508	0.340	303.86412	5.52	PPB
Replicates			108153.379	314.005022	141641.055	313.092424	131446.603	284.494910
QC Calculated Values			101.288					
SCANDIUM	45	Y	2037446.659	12.767	2037446.659	0		PPB
Replicates			1752065.427		2261270.006		2099004.546	
QC Calculated Values				97.541				
VANADIUM	51		5049867.982	12.723	2.477	302.65551	0.70	PPB
Replicates			4359176.247	303.786552	5629733.810	303.983542	5160693.890	300.196442
QC Calculated Values			100.885					
CHROMIUM	52		4487620.300	11.986	2.200	300.60108	2.19	PPB
Replicates			3935647.306	306.292949	5010166.665	302.104456	4517046.928	293.405845
QC Calculated Values			100.200					
MANGANESE	55		6884234.255	11.653	3.382	300.18480	1.39	PPB
Replicates			5985014.378	303.183353	7526550.926	295.414689	7141137.461	301.956361
QC Calculated Values			100.062					
COBALT	59		5589077.985	11.776	2.746	302.05433	1.05	PPB
Replicates			4866189.901	305.550133	6153658.727	299.381237	5747385.326	301.231632
QC Calculated Values			100.685					
NICKEL	60		1243346.071	12.199	0.611	309.31643	0.81	PPB
Replicates			1079202.468	312.042004	1378329.174	308.788239	1272506.570	307.119054
QC Calculated Values			103.105					
COPPER	63		2662675.394	12.085	1.308	302.85002	2.57	PPB
Replicates			2338933.904	309.067346	2982482.475	305.358932	2666609.802	294.123787
QC Calculated Values			100.950					
COPPER	65		1334951.784	11.729	0.656	304.94904	1.65	PPB
Replicates			1169167.226	310.258314	1480322.384	304.369032	1355365.743	300.219789
QC Calculated Values			101.650					
ZINC	66		680455.718	10.825	0.334	300.35308	2.46	PPB
Replicates			602635.678	308.762376	749088.193	297.366103	689643.282	294.930757
QC Calculated Values			100.118					
ARSENIC	75		704258.467	10.774	0.346	297.65738	2.13	PPB
Replicates			621373.582	304.849626	770296.784	292.816009	721105.036	295.306517
QC Calculated Values			99.219					
SELENIUM	82		69881.797	9.445	0.034	294.05210	3.55	PPB
Replicates			62461.129	304.734616	75095.915	283.858580	72088.348	293.563109
QC Calculated Values			98.017					

Sample ID: **6A14005-CCV1** Client ID: CCV Date/Time: 01/14/16 13:44:50

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		4111943.035	11.510	1.064	309.34671	5.41	PPB
Replicates			3566450.455	298.310370	4413222.687	301.142867	4356155.964	328.586893
QC Calculated Values			103.116					
SILVER	109		3883751.649	10.616	1.005	308.11686	3.96	PPB
Replicates			3413992.268	301.049250	4185505.461	301.097258	4051757.220	322.204079
QC Calculated Values			102.706					
CADMIUM	111		870594.477	9.645	0.225	305.17485	0.62	PPB
Replicates			785652.897	306.020210	953547.527	303.002051	872583.007	306.502286
QC Calculated Values			101.725					
INDIUM	113		1028750.770	9.093	0.223	0		PPB
Replicates			936406.972		1123441.431		1026403.907	
INDIUM	115	Y	3862898.816	10.159	3862898.816	0		PPB
Replicates			3475194.209		4259858.971		3853643.268	
QC Calculated Values				94.917				
ANTIMONY	121		2627442.857	8.922	0.555	296.10398	1.66	PPB
Replicates			2383480.952	292.909862	2850957.617	293.653712	2647890.002	301.748355
QC Calculated Values			98.701					
BARIUM	135		823669.411	8.509	0.174	304.22481	1.80	PPB
Replicates			749992.932	301.994645	889508.340	300.202528	831506.960	310.477270
QC Calculated Values			101.408					
BARIUM	137		1408371.885	8.726	0.297	306.71188	1.45	PPB
Replicates			1281757.703	304.359502	1527165.848	303.941107	1416192.105	311.835024
QC Calculated Values			102.237					
TERBIUM	159	Y	4736575.555	8.906	4736575.555	0		PPB
Replicates			4343491.273		5182229.334		4684006.058	
QC Calculated Values				99.561				
THALLIUM	205		7092693.140	10.063	3.055	298.80237	4.91	PPB
Replicates			6282205.071	287.928970	7627188.886	293.007041	7368685.463	315.471106
QC Calculated Values			99.601					
LEAD	206		2269187.900	9.210	0.977	295.97399	2.96	PPB
Replicates			2043147.006	289.889335	2455392.504	292.007357	2309024.189	306.025265
QC Calculated Values			98.658					
LEAD	207		4196016.247	8.490	1.808	295.67715	2.71	PPB
Replicates			3812279.012	292.108109	4516265.349	290.053767	4259504.380	304.869581
QC Calculated Values			98.559					
LEAD	208		6634473.916	8.558	2.859	296.32793	2.56	PPB
Replicates			6027363.043	292.751152	7152382.788	291.180400	6723675.918	305.052231
QC Calculated Values			98.776					
BISMUTH	209	Y	2321626.759	8.980	2321626.759	0		PPB
Replicates			2134111.889		2546109.046		2284659.343	
QC Calculated Values				94.614				

Sample ID: **6A14005-CCV1** Client ID: CCV Date/Time: 01/14/16 13:44:50

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
KRYPTON	83		67.778	13.543	21.667	0		MG/L
Replicates			63.334		61.667		78.334	

Sample ID: **6A14005-CCB1** Client ID: CCB Date/Time: 01/14/16 13:46:33

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	371824.625	16.367	371824.625	0		PPB
Replicates			301897.678		400776.658		412799.540	
QC Calculated Values				92.929				
BERYLLIUM	9		18.333	27.273	0.000	0.04251	48.50	PPB
Replicates			23.333	0.065288	18.333	0.037124	13.333	0.025120
SCANDIUM	45	Y	2029651.922	12.602	2029651.922	0		PPB
Replicates			1742330.733		2232551.422		2114073.613	
QC Calculated Values				97.167				
VANADIUM	51		4278.016	6.717	0.000	0.05033	106.37	PPB
Replicates			4608.482	0.111494	4086.924	0.011987	4138.642	0.027511
CHROMIUM	52		11139.537	2.689	0.000	0.05855	210.59	PPB
Replicates			11481.588	0.198735	10924.297	-0.033135	11012.727	0.010059
MANGANESE	55		2144.677	13.385	0.000	0.04334	55.57	PPB
Replicates			2412.791	0.070630	2179.404	0.034358	1841.836	0.025040
COBALT	59		905.042	17.606	0.000	0.04503	33.00	PPB
Replicates			1060.056	0.061785	913.375	0.039859	741.694	0.033447
NICKEL	60		232.410	12.780	0.000	0.04381	32.49	PPB
Replicates			258.337	0.059846	238.892	0.038939	200.002	0.032658
COPPER	63		651.874	19.848	0.000	0.05636	45.86	PPB
Replicates			800.032	0.086198	594.462	0.041534	561.127	0.041338
COPPER	65		297.227	10.778	0.000	0.04969	33.96	PPB
Replicates			333.339	0.069170	286.115	0.039802	272.226	0.040087
ZINC	66		656.503	9.671	0.000	0.12886	42.68	PPB
Replicates			688.913	0.189503	697.247	0.114876	583.350	0.082208
ARSENIC	75		-145.744	29.847	0.000	0.04018	37.76	PPB
Replicates			-109.814	0.047472	-133.310	0.050320	-194.107	0.022733
SELENIUM	82		69.074	7.027	0.000	0.06572	93.22	PPB
Replicates			74.445	0.134952	65.000	0.018507	67.778	0.043705
SILVER	107		2264.146	7.008	0.000	0.12064	24.01	PPB
Replicates			2428.073	0.154086	2253.032	0.103654	2111.334	0.104183
SILVER	109		2252.107	10.036	0.000	0.12910	27.81	PPB
Replicates			2489.199	0.170518	2228.026	0.110027	2039.097	0.106750
CADMIUM	111		133.209	31.898	0.000	0.04585	38.83	PPB
Replicates			163.413	0.062972	151.593	0.047156	84.621	0.027431
INDIUM	113		164599.818	10.105	-0.001	0		PPB
Replicates			147048.269		180128.669		166622.517	

Sample ID: **6A14005-CCB1** Client ID: CCB Date/Time: 01/14/16 13:46:33

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	115	Y	3835113.685	10.228	3835113.685	0		PPB
Replicates			3411214.263		4185269.822		3908856.970	
QC Calculated Values				94.235				
ANTIMONY	121		1759.879	13.143	0.000	0.17913	25.59	PPB
Replicates			1991.865	0.231198	1758.488	0.161387	1529.284	0.144806
BARIUM	135		140.557	16.099	0.000	0.04529	31.93	PPB
Replicates			166.668	0.061906	126.667	0.035595	128.334	0.038359
BARIUM	137		252.781	19.937	0.000	0.04907	35.91	PPB
Replicates			310.005	0.069105	215.002	0.035989	233.336	0.042114
TERBIUM	159	Y	4625821.071	9.724	4625821.071	0		PPB
Replicates			4123799.562		4992252.241		4761411.409	
QC Calculated Values				97.233				
THALLIUM	205		1305.643	18.889	0.001	0.04981	30.11	PPB
Replicates			1562.622	0.066782	1283.416	0.044281	1070.891	0.038361
LEAD	206		445.843	8.094	0.000	0.05144	19.83	PPB
Replicates			487.512	0.063120	425.009	0.044279	425.009	0.046916
LEAD	207		793.072	7.510	0.000	0.04910	19.31	PPB
Replicates			858.352	0.059657	741.681	0.041322	779.182	0.046312
LEAD	208		1265.328	17.979	0.000	0.04834	30.69	PPB
Replicates			1500.071	0.065111	1250.049	0.042944	1045.864	0.036953
BISMUTH	209	Y	2390501.611	9.248	2390501.611	0		PPB
Replicates			2146370.604		2577199.234		2447934.996	
QC Calculated Values				97.421				
KRYPTON	83		48.889	28.590	2.778	0		MG/L
Replicates			41.667		65.000		40.000	

Sample ID: **6010611-BLK1** Client ID: PBWTY Date/Time: 01/14/16 13:49:59

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	379721.935	14.208	379721.935	0		PPB
Replicates			317979.770		417769.687		403416.348	
QC Calculated Values				94.903				
BERYLLIUM	9		1.667	100.000	0.000	0.00030	1244.45	PPB
Replicates			1.667	0.000961	0.000	-0.003719	3.333	0.003658
SCANDIUM	45	Y	2076909.868	11.519	2076909.868	0		PPB
Replicates			1838933.769		2317396.820		2074399.016	
QC Calculated Values				99.430				
VANADIUM	51		3999.948	2.796	0.000	0.02527	85.60	PPB
Replicates			3917.800	0.048626	4127.314	0.005927	3954.729	0.021253
CHROMIUM	52		11705.184	2.972	0.001	0.07351	91.68	PPB
Replicates			11388.147	0.144479	12077.289	0.010378	11650.116	0.065669

Sample ID: **6010611-BLK1** Client ID: PBWTY Date/Time: 01/14/16 13:49:59

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	(Conc 3)	Units
MANGANESE	55		1376.484	5.943	0.000	0.00683	63.94		PPB
Replicates			1329.255	0.011867	1470.942	0.004047	1329.255	0.004584	
COBALT	59		254.448	4.601	0.000	0.00848	24.31		PPB
Replicates			266.670	0.010804	253.337	0.006877	243.336	0.007755	
NICKEL	60		78.704	26.016	0.000	0.00437	148.68		PPB
Replicates			86.111	0.008452	55.556	-0.003126	94.445	0.007795	
COPPER	63		295.375	5.180	0.000	0.01316	35.65		PPB
Replicates			294.449	0.016957	280.559	0.007915	311.116	0.014609	
COPPER	65		141.668	11.927	0.000	0.01217	39.17		PPB
Replicates			130.556	0.013224	133.334	0.006966	161.112	0.016326	
ZINC	66		625.020	16.707	0.000	0.10357	14.46		PPB
Replicates			516.680	0.086726	725.026	0.115373	633.353	0.108598	
ARSENIC	75		-258.348	17.080	-0.000	-0.00545	277.81		PPB
Replicates			-253.324	-0.016742	-304.769	-0.011378	-216.950	0.011762	
SELENIUM	82		57.222	7.001	0.000	0.00847	512.93		PPB
Replicates			60.556	0.051142	52.778	-0.035729	58.334	0.010003	
SILVER	107		936.155	5.399	0.000	0.01581	43.71		PPB
Replicates			994.494	0.022486	905.597	0.008683	908.375	0.016276	
SILVER	109		955.601	4.513	0.000	0.02066	26.76		PPB
Replicates			997.272	0.026508	958.379	0.015515	911.153	0.019962	
CADMIUM	111		15.707	46.260	0.000	0.00344	70.66		PPB
Replicates			7.350	0.000719	19.242	0.004214	20.529	0.005400	
INDIUM	113		169053.539	5.896	-0.001	0			PPB
Replicates			163001.061		180557.126		163602.429		
INDIUM	115	Y	3978904.632	6.527	3978904.632	0			PPB
Replicates			3837749.990		4278632.804		3820331.102		
QC Calculated Values				97.768					
ANTIMONY	121		566.683	5.883	0.000	0.03768	7.31		PPB
Replicates			566.683	0.040719	600.018	0.035354	533.348	0.036952	
BARIUM	135		40.556	16.609	0.000	0.00646	55.06		PPB
Replicates			46.667	0.009395	33.333	0.002503	41.667	0.007497	
BARIUM	137		76.667	17.794	0.000	0.00828	20.46		PPB
Replicates			65.000	0.006499	91.667	0.009871	73.334	0.008465	
TERBIUM	159	Y	4710937.488	8.365	4710937.488	0			PPB
Replicates			4490345.334		5165923.131		4476543.999		
QC Calculated Values				99.022					
THALLIUM	205		281.948	17.001	0.000	0.00708	37.73		PPB
Replicates			283.337	0.007445	233.336	0.004242	329.172	0.009545	
LEAD	206		98.612	8.796	0.000	0.00674	26.15		PPB
Replicates			108.334	0.008399	91.667	0.004889	95.834	0.006938	
LEAD	207		200.001	12.672	0.000	0.00783	28.81		PPB
Replicates			229.168	0.010318	187.501	0.005910	183.334	0.007273	

Sample ID: **6010611-BLK1** Client ID: PBWTY Date/Time: 01/14/16 13:49:59

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	208		358.337	5.069	0.000	0.00802	10.64	PPB
Replicates			366.670	0.008951	370.838	0.007270	337.504	0.007850
BISMUTH	209	Y	2423417.566	7.486	2423417.566	0		PPB
Replicates			2333955.028		2632180.876		2304116.793	
QC Calculated Values				98.762				
KRYPTON	83		41.111	11.703	-5.000	0		MG/L
Replicates			38.333		38.333		46.667	

Sample ID: **6010611-BS1** Client ID: MLCSTY Date/Time: 01/14/16 13:51:44

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	344268.302	16.563	344268.302	0		PPB
Replicates			280184.266		389407.091		363213.549	
QC Calculated Values				86.042				
BERYLLIUM	9		44790.709	13.318	0.131	116.65692	4.38	PPB
Replicates			38398.581	122.358996	50209.065	115.117651	45764.480	112.494115
SCANDIUM	45	Y	1954977.357	13.192	1954977.357	0		PPB
Replicates			1688244.587		2203032.066		1973655.418	
QC Calculated Values				93.593				
VANADIUM	51		1832934.068	12.760	0.936	114.40107	2.77	PPB
Replicates			1570616.447	113.459852	2019738.839	111.807228	1908446.918	117.936134
CHROMIUM	52		1642223.925	13.643	0.835	114.05129	0.90	PPB
Replicates			1404775.816	113.018126	1849882.024	114.057563	1672013.935	115.078183
MANGANESE	55		2484592.515	14.325	1.269	112.65082	2.57	PPB
Replicates			2092518.258	109.974701	2787326.137	112.261302	2573933.149	115.716443
COBALT	59		2037793.532	13.334	1.042	114.65151	0.92	PPB
Replicates			1747993.136	113.903163	2286829.647	114.194312	2078557.813	115.857069
NICKEL	60		463408.949	14.066	0.237	119.97482	1.28	PPB
Replicates			394194.283	118.277078	523623.189	120.399497	472409.377	121.247888
COPPER	63		1026718.300	14.089	0.525	121.47399	1.28	PPB
Replicates			873234.672	119.739215	1160537.948	121.949677	1046382.280	122.733079
COPPER	65		499195.123	13.758	0.255	118.64374	1.54	PPB
Replicates			424981.454	117.026981	560516.811	118.282363	512087.103	120.621877
ZINC	66		494298.486	12.496	0.253	227.06383	0.80	PPB
Replicates			429278.732	228.213687	552194.653	224.959586	501422.073	228.018208
ARSENIC	75		511141.781	12.157	0.262	224.98864	2.43	PPB
Replicates			442035.614	225.090114	562421.962	219.472949	528967.766	230.402867
SELENIUM	82		50933.352	10.836	0.026	223.12535	3.09	PPB
Replicates			44789.525	226.720302	55472.322	215.169724	52538.207	227.486024
SILVER	107		1481593.552	12.059	0.399	116.03234	3.97	PPB
Replicates			1279919.160	113.061767	1620086.141	113.698895	1544775.355	121.336364
SILVER	109		1413994.227	11.384	0.381	116.79535	3.33	PPB
Replicates			1233817.509	114.902346	1543627.866	114.209738	1464537.305	121.273953

Sample ID: **6010611-BS1** Client ID: MLCSTY Date/Time: 01/14/16 13:51:44

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CADMIUM	111		314020.810	10.150	0.085	114.68642	1.35	PPB
Replicates			281821.231	115.962039	345558.604	112.965918	314682.595	115.131295
INDIUM	113		469998.186	11.194	0.083	0		PPB
Replicates			419427.809		524437.871		466128.876	
INDIUM	115	Y	3710024.324	11.471	3710024.324	0		PPB
Replicates			3289667.311		4140646.972		3699758.687	
QC Calculated Values				91.161				
ANTIMONY	121		1920828.808	8.508	0.430	229.47351	3.64	PPB
Replicates			1750463.727	230.486497	2076270.230	220.660391	1935752.466	237.273656
BARIUM	135		290998.507	10.278	0.065	113.75501	2.65	PPB
Replicates			260684.092	112.464662	320484.522	111.598593	291826.909	117.201765
BARIUM	137		503444.862	10.162	0.113	116.06003	2.18	PPB
Replicates			453012.060	115.252861	555306.751	114.031526	502015.775	118.895710
TERBIUM	159	Y	4476920.548	11.073	4476920.548	0		PPB
Replicates			4053761.471		5022359.779		4354640.394	
QC Calculated Values				94.103				
THALLIUM	205		5027131.689	10.130	2.226	217.70790	3.29	PPB
Replicates			4476878.445	211.561417	5481825.587	216.001685	5122691.036	225.560585
LEAD	206		1642954.635	10.063	0.727	220.22368	1.25	PPB
Replicates			1484027.073	217.101051	1814012.367	221.274380	1630824.466	222.295620
LEAD	207		3090897.881	10.132	1.368	223.73337	1.27	PPB
Replicates			2790769.592	220.480644	3415657.332	225.004695	3066266.719	225.714779
LEAD	208		4794664.281	9.802	2.123	220.04250	1.28	PPB
Replicates			4335515.636	217.119361	5274738.805	220.256907	4773738.401	222.751225
BISMUTH	209	Y	2257829.276	9.242	2257829.276	0		PPB
Replicates			2069792.758		2482311.563		2221383.508	
QC Calculated Values				92.014				
KRYPTON	83		63.889	29.667	17.778	0		MG/L
Replicates			58.334		85.000		48.333	

Sample ID: **1601011-01** Client ID: MW-103 Date/Time: 01/14/16 13:53:27

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	357384.268	19.902	357384.268	0		PPB
Replicates			276142.474		387565.929		408444.402	
QC Calculated Values				89.320				
BERYLLIUM	9		10.000	92.796	0.000	0.02519	126.21	PPB
Replicates			20.000	0.060947	1.667	0.000120	8.333	0.014497
SCANDIUM	45	Y	1962204.153	11.811	1962204.153	0		PPB
Replicates			1717904.331		2178972.517		1989735.611	
QC Calculated Values				93.938				

Sample ID: **1601011-01** Client ID: MW-103 Date/Time: 01/14/16 13:53:27

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
VANADIUM	51		5376.651	4.081	0.001	0.12681	38.97	PPB
Replicates			5557.393	0.183580	5440.052	0.093363	5132.506	0.103489
CHROMIUM	52		12619.075	3.556	0.001	0.18620	65.59	PPB
Replicates			12925.014	0.326372	12828.223	0.102725	12103.988	0.129503
MANGANESE	55		136348.432	10.831	0.069	6.12192	2.91	PPB
Replicates			119522.539	6.123828	147162.430	5.942996	142360.328	6.298948
COBALT	59		2906.534	4.079	0.001	0.15916	11.61	PPB
Replicates			2898.753	0.180487	3028.792	0.147772	2792.056	0.149226
NICKEL	60		5134.668	13.744	0.003	1.30846	3.41	PPB
Replicates			4339.830	1.264568	5687.728	1.307147	5376.445	1.353660
COPPER	63		4576.056	11.644	0.002	0.52011	2.66	PPB
Replicates			4081.388	0.529960	5140.210	0.526072	4506.571	0.504286
COPPER	65		1887.215	3.537	0.001	0.43095	10.67	PPB
Replicates			1822.388	0.473463	1883.511	0.382135	1955.747	0.437241
ZINC	66		4693.702	10.523	0.002	1.98600	3.64	PPB
Replicates			4250.903	2.056839	5226.365	1.988647	4603.837	1.912526
ARSENIC	75		1071.507	2.349	0.001	0.57448	8.01	PPB
Replicates			1043.956	0.623812	1093.296	0.532776	1077.269	0.566860
SELENIUM	82		88.519	16.274	0.000	0.16408	69.12	PPB
Replicates			105.001	0.292304	78.334	0.076977	82.223	0.122944
SILVER	107		1279.713	13.677	0.000	0.05322	41.22	PPB
Replicates			1455.661	0.078370	1277.859	0.043225	1105.617	0.038055
SILVER	109		1196.369	13.425	0.000	0.05164	44.63	PPB
Replicates			1380.651	0.078073	1122.285	0.035819	1086.170	0.041014
CADMIUM	111		203.215	21.413	0.000	0.07655	27.41	PPB
Replicates			240.614	0.099117	213.576	0.072892	155.455	0.057639
INDIUM	113		152593.403	9.893	-0.001	0		PPB
Replicates			136757.953		166821.629		154200.629	
INDIUM	115	Y	3542589.177	9.059	3542589.177	0		PPB
Replicates			3225084.363		3866811.837		3535871.331	
QC Calculated Values				87.047				
ANTIMONY	121		3945.228	10.126	0.001	0.46668	17.83	PPB
Replicates			4284.251	0.561695	4046.652	0.431589	3504.781	0.406754
BARIUM	135		203912.834	10.487	0.047	82.78766	3.45	PPB
Replicates			179581.459	80.791226	219727.782	81.513073	212429.263	86.058668
BARIUM	137		353596.145	10.112	0.082	84.66429	2.19	PPB
Replicates			314008.871	83.307890	383545.281	83.907417	363234.282	86.777571
TERBIUM	159	Y	4306098.332	9.604	4306098.332	0		PPB
Replicates			3887261.382		4714162.711		4316870.904	
QC Calculated Values				90.512				
THALLIUM	205		1263.982	50.709	0.001	0.05741	61.09	PPB
Replicates			1983.530	0.097394	1054.222	0.042985	754.195	0.031851

Sample ID: **1601011-01** Client ID: MW-103 Date/Time: 01/14/16 13:53:27

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LEAD	206		1083.393	15.109	0.001	0.15651	21.36	PPB
Replicates			1262.580	0.194990	1045.888	0.139965	941.711	0.134583
LEAD	207		1882.037	17.288	0.001	0.14652	23.80	PPB
Replicates			2241.794	0.186656	1795.916	0.129298	1608.400	0.123613
LEAD	208		2800.239	21.090	0.001	0.13649	28.35	PPB
Replicates			3462.856	0.181051	2608.534	0.116996	2329.327	0.111413
BISMUTH	209	Y	2037845.050	6.613	2037845.050	0		PPB
Replicates			1905405.159		2174800.390		2033329.601	
QC Calculated Values				83.049				
KRYPTON	83		56.111	6.860	10.000	0		MG/L
Replicates			51.667		58.334		58.334	

Sample ID: **6010611-DUP1** Client ID: MW-103D Date/Time: 01/14/16 13:55:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	389157.567	19.738	389157.567	0		PPB
Replicates			300491.255		435410.479		431570.966	
QC Calculated Values				97.261				
BERYLLIUM	9		5.000	33.333	0.000	0.00759	27.14	PPB
Replicates			3.333	0.006185	6.667	0.009951	5.000	0.006625
SCANDIUM	45	Y	1919824.735	11.774	1919824.735	0		PPB
Replicates			1666345.057		2100460.494		1992668.652	
QC Calculated Values				91.910				
VANADIUM	51		4870.221	3.001	0.001	0.10056	29.02	PPB
Replicates			4711.582	0.133791	4999.444	0.079134	4899.638	0.088746
CHROMIUM	52		11687.382	0.900	0.001	0.13788	71.96	PPB
Replicates			11620.081	0.251161	11808.635	0.066460	11633.430	0.096006
MANGANESE	55		131753.348	10.585	0.068	6.04622	1.63	PPB
Replicates			116491.248	6.153443	143835.378	6.026483	134933.417	5.958744
COBALT	59		2541.435	7.519	0.001	0.14104	5.36	PPB
Replicates			2345.275	0.149689	2727.038	0.137683	2551.992	0.135745
NICKEL	60		4940.122	12.642	0.003	1.28805	4.17	PPB
Replicates			4223.114	1.268683	5231.924	1.246640	5365.328	1.348819
COPPER	63		4272.220	13.738	0.002	0.49467	4.47	PPB
Replicates			3700.685	0.494082	4873.409	0.517079	4242.566	0.472839
COPPER	65		1830.727	17.402	0.001	0.42156	6.91	PPB
Replicates			1463.996	0.388721	2039.097	0.431599	1989.087	0.444347
ZINC	66		4604.773	11.684	0.002	1.99208	6.49	PPB
Replicates			4156.419	2.074678	5201.352	2.058474	4456.548	1.843079
ARSENIC	75		973.820	12.284	0.001	0.53742	1.69	PPB
Replicates			847.701	0.538766	1085.674	0.545774	988.084	0.527716
SELENIUM	82		74.260	4.571	0.000	0.10437	51.05	PPB
Replicates			77.223	0.165880	75.000	0.074896	70.556	0.072339

Sample ID: **6010611-DUP1** Client ID: MW-103D Date/Time: 01/14/16 13:55:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		635.205	2.020	0.000	0.00068	901.32	PPB
Replicates			627.797	0.005565	627.797	-0.006207	650.021	0.002684
SILVER	109		537.977	3.910	-0.000	-0.00547	69.90	PPB
Replicates			513.902	-0.002725	552.793	-0.009838	547.237	-0.003848
CADMIUM	111		117.681	21.324	0.000	0.04386	19.37	PPB
Replicates			90.004	0.037120	124.088	0.041053	138.950	0.053400
INDIUM	113		151781.643	10.245	0.000	0		PPB
Replicates			135930.113		167012.272		152402.544	
INDIUM	115	Y	3480060.798	11.491	3480060.798	0		PPB
Replicates			3124394.751		3912938.374		3402849.269	
QC Calculated Values				85.511				
ANTIMONY	121		2207.188	4.348	0.000	0.24732	5.70	PPB
Replicates			2108.556	0.260367	2300.265	0.232367	2212.745	0.249234
BARIUM	135		201100.204	10.484	0.047	81.45942	1.55	PPB
Replicates			179556.008	80.069506	221690.392	81.779378	202054.212	82.529387
BARIUM	137		350675.856	9.226	0.081	83.83733	1.67	PPB
Replicates			316490.286	83.228006	380819.000	82.843081	354718.283	85.440918
TERBIUM	159	Y	4314709.841	9.515	4314709.841	0		PPB
Replicates			3921740.161		4740783.079		4281606.284	
QC Calculated Values				90.693				
THALLIUM	205		397.230	1.602	0.000	0.01495	11.33	PPB
Replicates			404.175	0.016754	395.841	0.013397	391.674	0.014689
LEAD	206		290.282	5.801	0.000	0.03807	6.90	PPB
Replicates			287.504	0.040991	308.338	0.037330	275.004	0.035899
LEAD	207		512.507	6.946	0.000	0.03595	7.85	PPB
Replicates			475.006	0.035881	516.674	0.033161	545.841	0.038804
LEAD	208		818.076	10.293	0.000	0.03471	3.30	PPB
Replicates			741.684	0.033860	908.360	0.036017	804.185	0.034264
BISMUTH	209	Y	2014064.924	7.601	2014064.924	0		PPB
Replicates			1866302.593		2171983.494		2003908.685	
QC Calculated Values				82.080				
KRYPTON	83		49.445	10.836	3.333	0		MG/L
Replicates			51.667		53.333		43.333	

Sample ID: **6010611-MS1** Client ID: MW-103S Date/Time: 01/14/16 13:56:52

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	390295.128	12.592	390295.128	0		PPB
Replicates			333918.527		424087.454		412879.404	
QC Calculated Values				97.545				
BERYLLIUM	9		45168.479	13.011	0.116	103.31981	2.61	PPB
Replicates			38749.933	103.607815	50286.118	105.865656	46469.387	100.485944

Sample ID: **6010611-MS1** Client ID: MW-103S Date/Time: 01/14/16 13:56:52

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
SCANDIUM	45	Y	1897767.756	13.244	1897767.756	0		PPB
Replicates			1615482.630		2097257.408		1980563.229	
QC Calculated Values				90.854				
VANADIUM	51		1702261.210	12.674	0.896	109.44405	0.65	PPB
Replicates			1458669.671	110.112726	1869220.461	108.687780	1778893.498	109.531660
CHROMIUM	52		1487337.645	12.774	0.779	106.47813	1.90	PPB
Replicates			1283303.382	107.863727	1659170.037	107.417707	1519539.518	104.152966
MANGANESE	55		2320080.091	12.933	1.223	108.54725	2.74	PPB
Replicates			2007778.913	110.273982	2606155.217	110.257457	2346306.142	105.110309
COBALT	59		1795613.817	11.186	0.948	104.29824	2.45	PPB
Replicates			1574540.532	107.221470	1966911.662	103.172156	1845389.258	102.501099
NICKEL	60		398713.296	10.775	0.211	106.70635	3.72	PPB
Replicates			353791.296	110.934537	439404.617	106.128516	402943.975	103.056006
COPPER	63		854621.117	10.725	0.452	104.56421	4.77	PPB
Replicates			764386.079	109.532874	947633.099	104.596879	851844.172	99.562883
COPPER	65		414997.377	11.125	0.219	101.88818	3.21	PPB
Replicates			366065.891	105.341674	457791.385	101.474288	421134.854	98.848563
ZINC	66		420749.662	11.699	0.222	199.33167	3.27	PPB
Replicates			369675.664	205.362529	467884.468	200.207580	424688.853	192.424894
ARSENIC	75		451667.315	10.852	0.239	205.12002	3.32	PPB
Replicates			399436.511	212.564900	496665.924	203.595355	458899.510	199.199804
SELENIUM	82		44187.414	9.292	0.023	199.70147	4.28	PPB
Replicates			39604.939	209.488452	47531.025	193.641932	45426.277	195.974036
SILVER	107		1275935.628	9.711	0.375	109.14869	3.98	PPB
Replicates			1139796.151	107.345273	1382116.236	105.997851	1305894.498	114.102938
SILVER	109		1208953.024	10.180	0.356	109.02780	5.16	PPB
Replicates			1069736.878	106.211570	1303253.140	105.371067	1253869.053	115.500761
CADMIUM	111		278552.942	9.588	0.082	110.96894	1.78	PPB
Replicates			252205.601	110.644503	305608.631	109.179249	277844.592	113.083062
INDIUM	113		419163.002	9.676	0.080	0		PPB
Replicates			379872.329		460876.992		416739.685	
INDIUM	115	Y	3400073.537	10.517	3400073.537	0		PPB
Replicates			3085451.059		3788952.746		3325816.808	
QC Calculated Values				83.545				
ANTIMONY	121		1778832.448	9.472	0.421	224.76873	3.04	PPB
Replicates			1611935.191	218.443296	1948887.443	223.847312	1775674.711	232.015587
BARIUM	135		460869.741	8.502	0.109	190.90799	2.62	PPB
Replicates			422474.627	187.593292	500798.634	188.474503	459335.962	196.656166
BARIUM	137		795290.999	8.976	0.188	194.21018	2.25	PPB
Replicates			727602.767	190.524306	869877.358	193.057655	788392.870	199.048572
TERBIUM	159	Y	4223634.129	8.854	4223634.129	0		PPB
Replicates			3938733.976		4647120.640		4085047.771	
QC Calculated Values				88.779				

Sample ID: **6010611-MS1** Client ID: MW-103S Date/Time: 01/14/16 13:56:52

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		4533280.146	8.803	2.258	220.85944	2.78	PPB
Replicates			4121206.696	213.768987	4917913.512	224.493724	4560720.229	224.315602
LEAD	206		1464527.230	8.154	0.730	220.93502	1.76	PPB
Replicates			1349696.690	216.728143	1588053.171	224.412549	1455831.829	221.664381
LEAD	207		2761776.753	8.067	1.376	225.00902	1.77	PPB
Replicates			2542802.308	220.504840	2988188.215	228.042838	2754339.736	226.479376
LEAD	208		4300974.735	7.724	2.143	222.15566	1.62	PPB
Replicates			3966201.723	218.017671	4630582.169	224.003843	4306140.313	224.445456
BISMUTH	209	Y	2005689.093	6.450	2005689.093	0		PPB
Replicates			1885679.243		2142719.072		1988668.964	
QC Calculated Values				81.738				
KRYPTON	83		63.889	12.328	17.778	0		MG/L
Replicates			70.000		66.667		55.000	

Sample ID: **6010611-MSD1** Client ID: MW-103SD Date/Time: 01/14/16 13:58:35

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	401216.592	15.575	401216.592	0		PPB
Replicates			330406.376		448627.552		424615.849	
QC Calculated Values				100.275				
BERYLLIUM	9		45731.388	11.699	0.114	102.22923	4.55	PPB
Replicates			39814.101	107.584857	50227.491	99.957883	47152.573	99.144945
SCANDIUM	45	Y	1868326.122	11.200	1868326.122	0		PPB
Replicates			1637581.775		2045789.628		1921606.963	
QC Calculated Values				89.444				
VANADIUM	51		1722450.658	12.097	0.920	112.35363	0.95	PPB
Replicates			1492706.736	111.163504	1899204.649	113.218267	1775440.589	112.679111
CHROMIUM	52		1496434.747	12.114	0.795	108.68756	1.09	PPB
Replicates			1300258.292	107.813640	1657749.088	110.042844	1531296.861	108.206187
MANGANESE	55		2351115.990	11.214	1.258	111.65444	0.18	PPB
Replicates			2058927.535	111.557788	2571274.047	111.519074	2423146.388	111.886456
COBALT	59		1820436.688	10.426	0.975	107.25393	0.91	PPB
Replicates			1608370.434	108.047183	1974380.946	106.169550	1878558.684	107.545061
NICKEL	60		403012.052	10.748	0.216	109.31479	1.25	PPB
Replicates			357034.105	110.440499	443052.045	109.702121	408950.005	107.801757
COPPER	63		856450.234	10.632	0.459	106.17645	1.56	PPB
Replicates			760904.449	107.562199	942231.726	106.617520	866214.527	104.349637
COPPER	65		418191.756	10.935	0.224	104.09573	1.78	PPB
Replicates			370920.511	105.298228	462201.341	105.029967	421453.418	101.958997
ZINC	66		422671.635	10.978	0.226	203.06067	0.24	PPB
Replicates			371577.575	203.632063	462186.802	202.747118	434250.528	202.802830
ARSENIC	75		453172.078	11.380	0.243	208.50277	0.52	PPB
Replicates			397173.909	208.510457	498717.031	209.576351	463625.294	207.421511

Sample ID: **6010611-MSD1** Client ID: MW-103SD Date/Time: 01/14/16 13:58:35

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		44002.050	9.979	0.024	201.43692	1.37	PPB
Replicates			39215.632	204.624626	47843.622	199.826472	44946.896	199.859670
SILVER	107		1293961.548	10.299	0.383	111.25701	7.23	PPB
Replicates			1141608.697	105.573817	1388842.926	107.738330	1351433.022	120.458871
SILVER	109		1216875.497	8.381	0.360	110.36419	5.43	PPB
Replicates			1103016.574	107.539096	1299849.969	106.303819	1247759.948	117.249663
CADMIUM	111		279439.617	9.045	0.083	111.87680	3.39	PPB
Replicates			253903.922	109.378318	304447.029	110.013860	279967.899	116.238224
INDIUM	113		424365.135	9.489	0.082	0		PPB
Replicates			392071.563		469484.689		411539.153	
INDIUM	115	Y	3382790.295	9.459	3382790.295	0		PPB
Replicates			3142185.788		3745916.316		3260268.780	
QC Calculated Values				83.120				
ANTIMONY	121		1759222.793	8.664	0.412	219.88344	1.43	PPB
Replicates			1604824.357	220.187115	1909594.622	216.588660	1763249.398	222.874550
BARIUM	135		468539.279	8.383	0.110	191.92017	1.59	PPB
Replicates			428774.440	192.760896	507308.078	188.535177	469535.319	194.464439
BARIUM	137		811187.529	8.474	0.190	195.93573	1.64	PPB
Replicates			740951.479	196.435158	878321.404	192.492382	814289.704	198.879644
TERBIUM	159	Y	4273043.890	9.599	4273043.890	0		PPB
Replicates			3890306.516		4706009.609		4222815.544	
QC Calculated Values				89.817				
THALLIUM	205		4634820.696	8.841	2.314	226.31702	3.91	PPB
Replicates			4183904.401	216.246804	4984388.819	229.822274	4736168.868	232.881971
LEAD	206		1482786.645	7.813	0.740	224.20381	2.28	PPB
Replicates			1364834.595	218.376938	1596401.500	227.866815	1487123.841	226.367667
LEAD	207		2780710.767	7.898	1.389	227.05687	2.41	PPB
Replicates			2554993.091	220.771400	2993693.717	230.766452	2793445.493	229.632752
LEAD	208		4334110.442	7.351	2.165	224.37548	1.75	PPB
Replicates			4015269.122	219.927341	4652490.720	227.332897	4334571.485	225.866189
BISMUTH	209	Y	2000990.466	5.742	2000990.466	0		PPB
Replicates			1892431.992		2121331.526		1989207.880	
QC Calculated Values				81.547				
KRYPTON	83		67.222	5.161	21.111	0		MG/L
Replicates			70.000		63.334		68.334	

Sample ID: **6A14005-SRD1** Client ID: MW-103L Date/Time: 01/14/16 14:00:18

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	416848.493	13.884	416848.493	0		PPB
Replicates			358116.230		473827.496		418601.755	
QC Calculated Values				104.181				

Sample ID: **6A14005-SRD1** Client ID: MW-103L Date/Time: 01/14/16 14:00:18

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
BERYLLIUM	9		13.333	50.000	0.000	0.02602	70.20	PPB
Replicates			20.000	0.046145	13.333	0.021405	6.667	0.010500
SCANDIUM	45	Y	1866566.736	14.144	1866566.736	0		PPB
Replicates			1582971.575		2105228.726		1911499.908	
QC Calculated Values				89.360				
VANADIUM	51		3853.946	2.050	0.000	0.04378	77.28	PPB
Replicates			3772.799	0.079525	3858.448	0.012254	3930.589	0.039561
CHROMIUM	52		10279.726	1.160	0.000	0.06136	182.59	PPB
Replicates			10231.899	0.181507	10191.858	-0.040239	10415.421	0.042802
MANGANESE	55		27688.611	11.412	0.014	1.26819	3.21	PPB
Replicates			24383.859	1.315098	30680.325	1.241379	28001.650	1.248094
COBALT	59		873.372	12.156	0.000	0.04651	7.98	PPB
Replicates			753.362	0.047208	911.708	0.042494	955.046	0.049817
NICKEL	60		1106.543	13.988	0.001	0.28528	5.11	PPB
Replicates			927.821	0.281672	1197.294	0.272855	1194.516	0.301321
COPPER	63		1079.688	5.521	0.000	0.11502	11.31	PPB
Replicates			1011.162	0.127781	1108.395	0.101785	1119.507	0.115486
COPPER	65		518.532	9.970	0.000	0.10992	5.29	PPB
Replicates			463.900	0.116476	566.683	0.105373	525.014	0.107922
ZINC	66		1322.310	8.396	0.001	0.47545	12.59	PPB
Replicates			1202.850	0.516855	1341.757	0.406810	1422.323	0.502682
ARSENIC	75		101.581	33.622	0.000	0.14749	6.81	PPB
Replicates			63.204	0.135939	128.635	0.154135	112.904	0.152385
SELENIUM	82		69.074	2.825	0.000	0.08993	46.39	PPB
Replicates			67.222	0.132719	68.889	0.049372	71.111	0.087687
SILVER	107		1059.316	6.890	0.000	0.03527	27.10	PPB
Replicates			1102.839	0.046306	1100.061	0.029530	975.048	0.029976
SILVER	109		977.826	5.596	0.000	0.03285	34.97	PPB
Replicates			1038.943	0.045342	961.157	0.022746	933.377	0.030451
CADMIUM	111		65.051	23.780	0.000	0.02361	31.99	PPB
Replicates			66.971	0.026162	48.712	0.015111	79.471	0.029558
INDIUM	113		151015.772	8.090	-0.001	0		PPB
Replicates			141155.935		164682.441		147208.940	
INDIUM	115	Y	3512701.209	9.497	3512701.209	0		PPB
Replicates			3233503.506		3882147.455		3422452.666	
QC Calculated Values				86.313				
ANTIMONY	121		3029.628	8.923	0.001	0.35342	12.89	PPB
Replicates			3242.192	0.406003	3121.320	0.325997	2725.371	0.328251
BARIUM	135		38947.659	7.647	0.009	15.94196	2.39	PPB
Replicates			36312.477	15.867507	42178.765	15.604300	38351.735	16.354089
BARIUM	137		67502.653	8.726	0.016	16.28648	3.11	PPB
Replicates			61838.947	15.935429	73596.496	16.056918	67072.518	16.867096

Sample ID: **6A14005-SRD1** Client ID: MW-103L Date/Time: 01/14/16 14:00:18

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4274910.262	9.191	4274910.262	0		PPB
Replicates			4000373.389		4724968.027		4099389.372	
QC Calculated Values				89.857				
THALLIUM	205		1152.844	2.407	0.000	0.04755	11.24	PPB
Replicates			1166.735	0.051145	1120.896	0.041410	1170.902	0.050099
LEAD	206		500.013	10.442	0.000	0.06413	16.19	PPB
Replicates			554.182	0.076061	495.846	0.057118	450.010	0.059220
LEAD	207		895.854	1.395	0.000	0.06171	9.17	PPB
Replicates			908.355	0.066595	895.854	0.055510	883.353	0.063035
LEAD	208		1465.343	2.960	0.001	0.06251	6.80	PPB
Replicates			1416.729	0.064179	1500.069	0.057677	1479.231	0.065669
BISMUTH	209	Y	2181894.795	8.401	2181894.795	0		PPB
Replicates			2053517.358		2391805.730		2100361.299	
QC Calculated Values				88.919				
KRYPTON	83		44.445	24.109	-1.667	0		MG/L
Replicates			56.667		36.667		40.000	

Sample ID: **6010611-PS1** Client ID: MW-103R Date/Time: 01/14/16 14:02:00

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	393372.079	17.948	393372.079	0		PPB
Replicates			312253.502		440952.221		426910.514	
QC Calculated Values				98.314				
BERYLLIUM	9		3836.858	15.132	0.010	8.74844	5.99	PPB
Replicates			3222.186	9.209702	4375.957	8.856801	3912.432	8.178811
SCANDIUM	45	Y	1807241.755	14.872	1807241.755	0		PPB
Replicates			1518227.508		2049684.291		1853813.468	
QC Calculated Values				86.520				
VANADIUM	51		721878.750	12.787	0.399	48.69875	2.39	PPB
Replicates			619474.425	49.642713	798692.040	47.399538	747469.786	49.054004
CHROMIUM	52		258837.994	12.524	0.138	18.92111	2.68	PPB
Replicates			224430.505	19.500863	288809.513	18.555173	263273.964	18.707300
MANGANESE	55		313826.235	11.553	0.174	15.41627	3.75	PPB
Replicates			273074.084	15.914175	342512.822	14.781598	325891.799	15.553025
COBALT	59		152699.230	13.513	0.085	9.30341	2.06	PPB
Replicates			129614.588	9.387067	169348.574	9.084468	159134.528	9.438708
NICKEL	60		36640.832	12.351	0.020	10.28359	3.21	PPB
Replicates			31527.398	10.505147	40130.361	9.903727	38264.736	10.441904
COPPER	63		144204.018	10.744	0.080	18.53462	4.37	PPB
Replicates			127488.069	19.422130	158081.354	17.836840	147042.631	18.344886
COPPER	65		70157.113	12.686	0.039	18.07239	2.40	PPB
Replicates			60683.568	18.565063	78344.585	17.752644	71443.187	17.899454

Sample ID: **6010611-PS1** Client ID: MW-103R Date/Time: 01/14/16 14:02:00

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
ZINC	66		38496.758	10.845	0.021	19.04829	4.40	PPB
Replicates			34080.196	19.995648	42378.496	18.404349	39031.580	18.744867
ARSENIC	75		19421.606	9.682	0.011	9.38738	5.65	PPB
Replicates			17474.614	9.991923	21227.652	9.000880	19562.553	9.169346
SELENIUM	82		9078.963	10.156	0.005	42.95636	4.99	PPB
Replicates			8074.926	45.267457	9887.664	41.035928	9274.299	42.565702
SILVER	107		105118.160	10.158	0.032	9.39786	2.09	PPB
Replicates			93325.123	9.252438	114130.931	9.320002	107898.424	9.621148
SILVER	109		99280.899	11.640	0.031	9.34888	3.68	PPB
Replicates			86270.532	9.015381	108356.111	9.328193	103216.054	9.703064
CADMIUM	111		22693.952	8.078	0.007	9.51015	1.60	PPB
Replicates			20826.917	9.666854	24491.599	9.362929	22763.339	9.500671
INDIUM	113		163039.000	10.509	0.007	0		PPB
Replicates			146346.418		180582.580		162188.001	
INDIUM	115	Y	3232852.031	9.660	3232852.031	0		PPB
Replicates			2915793.879		3540133.723		3242628.491	
QC Calculated Values				79.436				
ANTIMONY	121		146606.197	9.263	0.036	19.20996	3.41	PPB
Replicates			132269.007	19.070067	159275.072	18.636191	148274.510	19.923614
BARIUM	135		410562.403	9.881	0.101	176.43089	3.70	PPB
Replicates			367094.820	173.640006	447418.484	171.757037	417173.906	183.895638
BARIUM	137		710723.912	10.083	0.175	180.05747	2.86	PPB
Replicates			636821.352	177.635091	779909.845	176.556921	715440.538	185.980387
TERBIUM	159	Y	4073603.960	10.775	4073603.960	0		PPB
Replicates			3697431.633		4555864.838		3967515.407	
QC Calculated Values				85.625				
THALLIUM	205		196403.266	8.936	0.100	9.82745	3.96	PPB
Replicates			176442.994	9.503061	209424.370	9.720617	203342.433	10.258670
LEAD	206		64307.211	8.986	0.033	9.95637	1.57	PPB
Replicates			58688.379	9.784165	70233.273	10.090790	63999.980	9.994148
LEAD	207		117834.272	9.203	0.060	9.85119	1.71	PPB
Replicates			107645.426	9.691422	129231.802	10.027044	116625.589	9.835095
LEAD	208		184265.538	9.250	0.094	9.76342	1.80	PPB
Replicates			168964.508	9.641152	202635.249	9.964652	181196.858	9.684442
BISMUTH	209	Y	1953191.677	7.483	1953191.677	0		PPB
Replicates			1815246.676		2106360.244		1937968.110	
QC Calculated Values				79.599				
KRYPTON	83		55.000	5.249	8.889	0		MG/L
Replicates			56.667		51.667		56.667	

Sample ID: **1601011-02** Client ID: MW-105 Date/Time: 01/14/16 14:03:43

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)

Sample ID: **1601011-02** Client ID: MW-105 Date/Time: 01/14/16 14:03:43

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	389499.696	17.130	389499.696	0		PPB
Replicates			316203.078		446706.002		405590.009	
QC Calculated Values				97.346				
BERYLLIUM	9		13.889	27.713	0.000	0.02987	52.85	PPB
Replicates			18.333	0.048048	11.667	0.019600	11.667	0.021963
SCANDIUM	45	Y	1813303.535	14.996	1813303.535	0		PPB
Replicates			1506113.449		2023222.427		1910574.728	
QC Calculated Values				86.810				
VANADIUM	51		4713.787	3.124	0.001	0.11018	38.86	PPB
Replicates			4575.340	0.159493	4868.509	0.082329	4697.512	0.088729
CHROMIUM	52		12473.891	2.981	0.002	0.25067	49.55	PPB
Replicates			12060.602	0.392526	12781.496	0.161508	12579.574	0.197969
MANGANESE	55		6612823.298	14.023	3.650	324.01842	1.40	PPB
Replicates			5551658.856	327.160639	7267327.523	318.805090	7019483.515	326.089538
COBALT	59		36563.855	15.168	0.020	2.21288	1.84	PPB
Replicates			30180.474	2.199398	40198.969	2.180710	39312.121	2.258522
NICKEL	60		21013.195	16.499	0.012	5.84587	2.09	PPB
Replicates			17045.070	5.718268	23455.253	5.857975	22539.261	5.961372
COPPER	63		10959.794	14.804	0.006	1.37961	0.29	PPB
Replicates			9131.945	1.383729	12229.696	1.379425	11517.740	1.375664
COPPER	65		4828.961	14.922	0.003	1.21891	2.08	PPB
Replicates			4048.041	1.229931	5468.161	1.236887	4970.680	1.189910
ZINC	66		4125.860	12.779	0.002	1.88343	4.11	PPB
Replicates			3517.285	1.931877	4414.863	1.794239	4445.432	1.924164
ARSENIC	75		818.050	13.554	0.001	0.49135	7.98	PPB
Replicates			709.939	0.506674	812.708	0.446797	931.503	0.520577
SELENIUM	82		377.415	11.578	0.000	1.56082	10.12	PPB
Replicates			332.228	1.656434	380.563	1.378511	419.453	1.647510
SILVER	107		546.311	10.981	-0.000	-0.00420	170.56	PPB
Replicates			552.793	0.003690	602.796	-0.005988	483.345	-0.010312
SILVER	109		464.826	11.532	-0.000	-0.00966	47.00	PPB
Replicates			447.232	-0.004913	525.014	-0.010108	422.231	-0.013961
CADMIUM	111		219.334	18.497	0.000	0.08782	5.53	PPB
Replicates			176.683	0.082269	257.443	0.091314	223.876	0.089868
INDIUM	113		144155.162	10.084	0.000	0		PPB
Replicates			128706.303		157564.966		146194.216	
INDIUM	115	Y	3295082.020	13.616	3295082.020	0		PPB
Replicates			2842377.346		3739597.162		3303271.551	
QC Calculated Values				80.965				
ANTIMONY	121		2301.656	10.221	0.001	0.27288	14.18	PPB
Replicates			2362.779	0.315287	2500.313	0.263869	2041.875	0.239475
BARIUM	135		701653.769	11.308	0.170	297.35722	2.51	PPB
Replicates			615993.871	292.064751	772623.897	294.121925	716343.538	305.884987

Sample ID: **1601011-02** Client ID: MW-105 Date/Time: 01/14/16 14:03:43

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		1204243.781	11.251	0.292	300.97947	2.67	PPB
Replicates			1057046.170	295.553182	1323742.388	297.167727	1231942.786	310.217488
TERBIUM	159	Y	4126304.430	10.992	4126304.430	0		PPB
Replicates			3688738.266		4594321.939		4095853.087	
QC Calculated Values				86.733				
THALLIUM	205		2837.907	12.131	0.001	0.13732	6.10	PPB
Replicates			2446.132	0.128529	3092.145	0.138218	2975.443	0.145214
LEAD	206		1587.628	15.491	0.001	0.23930	8.05	PPB
Replicates			1325.088	0.217312	1812.664	0.253214	1625.132	0.247364
LEAD	207		2762.697	8.976	0.001	0.22526	1.04	PPB
Replicates			2512.658	0.222588	3008.569	0.226294	2766.864	0.226899
LEAD	208		4275.552	6.670	0.002	0.21958	2.05	PPB
Replicates			4029.641	0.224782	4588.147	0.216972	4208.869	0.216988
BISMUTH	209	Y	1954901.690	8.216	1954901.690	0		PPB
Replicates			1799538.259		2120288.231		1944878.580	
QC Calculated Values				79.669				
KRYPTON	83		51.667	25.194	5.556	0		MG/L
Replicates			58.334		36.667		60.000	

Sample ID: **1601011-03** Client ID: MW-107 Date/Time: 01/14/16 14:05:26

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	402972.923	15.153	402972.923	0		PPB
Replicates			332976.207		430619.574		445322.988	
QC Calculated Values				100.714				
BERYLLIUM	9		6.667	86.603	0.000	0.01070	107.51	PPB
Replicates			3.333	0.005219	13.333	0.023926	3.333	0.002964
SCANDIUM	45	Y	1801706.137	13.636	1801706.137	0		PPB
Replicates			1532740.869		2014304.742		1858072.801	
QC Calculated Values				86.255				
VANADIUM	51		4809.451	5.082	0.001	0.11782	33.59	PPB
Replicates			4706.140	0.163472	5088.566	0.096979	4633.647	0.093018
CHROMIUM	52		11454.891	1.385	0.001	0.17778	67.12	PPB
Replicates			11383.142	0.313108	11636.767	0.087662	11344.765	0.132570
MANGANESE	55		235010.016	12.510	0.130	11.54061	1.78	PPB
Replicates			203937.705	11.758905	262385.225	11.510942	238707.118	11.351985
COBALT	59		1519.561	14.145	0.001	0.08760	2.85	PPB
Replicates			1273.414	0.086251	1670.139	0.086068	1615.130	0.090481
NICKEL	60		4028.594	9.348	0.002	1.12261	5.48	PPB
Replicates			3656.224	1.193226	4409.305	1.093717	4020.252	1.080885
COPPER	63		5822.086	13.830	0.003	0.72791	0.50	PPB
Replicates			4931.771	0.724869	6499.334	0.726947	6035.154	0.731921

Sample ID: **1601011-03** Client ID: MW-107 Date/Time: 01/14/16 14:05:26

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	65		2678.141	13.915	0.001	0.67124	0.98	PPB
Replicates			2280.816	0.672118	3019.900	0.677309	2733.707	0.664305
ZINC	66		6620.727	10.842	0.004	3.14416	3.51	PPB
Replicates			5865.609	3.271512	7294.326	3.086839	6702.245	3.074115
ARSENIC	75		34391.472	11.394	0.019	16.54081	2.62	PPB
Replicates			30215.455	17.041060	37988.469	16.307227	34970.493	16.274140
SELENIUM	82		67.037	21.632	0.000	0.08965	72.72	PPB
Replicates			65.556	0.135322	82.223	0.118633	53.333	0.014990
SILVER	107		374.081	18.570	-0.000	-0.02081	14.84	PPB
Replicates			305.560	-0.024334	444.454	-0.018596	372.229	-0.019486
SILVER	109		375.933	26.233	-0.000	-0.01929	34.23	PPB
Replicates			266.670	-0.026900	458.344	-0.015896	402.786	-0.015075
CADMIUM	111		10394.902	5.903	0.003	4.17725	4.33	PPB
Replicates			9857.022	4.281448	11063.333	3.968290	10264.352	4.282027
INDIUM	113		153776.090	7.337	0.002	0		PPB
Replicates			143983.317		166114.164		151230.789	
INDIUM	115	Y	3376821.729	10.313	3376821.729	0		PPB
Replicates			3115058.610		3772060.728		3243345.848	
QC Calculated Values				82.974				
ANTIMONY	121		5234.711	9.583	0.001	0.64617	6.02	PPB
Replicates			4671.924	0.617105	5634.921	0.631076	5397.289	0.690340
BARIUM	135		166383.603	8.061	0.040	70.06595	2.52	PPB
Replicates			153341.739	69.218593	180136.305	68.880420	165672.765	72.098835
BARIUM	137		286980.735	8.716	0.069	71.24057	2.45	PPB
Replicates			262827.446	69.963919	312770.969	70.528182	285343.788	73.229607
TERBIUM	159	Y	4155364.181	8.885	4155364.181	0		PPB
Replicates			3874147.658		4573448.034		4018496.850	
QC Calculated Values				87.344				
THALLIUM	205		504.180	23.037	0.000	0.01980	25.12	PPB
Replicates			370.840	0.014449	558.349	0.020671	583.350	0.024279
LEAD	206		738.916	12.436	0.000	0.10468	11.96	PPB
Replicates			637.520	0.094810	762.529	0.100462	816.700	0.118766
LEAD	207		1352.824	11.951	0.001	0.10326	10.08	PPB
Replicates			1166.701	0.093552	1433.385	0.101987	1458.387	0.114248
LEAD	208		2054.291	13.816	0.001	0.09739	9.60	PPB
Replicates			1741.754	0.086628	2295.988	0.102047	2125.131	0.103497
BISMUTH	209	Y	2028298.871	6.507	2028298.871	0		PPB
Replicates			1921471.808		2175843.685		1987581.120	
QC Calculated Values				82.660				
KRYPTON	83		47.222	7.347	1.111	0		MG/L
Replicates			43.333		50.000		48.333	

Sample ID: **6A14005-CCV2** Client ID: CCV Date/Time: 01/14/16 14:07:10

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	405498.683	15.348	405498.683	0		PPB
Replicates			336621.935		457700.125		422173.988	
QC Calculated Values				101.345				
BERYLLIUM	9		129537.258	12.960	0.320	285.96527	2.63	PPB
Replicates			110645.419	293.469649	142746.610	278.456038	135219.746	285.970125
QC Calculated Values			95.322					
SCANDIUM	45	Y	1889516.157	13.251	1889516.157	0		PPB
Replicates			1604595.838		2074471.814		1989480.820	
QC Calculated Values				90.459				
VANADIUM	51		4630452.492	12.877	2.450	299.33377	0.79	PPB
Replicates			3958944.401	301.249012	5097931.999	300.052447	4834481.076	296.699846
QC Calculated Values			99.778					
CHROMIUM	52		4192728.138	13.436	2.214	302.57948	2.11	PPB
Replicates			3579129.402	304.141625	4686546.169	308.050681	4312508.843	295.546136
QC Calculated Values			100.860					
MANGANESE	55		6383762.461	13.331	3.378	299.83666	0.14	PPB
Replicates			5417022.233	299.629481	7019600.828	300.327181	6714664.322	299.553305
QC Calculated Values			99.946					
COBALT	59		5174128.639	12.814	2.740	301.44128	1.98	PPB
Replicates			4448122.893	304.968404	5747581.886	304.804487	5326681.137	294.550941
QC Calculated Values			100.480					
NICKEL	60		1138420.001	11.773	0.603	305.74106	2.93	PPB
Replicates			993876.349	313.781446	1258569.307	307.347526	1162814.349	296.094219
QC Calculated Values			101.914					
COPPER	63		2431837.631	11.959	1.289	298.37028	1.99	PPB
Replicates			2109101.282	304.310422	2673617.069	298.384424	2512794.543	292.415983
QC Calculated Values			99.457					
COPPER	65		1223229.287	12.669	0.648	301.17326	1.00	PPB
Replicates			1049000.319	303.953046	1345710.683	301.606351	1274976.860	297.960379
QC Calculated Values			100.391					
ZINC	66		625507.774	12.252	0.331	297.46315	1.41	PPB
Replicates			539516.032	301.823600	686605.681	297.105419	650401.607	293.460439
QC Calculated Values			99.154					
ARSENIC	75		647459.637	12.072	0.343	294.88494	1.40	PPB
Replicates			559200.332	299.562549	707920.700	293.336401	675257.880	291.755872
QC Calculated Values			98.295					
SELENIUM	82		65692.010	11.111	0.035	297.79925	2.45	PPB
Replicates			57476.929	306.190515	71431.437	294.328637	68167.663	292.878600
QC Calculated Values			99.266					

Sample ID: **6A14005-CCV2** Client ID: CCV Date/Time: 01/14/16 14:07:10

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		3762134.696	12.077	1.043	303.32973	3.88	PPB
Replicates			3242538.731	291.737618	4084853.606	302.967531	3959011.751	315.284041
QC Calculated Values			101.110					
SILVER	109		3595593.846	12.206	0.997	305.59345	3.84	PPB
Replicates			3095172.688	293.585627	3915084.316	306.128428	3776524.534	317.066310
QC Calculated Values			101.864					
CADMIUM	111		816849.861	10.643	0.227	306.95410	1.25	PPB
Replicates			727818.864	304.943603	901534.404	311.378051	821196.314	304.540650
QC Calculated Values			102.318					
INDIUM	113		964902.521	11.003	0.224	0		PPB
Replicates			851736.982		1062303.610		980666.971	
INDIUM	115	Y	3599987.242	9.637	3599987.242	0		PPB
Replicates			3230741.742		3919158.496		3650061.489	
QC Calculated Values				88.457				
ANTIMONY	121		2486937.402	10.548	0.561	299.22849	0.79	PPB
Replicates			2208016.983	296.514001	2728686.742	300.406418	2524108.480	300.765049
QC Calculated Values			99.743					
BARIUM	135		759892.764	10.075	0.171	299.68322	1.54	PPB
Replicates			674920.727	296.971402	823507.241	297.058180	781250.325	305.020070
QC Calculated Values			99.894					
BARIUM	137		1313376.121	10.699	0.296	305.30922	0.98	PPB
Replicates			1163328.784	301.858430	1441892.204	306.722791	1334907.375	307.346440
QC Calculated Values			101.770					
TERBIUM	159	Y	4434321.410	9.891	4434321.410	0		PPB
Replicates			3974833.553		4848492.429		4479638.249	
QC Calculated Values				93.207				
THALLIUM	205		6818886.930	10.270	3.055	298.80528	5.58	PPB
Replicates			6010952.240	285.612677	7252629.126	293.272840	7193079.423	317.530331
QC Calculated Values			99.602					
LEAD	206		2176277.202	9.463	0.975	295.14385	1.54	PPB
Replicates			1970981.835	289.918712	2382861.543	298.287235	2174988.227	297.225608
QC Calculated Values			98.381					
LEAD	207		4053710.985	8.871	1.816	296.99183	1.43	PPB
Replicates			3682353.573	292.513178	4400270.233	297.468811	4078509.150	300.993496
QC Calculated Values			98.997					
LEAD	208		6426977.536	7.912	2.881	298.65125	1.96	PPB
Replicates			5875568.475	295.857288	6877365.056	294.711045	6527999.075	305.385407
QC Calculated Values			99.550					
BISMUTH	209	Y	2231051.374	8.098	2231051.374	0		PPB
Replicates			2058525.173		2418879.233		2215749.715	
QC Calculated Values				90.922				

Sample ID: **6A14005-CCV2** Client ID: CCV Date/Time: 01/14/16 14:07:10

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
KRYPTON	83		72.222	10.659	26.111	0		MG/L
Replicates			76.667		76.667		63.334	

Sample ID: **6A14005-CCB2** Client ID: CCB Date/Time: 01/14/16 14:08:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	410716.986	14.593	410716.986	0		PPB
Replicates			341655.048		441378.768		449117.143	
QC Calculated Values				102.649				
BERYLLIUM	9		18.889	30.987	0.000	0.03690	23.45	PPB
Replicates			13.333	0.031125	25.000	0.046853	18.333	0.032728
SCANDIUM	45	Y	1910011.418	13.252	1910011.418	0		PPB
Replicates			1626989.401		2114692.391		1988352.460	
QC Calculated Values				91.440				
VANADIUM	51		4015.702	3.969	0.000	0.04893	89.00	PPB
Replicates			4139.998	0.099223	4071.069	0.023537	3836.040	0.024040
CHROMIUM	52		10212.434	0.701	0.000	0.03854	284.83	PPB
Replicates			10293.629	0.162792	10158.490	-0.045356	10185.184	-0.001806
MANGANESE	55		2303.046	12.488	0.001	0.05713	50.00	PPB
Replicates			2608.674	0.090032	2262.756	0.042686	2037.708	0.038674
COBALT	59		900.597	18.155	0.000	0.04814	35.47	PPB
Replicates			1078.391	0.067770	866.704	0.039940	756.695	0.036718
NICKEL	60		262.041	20.674	0.000	0.05614	42.78	PPB
Replicates			316.672	0.083336	261.115	0.047284	208.336	0.037812
COPPER	63		615.760	20.137	0.000	0.05684	47.20	PPB
Replicates			758.362	0.087805	555.571	0.040712	533.348	0.041989
COPPER	65		333.339	18.764	0.000	0.06343	41.20	PPB
Replicates			394.452	0.092942	336.117	0.054117	269.448	0.043223
ZINC	66		636.131	9.657	0.000	0.13759	39.90	PPB
Replicates			658.355	0.197810	683.357	0.124611	566.683	0.090349
ARSENIC	75		-112.660	27.203	0.000	0.05118	18.66	PPB
Replicates			-94.918	0.051500	-148.048	0.041472	-95.015	0.060569
SELENIUM	82		68.704	10.979	0.000	0.07886	38.86	PPB
Replicates			61.667	0.093680	67.778	0.043625	76.667	0.099289
SILVER	107		1915.001	14.681	0.000	0.09608	28.20	PPB
Replicates			2102.999	0.126033	2050.210	0.088922	1591.793	0.073282
SILVER	109		1719.595	15.796	0.000	0.08805	32.65	PPB
Replicates			1933.520	0.120252	1811.275	0.078907	1413.989	0.064984
CADMIUM	111		127.630	7.111	0.000	0.04455	17.33	PPB
Replicates			138.109	0.052824	122.426	0.037543	122.354	0.043268
INDIUM	113		163318.762	10.630	-0.000	0		PPB
Replicates			148287.196		182322.052		159347.039	

Sample ID: **6A14005-CCB2** Client ID: CCB Date/Time: 01/14/16 14:08:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	115	Y	3763691.083	10.672	3763691.083	0		PPB
Replicates			3417854.559		4204264.614		3668954.076	
QC Calculated Values				92.480				
ANTIMONY	121		1884.903	16.926	0.000	0.19693	26.93	PPB
Replicates			2237.750	0.258160	1800.162	0.165040	1616.797	0.167600
BARIUM	135		182.780	24.080	0.000	0.06203	32.15	PPB
Replicates			221.669	0.083654	191.669	0.058088	135.001	0.044359
BARIUM	137		341.673	27.474	0.000	0.07013	38.28	PPB
Replicates			445.010	0.101001	318.338	0.057064	261.670	0.052311
TERBIUM	159	Y	4550216.605	9.226	4550216.605	0		PPB
Replicates			4194279.688		5013175.261		4443194.866	
QC Calculated Values				95.643				
THALLIUM	205		1461.226	33.612	0.001	0.05647	43.13	PPB
Replicates			2012.703	0.084492	1300.085	0.044611	1070.891	0.040322
LEAD	206		484.734	17.371	0.000	0.05649	25.36	PPB
Replicates			575.017	0.072988	470.844	0.049325	408.342	0.047169
LEAD	207		869.464	22.511	0.000	0.05454	31.12	PPB
Replicates			1079.196	0.073971	837.518	0.047076	691.679	0.042584
LEAD	208		1400.061	24.025	0.001	0.05430	34.31	PPB
Replicates			1775.093	0.075775	1300.050	0.044634	1125.039	0.042488
BISMUTH	209	Y	2382589.958	8.101	2382589.958	0		PPB
Replicates			2213976.114		2593109.482		2340684.280	
QC Calculated Values				97.098				
KRYPTON	83		44.445	15.613	-1.667	0		MG/L
Replicates			46.667		36.667		50.000	

Sample ID: **1601011-04** Client ID: MW-108 Date/Time: 01/14/16 14:10:37

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	372279.034	14.649	372279.034	0		PPB
Replicates			313879.916		421878.571		381078.614	
QC Calculated Values				93.042				
BERYLLIUM	9		16.111	31.604	0.000	0.03652	51.10	PPB
Replicates			21.667	0.057913	15.000	0.028026	11.667	0.023615
SCANDIUM	45	Y	1808428.273	12.565	1808428.273	0		PPB
Replicates			1584432.228		2038764.677		1802087.913	
QC Calculated Values				86.577				
VANADIUM	51		4633.923	2.354	0.001	0.10428	33.71	PPB
Replicates			4593.661	0.142558	4757.423	0.073431	4550.685	0.096859
CHROMIUM	52		11754.683	1.481	0.001	0.19510	53.49	PPB
Replicates			11688.494	0.306333	11952.138	0.099330	11623.418	0.179627

Sample ID: **1601011-04** Client ID: MW-108 Date/Time: 01/14/16 14:10:37

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
MANGANESE	55		1868815.077	10.994	1.034	91.80422	2.23	PPB
Replicates			1649868.849	92.383700	2057402.461	89.529038	1899173.922	93.499932
COBALT	59		3861.862	9.942	0.002	0.23048	5.29	PPB
Replicates			3588.977	0.244050	4300.925	0.226934	3695.683	0.220466
NICKEL	60		3565.462	16.406	0.002	0.98109	5.21	PPB
Replicates			3103.259	0.976990	4223.114	1.034144	3370.012	0.932137
COPPER	63		5008.667	8.398	0.003	0.62351	4.82	PPB
Replicates			4637.186	0.657517	5465.382	0.600563	4923.434	0.612450
COPPER	65		2474.382	10.104	0.001	0.61775	3.04	PPB
Replicates			2205.799	0.627530	2700.365	0.596071	2516.983	0.629639
ZINC	66		2642.945	11.106	0.001	1.14945	4.75	PPB
Replicates			2419.737	1.206036	2975.443	1.145176	2533.654	1.097143
ARSENIC	75		415.954	12.095	0.000	0.29957	3.42	PPB
Replicates			382.088	0.308849	473.761	0.301308	392.012	0.288553
SELENIUM	82		92.408	10.349	0.000	0.20832	17.13	PPB
Replicates			88.334	0.246365	103.334	0.203024	85.556	0.175577
SILVER	107		923.191	7.918	0.000	0.02717	26.65	PPB
Replicates			936.155	0.035526	988.938	0.022911	844.480	0.023063
SILVER	109		896.337	17.047	0.000	0.02930	65.31	PPB
Replicates			1050.055	0.051370	894.484	0.019105	744.472	0.017417
CADMIUM	111		93.110	18.318	0.000	0.03578	22.40	PPB
Replicates			105.758	0.044613	99.858	0.033745	73.712	0.028979
INDIUM	113		145339.539	10.536	-0.000	0		PPB
Replicates			133620.126		162666.513		139731.978	
INDIUM	115	Y	3369518.129	11.171	3369518.129	0		PPB
Replicates			3079574.005		3794918.977		3234061.405	
QC Calculated Values				82.794				
ANTIMONY	121		1512.615	5.966	0.000	0.16948	11.74	PPB
Replicates			1595.961	0.190652	1525.116	0.151172	1416.767	0.166622
BARIUM	135		156529.470	9.530	0.038	66.15365	1.55	PPB
Replicates			145871.217	65.064711	173576.817	66.299253	150140.375	67.096971
BARIUM	137		269358.350	8.880	0.065	67.15638	1.33	PPB
Replicates			252674.049	66.462753	296760.629	66.844274	258640.373	68.162125
TERBIUM	159	Y	4137437.180	9.232	4137437.180	0		PPB
Replicates			3920659.630		4578457.771		3913194.139	
QC Calculated Values				86.967				
THALLIUM	205		708.360	26.419	0.000	0.02991	34.70	PPB
Replicates			908.375	0.041690	679.190	0.025918	537.514	0.022116
LEAD	206		805.588	5.531	0.000	0.11450	3.76	PPB
Replicates			795.865	0.119432	854.203	0.112500	766.696	0.111557
LEAD	207		1543.115	3.199	0.001	0.11864	3.78	PPB
Replicates			1512.557	0.122646	1600.064	0.113786	1516.724	0.119485

Sample ID: **1601011-04** Client ID: MW-108 Date/Time: 01/14/16 14:10:37

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LEAD	208		2464.065	3.613	0.001	0.11854	3.50	PPB
Replicates			2412.669	0.122478	2566.860	0.114211	2412.666	0.118933
BISMUTH	209	Y	2032098.693	6.822	2032098.693	0		PPB
Replicates			1926563.827		2189093.530		1980638.721	
QC Calculated Values				82.815				
KRYPTON	83		43.333	11.538	-2.778	0		MG/L
Replicates			43.333		48.333		38.333	

Sample ID: **1601011-05** Client ID: MW-109 Date/Time: 01/14/16 14:12:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	365547.847	11.051	365547.847	0		PPB
Replicates			325909.013		406658.795		364075.734	
QC Calculated Values				91.360				
BERYLLIUM	9		8.889	21.651	0.000	0.01847	36.24	PPB
Replicates			10.000	0.023677	6.667	0.010918	10.000	0.020805
SCANDIUM	45	Y	1783595.671	12.868	1783595.671	0		PPB
Replicates			1559899.127		2018526.993		1772360.895	
QC Calculated Values				85.388				
VANADIUM	51		4391.588	3.910	0.001	0.09183	35.82	PPB
Replicates			4346.182	0.128745	4581.457	0.065638	4247.124	0.081107
CHROMIUM	52		11382.030	1.102	0.001	0.17914	57.80	PPB
Replicates			11247.989	0.283595	11496.605	0.076520	11401.496	0.177299
MANGANESE	55		330497.452	10.177	0.185	16.43559	3.32	PPB
Replicates			294241.129	16.692203	360685.298	15.809749	336565.929	16.804821
COBALT	59		2654.798	6.360	0.001	0.15956	7.30	PPB
Replicates			2518.650	0.172483	2843.738	0.149841	2602.005	0.156363
NICKEL	60		6112.069	11.356	0.003	1.72563	6.47	PPB
Replicates			5712.742	1.840096	6913.500	1.719911	5709.963	1.616889
COPPER	63		5881.370	9.742	0.003	0.74542	3.23	PPB
Replicates			5320.860	0.769651	6465.979	0.721558	5857.270	0.745052
COPPER	65		2892.089	11.819	0.002	0.73484	1.89	PPB
Replicates			2533.654	0.735437	3214.405	0.720655	2928.206	0.748413
ZINC	66		2604.044	7.725	0.001	1.15185	6.68	PPB
Replicates			2439.186	1.238807	2828.178	1.092791	2544.768	1.123955
ARSENIC	75		124.654	48.116	0.000	0.16444	23.09	PPB
Replicates			193.604	0.208279	95.813	0.142418	84.545	0.142620
SELENIUM	82		104.630	5.450	0.000	0.27761	29.06	PPB
Replicates			109.445	0.369639	106.112	0.219143	98.334	0.244062
SILVER	107		553.719	10.138	-0.000	-0.00454	42.90	PPB
Replicates			544.459	-0.002325	613.908	-0.005305	502.790	-0.005987
SILVER	109		485.197	10.777	-0.000	-0.00841	54.49	PPB
Replicates			511.124	-0.003132	519.458	-0.010725	425.009	-0.011375

Sample ID: **1601011-05** Client ID: MW-109 Date/Time: 01/14/16 14:12:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CADMIUM	111		72.151	40.968	0.000	0.02731	43.63	PPB
Replicates			93.491	0.038522	84.550	0.028615	38.412	0.014796
INDIUM	113		143014.296	11.371	-0.001	0		PPB
Replicates			133100.768		161781.495		134160.624	
INDIUM	115	Y	3335236.618	10.871	3335236.618	0		PPB
Replicates			3132802.284		3753808.636		3119098.934	
QC Calculated Values				81.952				
ANTIMONY	121		897.263	6.971	0.000	0.09046	14.79	PPB
Replicates			958.379	0.105309	900.041	0.079351	833.368	0.086730
BARIUM	135		198573.116	9.258	0.048	84.47345	3.02	PPB
Replicates			181919.825	82.059018	218300.359	84.226261	195499.164	87.135079
BARIUM	137		342087.285	9.171	0.083	85.80892	1.87	PPB
Replicates			316553.920	84.204487	377110.697	85.803063	332597.237	87.419216
TERBIUM	159	Y	4111160.617	8.898	4111160.617	0		PPB
Replicates			3877045.447		4532682.525		3923753.879	
QC Calculated Values				86.415				
THALLIUM	205		590.295	11.606	0.000	0.02457	14.39	PPB
Replicates			641.687	0.028444	616.686	0.023769	512.513	0.021511
LEAD	206		436.121	8.126	0.000	0.06096	15.06	PPB
Replicates			470.844	0.069016	400.008	0.050966	437.510	0.062895
LEAD	207		784.738	4.453	0.000	0.05868	2.22	PPB
Replicates			766.682	0.059925	825.017	0.057328	762.515	0.058782
LEAD	208		1193.097	5.971	0.001	0.05471	0.41	PPB
Replicates			1145.874	0.054876	1275.045	0.054450	1158.373	0.054798
BISMUTH	209	Y	1993683.869	6.347	1993683.869	0		PPB
Replicates			1909314.608		2139171.869		1932565.130	
QC Calculated Values				81.249				
KRYPTON	83		43.889	29.497	-2.222	0		MG/L
Replicates			33.333		40.000		58.334	

Sample ID: **6A14005-CRL3** Client ID: LLCCV Date/Time: 01/14/16 14:14:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	417417.971	17.092	417417.971	0		PPB
Replicates			336427.210		470963.516		444863.186	
QC Calculated Values				104.324				
BERYLLIUM	9		457.788	10.402	0.001	0.98446	8.52	PPB
Replicates			408.342	1.079984	503.346	0.950520	461.677	0.922875
QC Calculated Values			98.446					
SCANDIUM	45	Y	1918130.860	13.171	1918130.860	0		PPB
Replicates			1643260.007		2140207.888		1970924.685	
QC Calculated Values				91.829				

Sample ID: **6A14005-CRL3** Client ID: LLCCV Date/Time: 01/14/16 14:14:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
VANADIUM	51		88462.978	12.327	0.044	5.42780	0.92	PPB
Replicates			76571.517	5.481796	97993.541	5.382778	90823.877	5.418815
QC Calculated Values			108.556					
CHROMIUM	52		40542.991	8.730	0.016	2.19882	6.26	PPB
Replicates			36744.049	2.354073	43747.148	2.091691	41137.775	2.150693
QC Calculated Values			109.941					
MANGANESE	55		24831.061	11.479	0.012	1.09868	2.31	PPB
Replicates			21615.002	1.115356	27044.855	1.069446	25833.325	1.111226
QC Calculated Values			109.868					
COBALT	59		18935.890	12.989	0.010	1.08125	1.32	PPB
Replicates			16368.385	1.090699	21270.932	1.088257	19168.354	1.064806
QC Calculated Values			108.125					
NICKEL	60		4094.361	9.217	0.002	1.07010	4.24	PPB
Replicates			3672.897	1.117088	4400.968	1.026504	4209.219	1.066694
QC Calculated Values			107.010					
COPPER	63		18905.121	13.938	0.010	2.26157	3.26	PPB
Replicates			16368.942	2.286249	21628.921	2.319759	18717.501	2.178713
QC Calculated Values			113.079					
COPPER	65		9102.334	12.801	0.005	2.18763	1.03	PPB
Replicates			7869.762	2.207008	10185.740	2.193112	9251.500	2.162777
QC Calculated Values			109.382					
ZINC	66		4863.231	12.115	0.002	2.11376	1.62	PPB
Replicates			4203.661	2.131972	5337.535	2.074319	5048.496	2.134993
QC Calculated Values			105.688					
ARSENIC	75		2070.134	16.256	0.001	1.02640	3.81	PPB
Replicates			1687.739	0.984176	2321.094	1.033543	2201.567	1.061473
QC Calculated Values			102.640					
SELENIUM	82		1186.182	7.840	0.001	5.08599	6.02	PPB
Replicates			1080.058	5.391975	1253.412	4.779341	1225.075	5.086652
QC Calculated Values			101.720					
SILVER	107		14338.119	10.064	0.004	1.07147	3.70	PPB
Replicates			12747.008	1.049368	15562.100	1.047796	14705.249	1.117235
QC Calculated Values			107.147					
SILVER	109		13669.577	9.466	0.004	1.07775	5.12	PPB
Replicates			12190.760	1.058166	14593.975	1.035030	14223.998	1.140053
QC Calculated Values			107.775					
CADMIUM	111		2874.861	21.802	0.001	1.03936	11.49	PPB
Replicates			2347.501	0.943228	3567.809	1.173010	2709.273	1.001844
QC Calculated Values			103.936					
INDIUM	113		162124.405	12.054	0.000	0		PPB
Replicates			144186.209		182950.032		159236.973	

Sample ID: **6A14005-CRL3** Client ID: LLCCV Date/Time: 01/14/16 14:14:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	115	Y	3708880.903	10.171	3708880.903	0		PPB
Replicates			3362236.412		4110627.226		3653779.072	
QC Calculated Values				91.133				
ANTIMONY	121		18084.553	12.108	0.004	2.13032	3.75	PPB
Replicates			15791.626	2.045544	20153.621	2.140961	18308.411	2.204458
QC Calculated Values			106.516					
BARIUM	135		26174.930	8.450	0.006	10.24345	2.32	PPB
Replicates			23943.631	10.285272	28366.844	9.987352	26214.315	10.457711
QC Calculated Values			102.434					
BARIUM	137		45818.041	8.806	0.010	10.57153	1.52	PPB
Replicates			41989.638	10.637334	50031.512	10.388447	45432.974	10.688819
QC Calculated Values			105.715					
TERBIUM	159	Y	4470682.934	10.163	4470682.934	0		PPB
Replicates			4068152.187		4963323.464		4380573.151	
QC Calculated Values				93.972				
THALLIUM	205		25155.454	10.751	0.011	1.04410	5.07	PPB
Replicates			22091.040	0.998512	27207.796	1.031593	26167.526	1.102186
QC Calculated Values			104.410					
LEAD	206		8170.020	8.793	0.003	1.04926	0.83	PPB
Replicates			7561.191	1.057044	8962.348	1.050817	7986.521	1.039914
QC Calculated Values			104.926					
LEAD	207		15068.251	9.787	0.006	1.04433	0.88	PPB
Replicates			13750.606	1.037945	16661.143	1.054901	14793.004	1.040132
QC Calculated Values			104.433					
LEAD	208		23393.844	9.647	0.010	1.02614	1.08	PPB
Replicates			21217.365	1.013495	25723.359	1.030685	23240.809	1.034234
QC Calculated Values			102.614					
BISMUTH	209	Y	2345379.107	8.913	2345379.107	0		PPB
Replicates			2154456.140		2568748.546		2312932.635	
QC Calculated Values				95.582				
KRYPTON	83		41.111	10.202	-5.000	0		MG/L
Replicates			36.667		45.000		41.667	

Sample ID: **6A14005-CCV3** Client ID: CCV Date/Time: 01/14/16 14:15:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	389868.825	15.373	389868.825	0		PPB
Replicates			322695.616		437876.392		409034.467	
QC Calculated Values				97.438				

Sample ID: **6A14005-CCV3** Client ID: CCV Date/Time: 01/14/16 14:15:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BERYLLIUM	9		127263.428	13.642	0.327	292.04786	2.34	PPB
Replicates			108286.474	299.608014	142347.649	290.249094	131156.160	286.286464
QC Calculated Values			97.349					
SCANDIUM	45	Y	1917228.381	14.363	1917228.381	0		PPB
Replicates			1610563.243		2143338.178		1997783.723	
QC Calculated Values				91.785				
VANADIUM	51		4677717.624	13.379	2.441	298.20046	1.06	PPB
Replicates			3979264.641	301.673636	5187589.157	295.515896	4866299.075	297.411858
QC Calculated Values			99.400					
CHROMIUM	52		4212316.579	12.771	2.196	300.18035	3.24	PPB
Replicates			3656019.336	309.536774	4729824.882	300.889948	4251105.520	290.114338
QC Calculated Values			100.060					
MANGANESE	55		6513211.227	12.264	3.404	302.19450	2.51	PPB
Replicates			5641833.719	310.910103	7210860.696	298.597199	6686939.267	297.076188
QC Calculated Values			100.731					
COBALT	59		5274248.723	13.095	2.755	303.06951	1.79	PPB
Replicates			4523405.421	308.980845	5882504.033	301.936204	5416836.714	298.291474
QC Calculated Values			101.023					
NICKEL	60		1172798.850	13.686	0.612	310.10458	0.76	PPB
Replicates			993025.505	312.351135	1301715.276	307.670210	1223655.769	310.292386
QC Calculated Values			103.368					
COPPER	63		2480390.718	12.958	1.296	299.95811	1.51	PPB
Replicates			2122081.958	305.048919	2743316.404	296.325809	2575773.793	298.499592
QC Calculated Values			99.986					
COPPER	65		1248138.771	13.489	0.652	302.96167	1.03	PPB
Replicates			1061875.402	306.543814	1389471.983	301.408431	1293068.929	300.932756
QC Calculated Values			100.987					
ZINC	66		643955.226	11.778	0.337	302.33237	2.97	PPB
Replicates			561039.372	312.707537	709820.467	297.282046	661005.838	297.007533
QC Calculated Values			100.777					
ARSENIC	75		668528.455	11.290	0.350	300.69167	3.38	PPB
Replicates			585227.797	312.339486	732374.898	293.718595	687982.671	296.016931
QC Calculated Values			100.231					
SELENIUM	82		67567.840	10.989	0.035	302.32307	3.83	PPB
Replicates			59478.583	315.686856	74072.771	295.406334	69152.166	295.876020
QC Calculated Values			100.774					
SILVER	107		3931357.305	11.242	1.045	303.92720	4.90	PPB
Replicates			3421084.122	291.898800	4179713.693	299.295689	4193274.102	320.587114
QC Calculated Values			101.309					

Sample ID: **6A14005-CCV3** Client ID: CCV Date/Time: 01/14/16 14:15:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	109		3693805.875	11.154	0.982	301.00555	4.10	PPB
Replicates			3219643.776	289.612901	3964520.534	299.286244	3897253.314	314.117512
QC Calculated Values			100.335					
CADMIUM	111		845920.948	9.111	0.225	304.78957	0.38	PPB
Replicates			763711.224	303.449645	916533.594	305.625295	857518.027	305.293778
QC Calculated Values			101.597					
INDIUM	113		993062.645	10.058	0.221	0		PPB
Replicates			886106.105		1083910.670		1009171.160	
INDIUM	115	Y	3756072.565	8.752	3756072.565	0		PPB
Replicates			3406755.689		4059359.939		3802102.067	
QC Calculated Values				92.293				
ANTIMONY	121		2578690.150	10.022	0.559	298.29739	1.88	PPB
Replicates			2301539.782	294.988614	2813054.104	295.131404	2621476.563	304.772167
QC Calculated Values			99.432					
BARIUM	135		781868.309	9.613	0.169	296.41689	1.23	PPB
Replicates			703519.391	295.448673	853375.744	293.357183	788709.790	300.444816
QC Calculated Values			98.806					
BARIUM	137		1352479.639	8.952	0.293	302.51748	2.04	PPB
Replicates			1222172.537	302.675704	1461509.096	296.276261	1373757.283	308.600467
QC Calculated Values			100.839					
TERBIUM	159	Y	4614540.976	10.012	4614540.976	0		PPB
Replicates			4164614.185		5087731.938		4591276.804	
QC Calculated Values				96.995				
THALLIUM	205		6941379.182	9.983	2.996	293.00762	3.99	PPB
Replicates			6156704.729	285.703634	7469369.057	286.832466	7198063.759	306.486760
QC Calculated Values			97.669					
LEAD	206		2228167.147	9.703	0.961	291.11256	1.48	PPB
Replicates			2003798.437	287.859675	2435169.535	289.489603	2245533.470	295.988405
QC Calculated Values			97.038					
LEAD	207		4144274.283	8.716	1.789	292.60334	2.07	PPB
Replicates			3757633.401	291.519467	4473102.964	287.169851	4202086.484	299.120716
QC Calculated Values			97.534					
LEAD	208		6588657.729	7.894	2.846	295.01386	1.95	PPB
Replicates			6049847.172	297.515829	7087842.222	288.440540	6628283.794	299.085224
QC Calculated Values			98.338					
BISMUTH	209	Y	2317349.250	9.509	2317349.250	0		PPB
Replicates			2107768.693		2547100.176		2297178.882	
QC Calculated Values				94.439				
KRYPTON	83		72.222	1.332	26.111	0		MG/L
Replicates			71.667		73.334		71.667	

Sample ID: **6A14005-CCB3** Client ID: CCB Date/Time: 01/14/16 14:17:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	381743.055	13.365	381743.055	0		PPB
Replicates			327673.629		429038.755		388516.780	
QC Calculated Values				95.408				
BERYLLIUM	9		22.222	51.052	0.000	0.05136	69.35	PPB
Replicates			35.000	0.091649	13.333	0.024028	18.333	0.038413
SCANDIUM	45	Y	1932313.898	11.355	1932313.898	0		PPB
Replicates			1695253.553		2128269.111		1973419.030	
QC Calculated Values				92.508				
VANADIUM	51		4002.406	7.900	0.000	0.04461	103.85	PPB
Replicates			4297.018	0.098020	4041.853	0.020359	3668.346	0.015441
CHROMIUM	52		10270.831	3.006	0.000	0.03207	318.22	PPB
Replicates			10553.900	0.148956	10316.986	-0.039366	9941.606	-0.013377
MANGANESE	55		2130.785	12.881	0.001	0.04682	43.85	PPB
Replicates			2325.270	0.069461	2250.253	0.041559	1816.832	0.029427
COBALT	59		896.153	28.834	0.000	0.04710	43.03	PPB
Replicates			1151.733	0.069593	901.707	0.041461	635.020	0.030251
NICKEL	60		242.596	9.739	0.000	0.04934	28.02	PPB
Replicates			269.448	0.065252	233.336	0.040273	225.003	0.042492
COPPER	63		619.464	22.201	0.000	0.05564	43.90	PPB
Replicates			755.584	0.083079	622.242	0.047577	480.567	0.036267
COPPER	65		292.597	5.229	0.000	0.05146	22.48	PPB
Replicates			308.338	0.064783	291.671	0.043936	277.782	0.045663
ZINC	66		569.461	7.986	0.000	0.10061	27.32	PPB
Replicates			558.349	0.130191	619.464	0.095795	530.570	0.075850
ARSENIC	75		-118.599	59.097	0.000	0.04966	59.04	PPB
Replicates			-58.679	0.071887	-101.447	0.060671	-195.670	0.016430
SELENIUM	82		71.297	5.849	0.000	0.08830	50.91	PPB
Replicates			71.111	0.128282	67.222	0.039643	75.556	0.096968
SILVER	107		1919.631	12.792	0.000	0.09284	29.77	PPB
Replicates			2136.339	0.124452	1969.638	0.080815	1652.914	0.073239
SILVER	109		1782.569	15.265	0.000	0.08928	31.46	PPB
Replicates			1980.752	0.120170	1894.624	0.082412	1472.331	0.065270
CADMIUM	111		131.266	24.951	0.000	0.04508	35.91	PPB
Replicates			168.939	0.063408	109.550	0.032741	115.308	0.039081
INDIUM	113		164546.526	8.640	-0.001	0		PPB
Replicates			151235.019		179522.073		162882.486	
INDIUM	115	Y	3866047.526	10.176	3866047.526	0		PPB
Replicates			3502994.633		4284015.449		3811132.496	
QC Calculated Values				94.995				
ANTIMONY	121		1670.976	16.909	0.000	0.16817	25.30	PPB
Replicates			1925.185	0.216321	1720.981	0.152594	1366.760	0.135608
BARIUM	135		159.446	18.998	0.000	0.05243	30.96	PPB
Replicates			193.335	0.071162	150.001	0.042404	135.001	0.043728

Sample ID: **6A14005-CCB3** Client ID: CCB Date/Time: 01/14/16 14:17:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		277.782	22.533	0.000	0.05427	32.38	PPB
Replicates			338.339	0.074071	281.671	0.048250	213.336	0.040503
TERBIUM	159	Y	4617291.420	9.960	4617291.420	0		PPB
Replicates			4229789.884		5125452.313		4496632.063	
QC Calculated Values				97.053				
THALLIUM	205		1464.004	32.500	0.001	0.05623	40.52	PPB
Replicates			1954.358	0.081584	1433.436	0.049653	1004.217	0.037456
LEAD	206		404.175	16.366	0.000	0.04585	21.29	PPB
Replicates			454.177	0.056223	429.176	0.044471	329.172	0.036847
LEAD	207		766.682	21.922	0.000	0.04715	28.92	PPB
Replicates			920.855	0.062016	791.682	0.044197	587.509	0.035228
LEAD	208		1309.776	25.835	0.000	0.05001	34.47	PPB
Replicates			1633.412	0.068849	1337.554	0.046145	958.361	0.035027
BISMUTH	209	Y	2386710.973	7.898	2386710.973	0		PPB
Replicates			2222478.967		2592535.669		2345118.283	
QC Calculated Values				97.266				
KRYPTON	83		51.111	16.086	5.000	0		MG/L
Replicates			56.667		41.667		55.000	

Sample ID: **1601011-06RE1** Client ID: MW-110 3X Date/Time: 01/14/16 14:23:58

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	420726.780	19.479	420726.780	0		PPB
Replicates			326556.290		459721.415		475902.635	
QC Calculated Values				105.151				
BERYLLIUM	9		26.111	31.487	0.000	0.05073	16.01	PPB
Replicates			16.667	0.041850	31.667	0.057782	30.000	0.052564
SCANDIUM	45	Y	1992772.967	13.521	1992772.967	0		PPB
Replicates			1682288.078		2165395.797		2130635.027	
QC Calculated Values				95.402				
VANADIUM	51		3503.401	3.390	0.000	0.00648	581.28	PPB
Replicates			3600.347	0.049808	3538.946	-0.011997	3370.910	-0.018375
CHROMIUM	52		10367.040	2.788	0.000	0.01950	598.22	PPB
Replicates			10530.542	0.153616	10537.215	-0.036826	10033.364	-0.058295
MANGANESE	55		8614475.847	9.894	4.338	385.11985	4.39	PPB
Replicates			7654696.211	403.865486	9282849.117	380.495650	8905882.213	370.998412
COBALT	59		221475.506	11.025	0.111	12.25224	2.80	PPB
Replicates			193448.185	12.645573	238157.579	12.094650	232820.754	12.016489
NICKEL	60		115752.955	11.080	0.058	29.48348	2.68	PPB
Replicates			100954.251	30.386994	123648.641	28.913752	122655.973	29.149686
COPPER	63		2140.972	11.649	0.001	0.22913	2.85	PPB
Replicates			1858.506	0.235670	2330.827	0.229106	2233.583	0.222604

Sample ID: **1601011-06RE1** Client ID: MW-110 3X Date/Time: 01/14/16 14:23:58

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	65		1312.124	13.267	0.001	0.28646	1.21	PPB
Replicates			1111.173	0.287332	1408.433	0.282642	1416.767	0.289395
ZINC	66		225654.561	11.614	0.113	101.73585	2.44	PPB
Replicates			195424.390	104.169646	239574.722	99.204641	241964.573	101.833271
ARSENIC	75		-81.497	37.638	0.000	0.06483	29.29	PPB
Replicates			-112.821	0.044003	-51.517	0.081187	-80.154	0.069304
SELENIUM	82		71.482	4.749	0.000	0.08144	71.23	PPB
Replicates			74.445	0.147998	72.222	0.054763	67.778	0.041573
SILVER	107		739.843	15.161	0.000	0.00547	182.27	PPB
Replicates			766.696	0.013100	836.146	0.009114	616.686	-0.005809
SILVER	109		634.279	2.916	-0.000	-0.00036	1619.06	PPB
Replicates			655.577	0.006314	622.242	-0.004523	625.020	-0.002873
CADMIUM	111		84.901	26.148	0.000	0.02936	30.01	PPB
Replicates			93.867	0.035721	101.217	0.033051	59.621	0.019302
INDIUM	113		159187.718	7.217	-0.001	0		PPB
Replicates			146177.305		167940.118		163445.731	
INDIUM	115	Y	3704611.868	7.743	3704611.868	0		PPB
Replicates			3379725.050		3922977.709		3811132.846	
QC Calculated Values				91.028				
ANTIMONY	121		423.620	13.957	0.000	0.02254	16.99	PPB
Replicates			370.840	0.020452	412.509	0.020202	487.512	0.026956
BARIUM	135		17680.120	7.631	0.004	6.73516	2.79	PPB
Replicates			16141.350	6.708399	18660.728	6.935354	18238.283	6.561732
BARIUM	137		30650.990	7.985	0.007	6.88328	0.94	PPB
Replicates			27850.395	6.826227	31723.573	6.953184	32379.002	6.870439
TERBIUM	159	Y	4585939.633	7.428	4585939.633	0		PPB
Replicates			4202874.826		4700066.686		4854877.388	
QC Calculated Values				96.394				
THALLIUM	205		205.558	13.032	0.000	0.00460	37.36	PPB
Replicates			225.003	0.006310	216.669	0.004605	175.002	0.002876
LEAD	206		281.948	15.940	0.000	0.03231	14.49	PPB
Replicates			250.003	0.031282	262.503	0.028226	333.339	0.037417
LEAD	207		533.341	17.661	0.000	0.03298	15.19	PPB
Replicates			454.172	0.030501	508.340	0.029695	637.510	0.038749
LEAD	208		869.467	3.903	0.000	0.03290	7.66	PPB
Replicates			845.856	0.035449	854.188	0.030408	908.356	0.032847
BISMUTH	209	Y	2246248.703	7.590	2246248.703	0		PPB
Replicates			2049396.343		2346005.084		2343344.682	
QC Calculated Values				91.542				
KRYPTON	83		48.333	23.890	2.222	0		MG/L
Replicates			61.667		41.667		41.667	

Sample ID: **6A14005-CRL4** Client ID: LLCCV Date/Time: 01/14/16 14:25:42

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	407904.838	13.992	407904.838	0		PPB
Replicates			342167.117		436739.945		444807.453	
QC Calculated Values				101.946				
BERYLLIUM	9		431.676	10.411	0.001	0.94475	4.34	PPB
Replicates			380.007	0.987869	461.677	0.940110	453.344	0.906264
QC Calculated Values			94.475					
SCANDIUM	45	Y	1856871.324	12.727	1856871.324	0		PPB
Replicates			1585883.372		2020164.935		1964565.664	
QC Calculated Values				88.896				
VANADIUM	51		85761.103	12.255	0.044	5.43396	0.65	PPB
Replicates			73670.011	5.464237	92704.742	5.395334	90908.555	5.442306
QC Calculated Values			108.679					
CHROMIUM	52		38847.965	9.283	0.016	2.16645	4.95	PPB
Replicates			34698.428	2.288349	41226.473	2.087164	40618.995	2.123837
QC Calculated Values			108.322					
MANGANESE	55		25468.667	8.747	0.013	1.16985	4.78	PPB
Replicates			22976.365	1.233803	27266.289	1.145833	26163.348	1.129904
QC Calculated Values			116.985					
COBALT	59		18474.451	12.556	0.010	1.08959	0.60	PPB
Replicates			15802.476	1.091088	19971.590	1.082469	19649.286	1.095201
QC Calculated Values			108.959					
NICKEL	60		4105.479	11.297	0.002	1.10640	2.22	PPB
Replicates			3570.082	1.125211	4362.062	1.078652	4384.294	1.115344
QC Calculated Values			110.640					
COPPER	63		17969.994	12.145	0.010	2.22181	0.82	PPB
Replicates			15481.419	2.240117	19557.996	2.221448	18870.566	2.203870
QC Calculated Values			111.091					
COPPER	65		8726.982	10.327	0.005	2.17056	3.03	PPB
Replicates			7716.865	2.242744	9448.906	2.155014	9015.173	2.113908
QC Calculated Values			108.528					
ZINC	66		4628.855	9.003	0.002	2.08144	4.94	PPB
Replicates			4170.314	2.196212	4984.575	2.050498	4731.675	1.997595
QC Calculated Values			104.072					
ARSENIC	75		2006.632	14.455	0.001	1.02883	2.44	PPB
Replicates			1671.857	1.007501	2165.120	1.022575	2182.919	1.056424
QC Calculated Values			102.883					
SELENIUM	82		1152.845	12.012	0.001	5.08481	2.43	PPB
Replicates			993.383	5.127858	1222.297	4.945284	1242.855	5.181283
QC Calculated Values			101.696					

Sample ID: **6A14005-CRL4** Client ID: LLCCV Date/Time: 01/14/16 14:25:42

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		13912.533	11.405	0.004	1.08970	7.66	PPB
Replicates			12229.696	1.069820	14126.638	1.017906	15381.265	1.181364
QC Calculated Values			108.970					
SILVER	109		13295.949	11.603	0.004	1.09646	4.83	PPB
Replicates			11520.521	1.061802	14057.095	1.070148	14310.232	1.157427
QC Calculated Values			109.646					
CADMIUM	111		2838.401	12.613	0.001	1.08106	4.74	PPB
Replicates			2425.024	1.034619	3044.220	1.072466	3045.960	1.136110
QC Calculated Values			108.106					
INDIUM	113		156030.632	9.725	0.000	0		PPB
Replicates			139955.910		170105.425		158030.560	
INDIUM	115	Y	3541938.823	9.645	3541938.823	0		PPB
Replicates			3167021.809		3835620.538		3623174.123	
QC Calculated Values				87.031				
ANTIMONY	121		17778.386	9.587	0.004	2.17769	3.65	PPB
Replicates			15812.492	2.139610	18679.931	2.124507	18842.736	2.268954
QC Calculated Values			108.885					
BARIUM	135		25602.957	10.122	0.006	10.38512	1.66	PPB
Replicates			22719.112	10.188735	27736.746	10.456362	26353.012	10.510258
QC Calculated Values			103.851					
BARIUM	137		44080.232	8.941	0.010	10.55290	1.98	PPB
Replicates			39559.761	10.462734	46795.904	10.403608	45885.031	10.792350
QC Calculated Values			105.529					
TERBIUM	159	Y	4304657.624	8.722	4304657.624	0		PPB
Replicates			3896642.360		4635578.598		4381751.913	
QC Calculated Values				90.482				
THALLIUM	205		23731.078	9.685	0.011	1.03539	4.90	PPB
Replicates			21138.986	1.000854	24534.226	1.011687	25520.022	1.093625
QC Calculated Values			103.539					
LEAD	206		7807.223	6.874	0.003	1.05459	3.16	PPB
Replicates			7198.423	1.054093	8011.541	1.021528	8211.704	1.088142
QC Calculated Values			105.459					
LEAD	207		14344.090	7.054	0.006	1.04587	1.42	PPB
Replicates			13179.378	1.042081	15005.653	1.033257	14847.238	1.062273
QC Calculated Values			104.587					
LEAD	208		22766.751	8.038	0.010	1.05014	1.18	PPB
Replicates			20704.286	1.036104	24196.395	1.054665	23399.574	1.059638
QC Calculated Values			105.014					
BISMUTH	209	Y	2230599.279	7.033	2230599.279	0		PPB
Replicates			2056803.737		2361706.672		2273287.429	
QC Calculated Values				90.904				

Sample ID: **6A14005-CRL4** Client ID: LLCCV Date/Time: 01/14/16 14:25:42

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
KRYPTON	83		45.556	13.851	-0.556	0		MG/L
Replicates			38.333		50.000		48.333	

Sample ID: **6A14005-CCV4** Client ID: CCV Date/Time: 01/14/16 14:27:26

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	397888.327	15.358	397888.327	0		PPB
Replicates			327344.785		434545.723		431774.474	
QC Calculated Values				99.443				
BERYLLIUM	9		128932.243	13.373	0.325	290.06625	3.53	PPB
Replicates			109518.111	298.712077	142460.912	292.706516	134817.706	278.780147
QC Calculated Values			96.689					
SCANDIUM	45	Y	1946199.090	13.115	1946199.090	0		PPB
Replicates			1656931.199		2139771.104		2041894.966	
QC Calculated Values				93.172				
VANADIUM	51		4701395.382	13.877	2.413	294.78292	1.71	PPB
Replicates			3985472.583	293.683389	5262437.845	300.282878	4856275.719	290.382483
QC Calculated Values			98.261					
CHROMIUM	52		4268614.597	12.729	2.190	299.31532	3.24	PPB
Replicates			3703441.260	304.766451	4787100.511	305.050915	4315302.020	288.128589
QC Calculated Values			99.772					
MANGANESE	55		6518672.816	12.230	3.352	297.57543	1.96	PPB
Replicates			5647230.133	302.497169	7211329.950	299.114525	6697458.364	291.114604
QC Calculated Values			99.192					
COBALT	59		5294832.936	12.167	2.723	299.57574	1.12	PPB
Replicates			4569416.871	303.389116	5800096.200	298.202611	5514985.737	297.135493
QC Calculated Values			99.859					
NICKEL	60		1167643.916	12.322	0.600	304.17582	1.08	PPB
Replicates			1006328.594	307.677320	1282693.136	303.679388	1213910.020	301.170742
QC Calculated Values			101.392					
COPPER	63		2495429.539	12.744	1.283	296.99051	1.34	PPB
Replicates			2143994.027	299.573707	2763333.064	298.985726	2578961.525	292.412105
QC Calculated Values			98.997					
COPPER	65		1277917.805	13.326	0.657	305.26712	1.34	PPB
Replicates			1090075.713	305.878468	1422214.896	309.025921	1321462.806	300.896959
QC Calculated Values			101.756					
ZINC	66		653555.567	12.332	0.336	301.72561	2.01	PPB
Replicates			565717.178	306.487677	724103.039	303.772938	670846.484	294.916229
QC Calculated Values			100.575					

Sample ID: **6A14005-CCV4** Client ID: CCV Date/Time: 01/14/16 14:27:26

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
ARSENIC	75		669194.405	11.840	0.344	295.92843	1.48	PPB
Replicates			580095.765	300.940268	731737.951	293.952280	695749.498	292.892747
QC Calculated Values			98.643					
SELENIUM	82		67105.497	11.108	0.035	295.29736	2.27	PPB
Replicates			58739.232	303.029019	73039.098	291.766732	69538.162	291.096315
QC Calculated Values			98.432					
SILVER	107		3844281.899	12.427	1.026	298.23774	4.52	PPB
Replicates			3301269.115	285.895698	4199928.747	296.183379	4031647.833	312.634133
QC Calculated Values			99.413					
SILVER	109		3691038.453	10.032	0.986	302.35326	3.06	PPB
Replicates			3271973.208	298.732200	3974049.271	295.456788	3827092.879	312.870804
QC Calculated Values			100.784					
CADMIUM	111		841410.547	9.265	0.225	304.55104	0.99	PPB
Replicates			763134.222	307.764280	919045.072	301.816740	842052.347	304.072111
QC Calculated Values			101.517					
INDIUM	113		989994.214	10.197	0.221	0		PPB
Replicates			882707.704		1083100.358		1004174.580	
INDIUM	115	Y	3742278.377	10.227	3742278.377	0		PPB
Replicates			3356457.896		4121847.523		3748529.712	
QC Calculated Values				91.954				
ANTIMONY	121		2556137.254	10.036	0.559	298.15655	1.57	PPB
Replicates			2279566.731	295.384233	2786274.447	295.537192	2602570.584	303.548216
QC Calculated Values			99.386					
BARIUM	135		783206.601	10.286	0.171	299.27357	0.86	PPB
Replicates			699330.325	296.918034	859984.136	298.880768	790305.342	302.021920
QC Calculated Values			99.758					
BARIUM	137		1348769.301	9.833	0.295	304.01932	0.78	PPB
Replicates			1210476.597	303.074665	1474895.847	302.278869	1360935.459	306.704413
QC Calculated Values			101.340					
TERBIUM	159	Y	4576083.876	9.976	4576083.876	0		PPB
Replicates			4119330.090		5032379.254		4576542.283	
QC Calculated Values				96.187				
THALLIUM	205		6881916.923	9.748	3.025	295.83649	3.07	PPB
Replicates			6127585.711	289.555033	7411550.755	291.703510	7106614.304	306.250940
QC Calculated Values			98.612					
LEAD	206		2217141.187	9.780	0.974	294.99533	1.80	PPB
Replicates			1984098.025	290.244627	2412960.847	293.996555	2254364.690	300.744803
QC Calculated Values			98.332					
LEAD	207		4117150.485	9.034	1.810	295.97317	1.83	PPB
Replicates			3712516.782	293.289035	4444175.180	292.421527	4194759.493	302.208946
QC Calculated Values			98.658					

Sample ID: **6A14005-CCV4** Client ID: CCV Date/Time: 01/14/16 14:27:26

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	208		6506032.936	8.378	2.861	296.57844	1.36	PPB
Replicates			5928146.540	296.864848	7010950.618	292.420210	6579001.649	300.450248
QC Calculated Values			98.859					
BISMUTH	209	Y	2274939.313	9.129	2274939.313	0		PPB
Replicates			2069897.088		2485180.624		2269740.226	
QC Calculated Values				92.711				
KRYPTON	83		76.111	15.841	30.000	0		MG/L
Replicates			70.000		68.334		90.000	

Sample ID: **6A14005-CCB4** Client ID: CCB Date/Time: 01/14/16 14:29:08

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	409538.154	13.883	409538.154	0		PPB
Replicates			348555.494		461087.190		418971.777	
QC Calculated Values				102.354				
BERYLLIUM	9		15.000	38.490	0.000	0.03060	60.07	PPB
Replicates			21.667	0.051782	11.667	0.018872	11.667	0.021143
SCANDIUM	45	Y	1988376.436	12.549	1988376.436	0		PPB
Replicates			1723732.952		2219338.689		2022057.668	
QC Calculated Values				95.191				
VANADIUM	51		4098.329	3.686	0.000	0.04332	90.74	PPB
Replicates			4232.168	0.088307	4128.273	0.015595	3934.547	0.026063
CHROMIUM	52		10634.541	0.363	0.000	0.03709	258.57	PPB
Replicates			10623.974	0.140455	10602.284	-0.048983	10677.364	0.019790
MANGANESE	55		2232.195	9.375	0.001	0.04892	42.35	PPB
Replicates			2429.462	0.072815	2254.421	0.037874	2012.703	0.036060
COBALT	59		821.702	25.378	0.000	0.04143	40.58	PPB
Replicates			1025.053	0.060273	831.701	0.036078	608.352	0.027949
NICKEL	60		197.224	25.702	0.000	0.03662	55.47	PPB
Replicates			255.559	0.059840	163.890	0.022141	172.224	0.027879
COPPER	63		896.337	10.634	0.000	0.08592	26.36	PPB
Replicates			983.382	0.111972	911.153	0.074940	794.476	0.070854
COPPER	65		449.084	9.056	0.000	0.08621	17.68	PPB
Replicates			455.566	0.103100	486.123	0.082060	405.564	0.073472
ZINC	66		611.130	5.163	0.000	0.11233	20.93	PPB
Replicates			575.017	0.133988	625.020	0.087316	633.353	0.115696
ARSENIC	75		-120.911	26.523	0.000	0.05000	16.40	PPB
Replicates			-84.575	0.059469	-145.261	0.045388	-132.898	0.045154
SELENIUM	82		75.371	8.917	0.000	0.09947	69.64	PPB
Replicates			80.556	0.169224	67.778	0.030697	77.778	0.098491
SILVER	107		1857.581	10.352	0.000	0.08785	23.78	PPB
Replicates			1983.530	0.111598	1952.968	0.079671	1636.245	0.072294

Sample ID: **6A14005-CCB4** Client ID: CCB Date/Time: 01/14/16 14:29:08

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	109		1793.680	3.731	0.000	0.09004	16.19	PPB
Replicates			1825.167	0.106390	1839.058	0.078424	1716.814	0.085293
CADMIUM	111		114.373	38.816	0.000	0.03890	47.83	PPB
Replicates			158.639	0.059364	114.629	0.034342	69.850	0.023001
INDIUM	113		166314.073	8.403	-0.001	0		PPB
Replicates			153274.046		181066.208		164601.965	
INDIUM	115	Y	3864097.318	10.162	3864097.318	0		PPB
Replicates			3506663.840		4284436.455		3801191.658	
QC Calculated Values				94.947				
ANTIMONY	121		1601.518	12.083	0.000	0.16003	20.87	PPB
Replicates			1808.497	0.198589	1570.957	0.140583	1425.102	0.140905
BARIUM	135		142.779	12.372	0.000	0.04575	21.65	PPB
Replicates			161.668	0.057187	140.001	0.040047	126.667	0.040012
BARIUM	137		228.892	26.619	0.000	0.04334	38.80	PPB
Replicates			295.004	0.062557	216.669	0.036133	175.002	0.031323
TERBIUM	159	Y	4613755.135	8.014	4613755.135	0		PPB
Replicates			4286223.100		5014697.828		4540344.476	
QC Calculated Values				96.979				
THALLIUM	205		1250.084	34.950	0.000	0.04731	45.11	PPB
Replicates			1733.484	0.071793	1133.398	0.037444	883.372	0.032682
LEAD	206		437.510	19.119	0.000	0.04996	26.09	PPB
Replicates			516.680	0.064675	445.843	0.045336	350.006	0.039864
LEAD	207		769.460	19.796	0.000	0.04711	27.28	PPB
Replicates			916.688	0.061648	779.182	0.042388	612.510	0.037281
LEAD	208		1234.769	16.726	0.000	0.04657	26.95	PPB
Replicates			1466.732	0.061012	1166.707	0.038346	1070.869	0.040342
BISMUTH	209	Y	2400099.924	9.185	2400099.924	0		PPB
Replicates			2224513.392		2647517.311		2328269.070	
QC Calculated Values				97.812				
KRYPTON	83		40.556	9.491	-5.556	0		MG/L
Replicates			45.000		38.333		38.333	

Sample ID: **6011103-BLK1** Client ID: PBSUB Date/Time: 01/14/16 15:09:00

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	472771.165	12.972	472771.165	0		PPB
Replicates			408154.588		530171.140		479987.767	
QC Calculated Values				118.158				
BERYLLIUM	9		5.556	34.641	0.000	0.00715	65.45	PPB
Replicates			6.667	0.010864	3.333	0.001894	6.667	0.008682

Sample ID: **6011103-BLK1** Client ID: PBSUB Date/Time: 01/14/16 15:09:00

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
SCANDIUM	45	Y	1999997.559	11.553	1999997.559	0		PPB
Replicates			1749897.028		2205507.178		2044588.471	
QC Calculated Values				95.748				
VANADIUM	51		10022.640	9.204	0.003	0.40182	4.58	PPB
Replicates			8970.551	0.414674	10693.227	0.380718	10404.141	0.410067
CHROMIUM	52		31073.973	8.149	0.010	1.42764	6.22	PPB
Replicates			28161.264	1.497528	32753.552	1.327747	32307.103	1.457645
MANGANESE	55		6477.110	9.715	0.003	0.23563	2.75	PPB
Replicates			5822.528	0.243070	7077.504	0.232565	6531.299	0.231270
COBALT	59		273.893	9.894	0.000	0.01015	32.14	PPB
Replicates			303.338	0.013921	268.337	0.008235	250.003	0.008302
NICKEL	60		537.052	15.979	0.000	0.12029	5.23	PPB
Replicates			444.454	0.113405	613.908	0.125748	552.793	0.121703
COPPER	63		2052.064	12.216	0.001	0.21734	1.37	PPB
Replicates			1791.827	0.216965	2291.929	0.220490	2072.437	0.214571
COPPER	65		1004.681	12.233	0.000	0.21367	1.05	PPB
Replicates			875.038	0.212722	1119.507	0.216230	1019.496	0.212062
ZINC	66		4100.845	9.248	0.002	1.67939	2.73	PPB
Replicates			3678.454	1.722389	4412.084	1.631125	4211.998	1.684643
ARSENIC	75		-234.204	21.530	-0.000	-0.00149	2330.96	PPB
Replicates			-291.555	-0.041538	-214.233	0.018163	-196.823	0.018911
SELENIUM	82		48.148	9.608	-0.000	-0.02110	217.29	PPB
Replicates			53.333	0.030169	44.445	-0.058168	46.667	-0.035303
SILVER	107		1351.944	7.744	0.000	0.04650	18.16	PPB
Replicates			1363.982	0.055833	1450.105	0.044275	1241.744	0.039388
SILVER	109		1251.931	13.004	0.000	0.04400	33.90	PPB
Replicates			1344.535	0.059809	1347.313	0.041999	1063.945	0.030181
CADMIUM	111		22.401	2.875	0.000	0.00582	15.18	PPB
Replicates			23.033	0.006672	21.746	0.004908	22.425	0.005882
INDIUM	113		174967.499	9.206	0.000	0		PPB
Replicates			159088.809		191295.701		174517.987	
INDIUM	115	Y	3967663.019	8.799	3967663.019	0		PPB
Replicates			3648609.338		4340563.341		3913816.377	
QC Calculated Values				97.492				
ANTIMONY	121		443.066	37.763	0.000	0.02195	79.71	PPB
Replicates			250.003	0.002178	533.348	0.028243	545.848	0.035432
BARIUM	135		778.364	11.458	0.000	0.27210	5.21	PPB
Replicates			713.359	0.260724	880.039	0.287974	741.694	0.267599
BARIUM	137		1346.202	10.038	0.000	0.27842	6.51	PPB
Replicates			1198.405	0.258564	1463.440	0.282582	1376.761	0.294108
TERBIUM	159	Y	4836622.954	6.304	4836622.954	0		PPB
Replicates			4629488.329		5186747.921		4693632.611	
QC Calculated Values				101.664				

Sample ID: **6011103-BLK1** Client ID: PBSUB Date/Time: 01/14/16 15:09:00

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		351.395	17.839	0.000	0.01091	29.55	PPB
Replicates			416.675	0.014614	345.839	0.009425	291.671	0.008704
LEAD	206		1197.295	15.504	0.001	0.15495	10.64	PPB
Replicates			1187.571	0.162368	1387.596	0.166418	1016.718	0.136064
LEAD	207		2198.734	9.534	0.001	0.15402	7.44	PPB
Replicates			2241.793	0.165552	2383.479	0.153882	1970.931	0.142625
LEAD	208		3447.573	8.284	0.001	0.15203	12.46	PPB
Replicates			3737.916	0.173709	3437.848	0.138608	3166.957	0.143783
BISMUTH	209	Y	2251430.401	7.357	2251430.401	0		PPB
Replicates			2140162.999		2441779.556		2172348.647	
QC Calculated Values				91.753				
KRYPTON	83		46.667	17.857	0.556	0		MG/L
Replicates			55.000		38.333		46.667	

Sample ID: **6011103-BS1** Client ID: MLCSUB Date/Time: 01/14/16 15:10:42

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	364272.639	15.086	364272.639	0		PPB
Replicates			302436.944		407535.074		382845.899	
QC Calculated Values				91.041				
BERYLLIUM	9		386512.249	11.275	1.065	951.31644	4.14	PPB
Replicates			337247.491	995.611565	420033.278	920.226257	402255.979	938.111492
SCANDIUM	45	Y	2120957.583	12.799	2120957.583	0		PPB
Replicates			1807501.099		2276921.452		2278450.198	
QC Calculated Values				101.539				
VANADIUM	51		16134353.386	13.484	7.601	928.67540	0.88	PPB
Replicates			13623789.49	920.738866	17466917.83	937.102492	17312352.83	928.184852
CHROMIUM	52		14218539.196	13.018	6.698	915.35520	1.16	PPB
Replicates			12090107.91	913.446745	15452114.42	926.779222	15113395.25	905.839647
MANGANESE	55		107480303.15	12.415	50.696	4500.28098	1.30	PPB
Replicates			92151358.50	4525.676806	116497476.6	4541.808846	113792074.3	4433.357297
COBALT	59		10328546.665	12.122	4.873	536.11113	1.44	PPB
Replicates			8890348.982	541.112006	11175606.14	539.970409	10919684.86	527.250969
NICKEL	60		9357395.817	11.390	4.418	2238.16713	1.88	PPB
Replicates			8131953.694	2279.266558	10068223.48	2240.183215	9872010.274	2195.051622
COPPER	63		4114845.373	11.158	1.943	449.92007	2.53	PPB
Replicates			3591023.429	459.975219	4447661.848	452.249561	4305850.842	437.535437
COPPER	65		2035113.185	9.458	0.963	447.55978	3.94	PPB
Replicates			1815005.421	466.880530	2171943.816	443.512612	2118390.319	432.286204
ZINC	66		4057472.674	9.074	1.920	1724.09504	4.21	PPB
Replicates			3634659.875	1805.918449	4307440.060	1698.953978	4230318.088	1667.412696
ARSENIC	75		2132064.417	8.340	1.010	867.51564	4.96	PPB
Replicates			1927789.383	916.574066	2252220.699	850.067115	2216183.168	835.905746

Sample ID: **6011103-BS1** Client ID: MLCSUB Date/Time: 01/14/16 15:10:42

ElemName	Mass	Internal	Meas. Int Mean	Meas. Int Rsd	Net Int Mean	Conc Mean	Conc Rsd	Units
			(Intensity 1)	(Conc 1)	(Intensity 2)	(Conc 2)	(Intensity 3)	(Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
SELENIUM	82		227948.915	9.966	0.108	921.58161	3.09	PPB
Replicates			201719.784	954.455666	241365.350	906.582169	240761.610	903.707000
SILVER	107		4285790.414	10.500	1.328	386.18079	3.57	PPB
Replicates			3766215.375	377.817259	4550082.375	378.654277	4541073.492	402.070838
SILVER	109		4017552.304	9.221	1.246	381.89143	2.14	PPB
Replicates			3592616.771	379.953214	4272553.459	374.845878	4187486.684	390.875189
CADMIUM	111		2912759.885	8.865	0.904	1223.13760	1.29	PPB
Replicates			2621542.757	1224.634889	3113785.662	1206.660842	3002951.237	1238.117063
INDIUM	113		2970116.737	8.463	0.878	0		PPB
Replicates			2682494.604		3147623.766		3080231.842	
INDIUM	115	Y	3224615.919	9.364	3224615.919	0		PPB
Replicates			2897682.411		3493043.162		3283122.183	
QC Calculated Values				79.234				
ANTIMONY	121		603836.348	8.102	0.142	75.65276	2.37	PPB
Replicates			547668.129	75.451138	637119.471	73.971217	626721.445	77.535938
BARIUM	135		5732937.927	8.956	1.345	2352.72170	1.69	PPB
Replicates			5153249.632	2326.880691	6130349.815	2332.785581	5915214.333	2398.498817
BARIUM	137		10089889.631	8.462	2.368	2442.46503	1.09	PPB
Replicates			9139081.178	2433.514072	10791103.39	2421.552000	10339484.31	2472.329032
TERBIUM	159	Y	4261043.441	8.548	4261043.441	0		PPB
Replicates			3873460.047		4596237.426		4313432.850	
QC Calculated Values				89.565				
THALLIUM	205		55942477.303	8.825	30.146	2948.63844	2.13	PPB
Replicates			50604235.58	2878.349960	60344258.41	2968.387048	56878937.91	2999.178306
LEAD	206		16792972.867	7.889	9.053	2741.29675	1.05	PPB
Replicates			15394539.70	2710.718109	18029169.38	2745.498468	16955209.50	2767.673668
LEAD	207		30179722.556	7.991	16.269	2660.42177	1.22	PPB
Replicates			27615946.11	2626.055527	32402786.35	2664.735917	30520435.19	2690.473859
LEAD	208		46907160.671	7.910	25.288	2621.31676	1.64	PPB
Replicates			42851679.89	2583.010796	50131140.75	2613.327251	47738661.36	2667.612225
BISMUTH	209	Y	1854364.484	7.248	1854364.484	0		PPB
Replicates			1719648.658		1988437.289		1855007.506	
QC Calculated Values				75.571				
KRYPTON	83		406.675	16.047	360.564	0		MG/L
Replicates			338.339		468.344		413.342	

Sample ID: **1601025-04** Client ID: WS-4 5X Date/Time: 01/14/16 15:12:25

ElemName	Mass	Internal	Meas. Int Mean	Meas. Int Rsd	Net Int Mean	Conc Mean	Conc Rsd	Units
			(Intensity 1)	(Conc 1)	(Intensity 2)	(Conc 2)	(Intensity 3)	(Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
LITHIUM	6	Y	384502.246	15.452	384502.246	0		PPB
Replicates			319189.061		435344.359		398973.320	
QC Calculated Values				96.097				

Sample ID: **1601025-04** Client ID: WS-4 5X Date/Time: 01/14/16 15:12:25

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BERYLLIUM	9		725.582	4.263	0.002	1.70226	12.12	PPB
Replicates			693.357	1.935768	755.029	1.544770	728.360	1.626252
SCANDIUM	45	Y	2252823.914	12.485	2252823.914	0		PPB
Replicates			1946197.981		2498880.800		2313392.962	
QC Calculated Values				107.852				
VANADIUM	51		2242529.378	12.315	0.994	121.43171	0.27	PPB
Replicates			1939584.171	121.557828	2480247.159	121.061945	2307756.804	121.675371
CHROMIUM	52		1293761.824	12.349	0.569	77.79699	0.63	PPB
Replicates			1122760.998	78.141553	1439218.298	78.011101	1319306.177	77.238302
MANGANESE	55		12685926.968	13.094	5.627	499.54954	0.70	PPB
Replicates			10865015.19(	495.521918	14118309.96(	501.484213	13074455.75(	501.642493
COBALT	59		588482.370	11.791	0.261	28.75028	0.73	PPB
Replicates			512606.621	28.971506	648713.757	28.554878	604126.732	28.724459
NICKEL	60		215708.810	10.732	0.096	48.56798	1.84	PPB
Replicates			190290.686	49.519734	235584.359	47.746741	221251.384	48.437463
COPPER	63		753951.364	11.313	0.335	77.54626	1.23	PPB
Replicates			660457.434	78.552565	827508.742	76.652593	773887.915	77.433627
COPPER	65		379442.857	11.802	0.168	78.34074	0.84	PPB
Replicates			329914.990	78.800832	417075.481	77.585969	391338.099	78.635430
ZINC	66		1159146.104	10.788	0.515	462.67109	1.94	PPB
Replicates			1025363.158	473.032970	1273094.234	457.415147	1178980.920	457.565160
ARSENIC	75		15025.297	10.764	0.007	5.84130	1.99	PPB
Replicates			13209.964	5.934107	16312.924	5.711137	15553.003	5.878642
SELENIUM	82		433.528	9.996	0.000	1.41962	4.03	PPB
Replicates			390.008	1.483707	476.678	1.401260	433.898	1.373908
SILVER	107		6515.095	8.656	0.002	0.44317	1.47	PPB
Replicates			5932.315	0.447883	7058.045	0.435763	6554.925	0.445861
SILVER	109		5531.170	10.601	0.001	0.39024	1.47	PPB
Replicates			4915.097	0.384241	6082.405	0.390777	5596.010	0.395714
CADMIUM	111		6280.437	10.560	0.002	2.22276	3.44	PPB
Replicates			5778.042	2.268919	7032.228	2.264797	6031.041	2.134554
INDIUM	113		168733.659	9.372	0.001	0		PPB
Replicates			154678.762		185857.074		165665.140	
INDIUM	115	Y	3821717.407	9.881	3821717.407	0		PPB
Replicates			3444327.356		4199577.752		3821247.112	
QC Calculated Values				93.906				
ANTIMONY	121		763.919	17.096	0.000	0.05896	11.75	PPB
Replicates			645.854	0.051956	904.208	0.065812	741.694	0.059122
BARIUM	135		1250335.853	9.478	0.264	461.22220	2.59	PPB
Replicates			1131042.576	451.007049	1368036.925	458.327559	1251928.059	474.332002
BARIUM	137		2096670.891	7.910	0.443	456.47906	2.07	PPB
Replicates			1935234.210	455.068293	2266616.885	447.810916	2088161.578	466.557961

Sample ID: **1601025-04** Client ID: WS-4 5X Date/Time: 01/14/16 15:12:25

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4740914.053	9.089	4740914.053	0		PPB
Replicates			4386123.154		5220440.859		4616178.145	
QC Calculated Values				99.652				
THALLIUM	205		14467.451	8.388	0.007	0.67816	11.53	PPB
Replicates			15466.117	0.767757	14819.306	0.642798	13116.930	0.623916
LEAD	206		499813.431	6.920	0.240	72.75216	1.30	PPB
Replicates			466242.319	72.057545	535330.394	72.373224	497867.581	73.825715
LEAD	207		896307.715	6.765	0.431	70.46247	1.53	PPB
Replicates			836121.125	69.784941	957390.559	69.898815	895411.462	71.703664
LEAD	208		1386025.056	7.034	0.666	69.06104	1.80	PPB
Replicates			1287431.618	68.111480	1482376.912	68.603017	1388266.637	70.468629
BISMUTH	209	Y	2080190.931	6.928	2080190.931	0		PPB
Replicates			1959099.169		2239589.004		2041884.619	
QC Calculated Values				84.774				
KRYPTON	83		213.891	13.638	167.780	0		MG/L
Replicates			213.336		243.336		185.002	

Sample ID: **6011103-DUP1** Client ID: WS-4D 5X Date/Time: 01/14/16 15:14:08

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	381661.642	13.539	381661.642	0		PPB
Replicates			323881.374		423447.854		397655.697	
QC Calculated Values				95.387				
BERYLLIUM	9		709.470	18.022	0.002	1.65229	7.72	PPB
Replicates			596.684	1.641169	848.369	1.785085	683.357	1.530608
SCANDIUM	45	Y	2230468.224	12.572	2230468.224	0		PPB
Replicates			1922918.562		2471982.151		2296503.959	
QC Calculated Values				106.781				
VANADIUM	51		2274901.928	11.155	1.019	124.56418	1.51	PPB
Replicates			1996944.737	126.676770	2494233.822	123.072903	2333527.223	123.942862
CHROMIUM	52		1368103.564	11.924	0.609	83.17682	0.88	PPB
Replicates			1191609.500	83.989321	1513353.249	82.966278	1399347.944	82.574865
MANGANESE	55		13661205.002	11.991	6.127	543.92045	1.15	PPB
Replicates			11819554.83(	545.586961	14955927.29:	537.020797	14208132.88:	549.153602
COBALT	59		656421.265	11.043	0.295	32.41574	1.90	PPB
Replicates			574627.044	32.870643	712708.774	31.713730	681927.976	32.662837
NICKEL	60		227649.991	11.281	0.102	51.75073	1.53	PPB
Replicates			198880.421	52.382503	248257.701	50.863791	235811.850	52.005901
COPPER	63		736387.674	11.676	0.330	76.48048	0.96	PPB
Replicates			641379.257	77.206637	808851.623	75.739417	758932.143	76.495399
COPPER	65		369628.675	11.165	0.166	77.13078	1.51	PPB
Replicates			324511.884	78.448564	405476.660	76.248737	378897.482	76.695044

Sample ID: **6011103-DUP1** Client ID: WS-4D 5X Date/Time: 01/14/16 15:14:08

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
ZINC	66		1174477.478	10.436	0.527	473.65957	2.26	PPB
Replicates			1038224.701	484.769030	1275762.695	463.363816	1209445.037	472.845869
ARSENIC	75		12879.706	10.191	0.006	5.07399	2.46	PPB
Replicates			11432.773	5.210550	13994.006	4.966096	13212.339	5.045317
SELENIUM	82		383.711	10.253	0.000	1.24473	5.30	PPB
Replicates			338.339	1.274604	404.453	1.169076	408.342	1.290510
SILVER	107		5400.539	8.570	0.001	0.36408	6.44	PPB
Replicates			4867.851	0.354286	5704.404	0.347095	5629.362	0.390849
SILVER	109		4643.675	7.841	0.001	0.32522	8.38	PPB
Replicates			4228.672	0.319726	4792.815	0.301124	4909.538	0.354818
CADMIUM	111		5844.253	14.080	0.002	2.09009	5.09	PPB
Replicates			5088.329	1.979618	6720.797	2.192072	5723.633	2.098592
INDIUM	113		168087.572	9.042	0.001	0		PPB
Replicates			153997.535		184193.380		166071.803	
INDIUM	115	Y	3770411.446	9.090	3770411.446	0		PPB
Replicates			3476034.013		4146637.008		3688563.318	
QC Calculated Values				92.645				
ANTIMONY	121		676.413	24.905	0.000	0.04888	25.86	PPB
Replicates			583.350	0.044039	870.871	0.063228	575.017	0.039380
BARIUM	135		1334547.386	8.817	0.281	492.18958	3.44	PPB
Replicates			1206548.335	479.018462	1438021.385	486.234925	1359072.440	511.315339
BARIUM	137		2259467.997	8.410	0.476	491.45987	2.68	PPB
Replicates			2058765.350	482.006618	2436607.909	485.853147	2283030.732	506.519840
TERBIUM	159	Y	4742223.788	8.267	4742223.788	0		PPB
Replicates			4405327.147		5172553.665		4648790.552	
QC Calculated Values				99.679				
THALLIUM	205		10078.705	7.154	0.005	0.47231	2.78	PPB
Replicates			9304.327	0.463352	10730.754	0.466183	10201.034	0.487401
LEAD	206		519258.594	7.438	0.251	76.01935	2.67	PPB
Replicates			478221.944	74.424415	554896.562	75.330996	524657.276	78.302641
LEAD	207		930066.254	7.532	0.450	73.53089	2.83	PPB
Replicates			855100.809	71.866740	993857.309	72.863576	941240.645	75.862347
LEAD	208		1437327.625	7.250	0.695	72.03678	2.50	PPB
Replicates			1327326.473	70.711931	1534560.732	71.313992	1450095.671	74.084404
BISMUTH	209	Y	2068193.039	7.080	2068193.039	0		PPB
Replicates			1945536.335		2230303.679		2028739.104	
QC Calculated Values				84.285				
KRYPTON	83		228.336	12.790	182.225	0		MG/L
Replicates			200.002		258.337		226.669	

Sample ID: **6011103-MS1** Client ID: WS-4S 5X Date/Time: 01/14/16 15:15:51

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)

Sample ID: **6011103-MS1** Client ID: WS-4S 5X Date/Time: 01/14/16 15:15:51

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	367834.816	10.959	367834.816	0		PPB
Replicates			323943.333		403199.528		376361.587	
QC Calculated Values				91.932				
BERYLLIUM	9		38065.603	10.343	0.104	92.44441	1.31	PPB
Replicates			33955.886	93.585039	41803.863	92.567091	38437.062	91.181105
SCANDIUM	45	Y	2219430.160	12.520	2219430.160	0		PPB
Replicates			1930024.945		2484139.321		2244126.212	
QC Calculated Values				106.253				
VANADIUM	51		3660900.585	11.533	1.649	201.49643	1.37	PPB
Replicates			3204127.862	202.633112	4036917.616	198.347917	3741656.276	203.508268
CHROMIUM	52		2569753.120	10.854	1.154	157.76723	1.77	PPB
Replicates			2281947.350	160.885676	2838860.127	155.480940	2588451.882	156.935073
MANGANESE	55		14486934.581	11.530	6.532	579.85817	1.24	PPB
Replicates			12692522.58(	583.729305	15996418.51!	571.573987	14771862.64	584.271218
COBALT	59		2220537.231	11.036	1.002	110.20531	1.53	PPB
Replicates			1965216.981	112.015645	2453856.614	108.668511	2242538.098	109.931783
NICKEL	60		572288.845	9.755	0.258	130.92752	2.84	PPB
Replicates			512826.357	134.598384	623582.666	127.159155	580457.512	131.025023
COPPER	63		1466685.104	10.734	0.662	153.22478	2.45	PPB
Replicates			1292096.063	154.984860	1597857.493	148.907711	1510101.756	155.781764
COPPER	65		724173.294	9.936	0.327	152.02952	2.73	PPB
Replicates			646363.071	155.698073	788298.036	147.530245	737858.776	152.860251
ZINC	66		1361611.137	10.388	0.614	551.85652	2.40	PPB
Replicates			1207358.482	561.691731	1485206.689	536.821290	1392268.240	557.056553
ARSENIC	75		381242.230	10.528	0.172	147.96216	2.60	PPB
Replicates			336714.268	150.013835	414637.034	143.528504	392375.389	150.344155
SELENIUM	82		37249.846	9.462	0.017	143.72240	3.37	PPB
Replicates			33358.324	147.623090	40226.859	138.295321	38164.354	145.248801
SILVER	107		1227605.436	8.888	0.326	94.67266	3.85	PPB
Replicates			1104847.564	93.629799	1313513.345	91.660943	1264455.400	98.727236
SILVER	109		1159677.311	8.804	0.308	94.29466	4.06	PPB
Replicates			1044186.215	93.288912	1237941.937	91.073012	1196903.780	98.522070
CADMIUM	111		266651.444	7.679	0.071	95.83905	2.29	PPB
Replicates			246048.165	97.136292	287000.106	93.301037	266906.062	97.079807
INDIUM	113		419781.075	7.271	0.068	0		PPB
Replicates			390347.719		451287.483		417708.023	
INDIUM	115	Y	3771344.484	9.812	3771344.484	0		PPB
Replicates			3428714.822		4163782.141		3721536.489	
QC Calculated Values				92.668				
ANTIMONY	121		32284.249	8.921	0.007	3.65248	2.66	PPB
Replicates			29518.503	3.554726	35266.243	3.653779	32068.002	3.748947
BARIUM	135		1421145.456	8.043	0.304	530.89551	2.92	PPB
Replicates			1306477.702	519.329615	1535075.838	524.873548	1421882.828	548.483368

Sample ID: **6011103-MS1** Client ID: WS-4S 5X Date/Time: 01/14/16 15:15:51

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		2391808.211	8.350	0.511	526.78587	2.47	PPB
Replicates			2199169.510	515.511422	2597905.885	523.825696	2378349.238	541.020504
TERBIUM	159	Y	4683056.500	8.119	4683056.500	0		PPB
Replicates			4399924.489		5115187.263		4534057.747	
QC Calculated Values				98.436				
THALLIUM	205		4382735.699	6.640	2.101	205.54156	3.26	PPB
Replicates			4081017.205	201.251772	4661718.623	202.106601	4405471.268	213.266307
LEAD	206		1818800.895	7.154	0.872	263.94592	2.02	PPB
Replicates			1698965.728	259.368454	1957190.797	262.681165	1800246.161	269.788133
LEAD	207		3387540.865	7.379	1.623	265.45064	1.79	PPB
Replicates			3164286.936	260.876334	3657618.205	265.106552	3340717.453	270.369037
LEAD	208		5218879.044	6.656	2.502	259.33965	2.47	PPB
Replicates			4882005.437	255.134288	5575823.198	256.178530	5198808.497	266.706119
BISMUTH	209	Y	2086665.794	7.087	2086665.794	0		PPB
Replicates			1983427.244		2256073.063		2020497.074	
QC Calculated Values				85.038				
KRYPTON	83		197.780	5.080	151.669	0		MG/L
Replicates			188.335		208.336		196.669	

Sample ID: **6011103-MSD1** Client ID: WS-4SD 5X Date/Time: 01/14/16 15:17:34

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	375624.505	14.032	375624.505	0		PPB
Replicates			318330.673		422055.820		386487.021	
QC Calculated Values				93.878				
BERYLLIUM	9		38171.615	10.830	0.102	91.02490	3.60	PPB
Replicates			33800.360	94.798938	42018.091	88.884477	38696.393	89.391282
SCANDIUM	45	Y	2194380.429	10.900	2194380.429	0		PPB
Replicates			1938228.803		2411887.877		2233024.605	
QC Calculated Values				105.054				
VANADIUM	51		3663996.282	11.777	1.667	203.66581	1.47	PPB
Replicates			3186293.249	200.650257	4025574.248	203.721397	3780121.348	206.625772
CHROMIUM	52		2617412.981	10.550	1.188	162.36150	0.73	PPB
Replicates			2328857.192	163.509416	2879190.487	162.444897	2644191.265	161.130183
MANGANESE	55		13942053.166	10.515	6.355	564.11699	1.33	PPB
Replicates			12304997.48(	563.509918	15133500.60:	556.938046	14387661.41(	571.902994
COBALT	59		2239199.861	10.277	1.021	112.31097	1.50	PPB
Replicates			1981417.825	112.461067	2423930.335	110.558937	2312251.423	113.912918
NICKEL	60		570082.970	10.258	0.260	131.66284	0.99	PPB
Replicates			505675.658	132.159542	619855.776	130.186004	584717.477	132.642980
COPPER	63		1475298.408	10.030	0.673	155.74191	1.02	PPB
Replicates			1313484.953	156.883812	1603706.116	153.930499	1508704.154	156.411430

Sample ID: **6011103-MSD1** Client ID: WS-4SD 5X Date/Time: 01/14/16 15:17:34

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	65		731113.471	10.006	0.333	155.00933	1.27	PPB
Replicates			655336.450	157.191634	801321.808	154.461066	736682.154	153.375301
ZINC	66		1409387.871	10.051	0.643	577.14482	1.81	PPB
Replicates			1267969.773	587.400316	1551285.474	577.514422	1408908.366	566.519738
ARSENIC	75		379670.223	9.751	0.173	148.90206	1.27	PPB
Replicates			339176.107	150.470731	411784.073	146.808626	388050.489	149.426836
SELENIUM	82		36906.771	7.772	0.017	143.98299	3.27	PPB
Replicates			33736.813	148.667746	39322.718	139.238271	37660.783	144.042948
SILVER	107		1243853.123	9.148	0.324	94.32331	5.08	PPB
Replicates			1115385.021	92.488886	1331974.408	90.722228	1284199.940	99.758807
SILVER	109		1174981.815	9.009	0.306	93.94100	5.04	PPB
Replicates			1055503.624	92.270974	1257075.543	90.264945	1212366.279	99.287066
CADMIUM	111		266966.920	7.405	0.070	94.35483	2.79	PPB
Replicates			248444.814	95.972599	287782.348	91.314335	264673.597	95.777547
INDIUM	113		425262.099	9.627	0.067	0		PPB
Replicates			389096.166		469707.285		416982.846	
INDIUM	115	Y	3836880.678	10.163	3836880.678	0		PPB
Replicates			3504090.649		4265966.227		3740585.157	
QC Calculated Values				94.278				
ANTIMONY	121		30741.839	8.257	0.006	3.38827	2.18	PPB
Replicates			28440.385	3.371686	33464.233	3.324247	30320.898	3.468881
BARIUM	135		1434142.235	9.069	0.298	521.81827	3.54	PPB
Replicates			1302241.528	509.809254	1562274.860	512.534450	1437910.318	543.111116
BARIUM	137		2458105.409	9.092	0.511	527.29802	1.95	PPB
Replicates			2255845.894	520.792007	2698028.444	521.976350	2420441.890	539.125707
TERBIUM	159	Y	4809740.638	9.540	4809740.638	0		PPB
Replicates			4467555.941		5331146.228		4630519.746	
QC Calculated Values				101.098				
THALLIUM	205		4454894.898	9.753	2.130	208.34140	6.38	PPB
Replicates			3965223.201	196.499380	4794406.904	205.803616	4605054.589	222.721210
LEAD	206		1853266.825	8.018	0.886	268.34768	3.29	PPB
Replicates			1702335.736	261.156179	1999401.891	265.692608	1858062.847	278.194258
LEAD	207		3441447.012	8.230	1.646	269.09075	3.53	PPB
Replicates			3150564.850	261.017570	3716313.801	266.696934	3457462.384	279.557734
LEAD	208		5307985.927	8.175	2.538	263.11033	3.81	PPB
Replicates			4853976.687	254.912266	5718576.350	260.138927	5351404.742	274.279801
BISMUTH	209	Y	2091580.233	7.831	2091580.233	0		PPB
Replicates			1973757.462		2278608.233		2022375.005	
QC Calculated Values				85.239				
KRYPTON	83		210.558	16.151	164.447	0		MG/L
Replicates			173.335		240.003		218.336	

Sample ID: **6A14005-SRD2** Client ID: WS-4L Date/Time: 01/14/16 15:19:16

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	377118.354	10.631	377118.354	0		PPB
Replicates			331436.297		406457.521		393461.245	
QC Calculated Values				94.252				
BERYLLIUM	9		642.798	2.597	0.002	1.52980	11.08	PPB
Replicates			641.687	1.724907	660.022	1.446123	626.686	1.418367
SCANDIUM	45	Y	2232729.954	11.860	2232729.954	0		PPB
Replicates			1949650.246		2474384.466		2274155.150	
QC Calculated Values				106.890				
VANADIUM	51		2205988.820	10.750	0.987	120.61857	1.17	PPB
Replicates			1949422.936	121.958806	2417157.716	119.147203	2251385.808	120.749711
CHROMIUM	52		1262764.669	12.164	0.560	76.57251	0.60	PPB
Replicates			1096009.786	76.126726	1398474.093	76.539936	1293810.129	77.050857
MANGANESE	55		12697241.189	11.990	5.686	504.70857	0.45	PPB
Replicates			11047202.82	502.939613	14047178.96	503.897548	12997341.77	507.288551
COBALT	59		584461.466	11.078	0.262	28.81152	1.15	PPB
Replicates			513164.152	28.951657	639604.132	28.432594	600616.113	29.050323
NICKEL	60		209370.982	10.854	0.094	47.53346	2.07	PPB
Replicates			183733.649	47.728167	227034.415	46.469020	217344.881	48.403195
COPPER	63		747647.074	11.063	0.335	77.56116	0.83	PPB
Replicates			658844.998	78.221949	822500.331	76.943003	761595.892	77.518538
COPPER	65		375495.870	10.405	0.168	78.27037	1.57	PPB
Replicates			332834.379	79.357506	409540.099	76.938265	384113.132	78.515327
ZINC	66		1144044.527	9.969	0.513	460.75815	1.99	PPB
Replicates			1019709.919	469.590759	1243813.477	451.316783	1168610.185	461.366922
ARSENIC	75		14602.002	10.747	0.007	5.72650	1.62	PPB
Replicates			12854.599	5.767156	15890.949	5.620130	15060.457	5.792209
SELENIUM	82		403.156	10.546	0.000	1.31593	2.27	PPB
Replicates			360.006	1.349037	445.010	1.307932	404.453	1.290829
SILVER	107		5799.836	7.794	0.001	0.38628	2.62	PPB
Replicates			5326.418	0.391530	6226.938	0.374614	5846.153	0.392710
SILVER	109		5295.849	5.522	0.001	0.37035	6.11	PPB
Replicates			4959.563	0.383083	5490.396	0.344211	5437.589	0.383766
CADMIUM	111		5790.926	6.388	0.002	2.04149	3.50	PPB
Replicates			5456.111	2.117547	6188.024	1.975968	5728.645	2.030966
INDIUM	113		169526.043	9.320	0.000	0		PPB
Replicates			154860.712		186256.061		167461.356	
INDIUM	115	Y	3844800.706	9.782	3844800.706	0		PPB
Replicates			3484713.944		4235079.310		3814608.865	
QC Calculated Values				94.473				
ANTIMONY	121		658.355	10.419	0.000	0.04657	11.50	PPB
Replicates			579.183	0.043639	695.858	0.043309	700.025	0.052747
BARIUM	135		1243805.476	7.750	0.259	453.28947	2.39	PPB
Replicates			1147118.388	456.104835	1339904.127	441.348967	1244393.914	462.414619

Sample ID: **6A14005-SRD2** Client ID: WS-4L Date/Time: 01/14/16 15:19:16

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		2105265.230	9.098	0.438	452.04507	1.06	PPB
Replicates			1923728.627	451.064600	2305449.644	447.819245	2086617.418	457.251358
TERBIUM	159	Y	4805058.335	9.644	4805058.335	0		PPB
Replicates			4398745.727		5309781.173		4706648.105	
QC Calculated Values				101.000				
THALLIUM	205		9897.968	7.156	0.005	0.45317	0.79	PPB
Replicates			9291.815	0.450441	10676.530	0.451842	9725.560	0.457224
LEAD	206		499441.793	9.760	0.236	71.39769	3.63	PPB
Replicates			451518.397	68.420769	548974.414	72.622709	497832.568	73.149579
LEAD	207		897049.564	9.006	0.424	69.27632	2.99	PPB
Replicates			818043.722	66.944370	979505.288	69.976418	893599.681	70.908180
LEAD	208		1378622.957	7.066	0.652	67.54403	1.79	PPB
Replicates			1285582.302	66.687060	1479880.417	67.015353	1370406.153	68.929678
BISMUTH	209	Y	2115819.452	7.232	2115819.452	0		PPB
Replicates			1998066.234		2288780.358		2060611.763	
QC Calculated Values				86.226				
KRYPTON	83		215.558	9.668	169.447	0		MG/L
Replicates			230.003		225.003		191.669	

Sample ID: **6011103-PS1** Client ID: WS-4R 5X Date/Time: 01/14/16 15:20:59

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	709477.298	13.836	709477.298	0		PPB
Replicates			598425.456		784649.982		745356.454	
QC Calculated Values				177.317				
BERYLLIUM	9		2579.225	12.278	0.004	3.25610	8.44	PPB
Replicates			2335.273	3.480498	2937.098	3.338386	2465.304	2.949421
SCANDIUM	45	Y	4091360.865	10.949	4091360.865	0		PPB
Replicates			3591460.949		4456476.348		4226145.296	
QC Calculated Values				195.870				
VANADIUM	51		2598227.515	9.686	0.634	77.45746	1.47	PPB
Replicates			2312768.962	78.470798	2788011.781	76.228187	2693901.802	77.673399
CHROMIUM	52		1405325.151	11.208	0.338	46.23176	0.51	PPB
Replicates			1227937.097	46.025370	1528776.349	46.181358	1459262.005	46.488568
MANGANESE	55		12720742.964	11.025	3.108	275.93460	0.21	PPB
Replicates			11163851.40	275.883648	13884934.59	276.525691	13113442.89	275.394474
COBALT	59		667706.589	10.800	0.163	17.95157	1.26	PPB
Replicates			585234.794	17.921951	718906.339	17.742129	698978.635	18.190624
NICKEL	60		230706.098	11.191	0.056	28.54703	0.26	PPB
Replicates			201946.514	28.471742	251882.792	28.619162	238288.988	28.550191
COPPER	63		821529.181	10.426	0.201	46.49226	1.05	PPB
Replicates			728351.073	46.935049	896824.974	46.573868	839411.495	45.967854

Sample ID: **6011103-PS1** Client ID: WS-4R 5X Date/Time: 01/14/16 15:20:59

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	65		410120.361	9.436	0.100	46.64352	1.60	PPB
Replicates			366918.523	47.483461	441609.748	46.055904	421832.811	46.391194
ZINC	66		1152801.569	9.150	0.282	253.25391	1.90	PPB
Replicates			1034202.051	258.469199	1236125.363	248.963020	1188077.292	252.329516
ARSENIC	75		25048.841	9.026	0.006	5.37029	1.99	PPB
Replicates			22508.752	5.487039	26841.398	5.277126	25796.371	5.346716
SELENIUM	82		5423.886	9.032	0.001	11.12685	2.23	PPB
Replicates			4865.072	11.357457	5779.447	10.863377	5627.138	11.159714
SILVER	107		70114.872	9.315	0.009	2.69297	4.72	PPB
Replicates			62603.683	2.582608	74453.919	2.664249	73287.013	2.832045
SILVER	109		66072.441	9.040	0.009	2.67590	5.52	PPB
Replicates			59185.742	2.573596	69188.527	2.608780	69843.054	2.845333
CADMIUM	111		18549.695	7.491	0.002	3.38235	1.78	PPB
Replicates			17451.710	3.418767	20111.970	3.415447	18085.406	3.312829
INDIUM	113		334032.372	7.799	0.001	0		PPB
Replicates			307983.259		360085.071		334028.785	
INDIUM	115	Y	7419403.658	7.157	7419403.658	0		PPB
Replicates			6906081.544		7966545.320		7385584.111	
QC Calculated Values				182.306				
ANTIMONY	121		86450.198	8.400	0.009	4.97629	3.20	PPB
Replicates			78183.610	4.867976	91802.796	4.901470	89364.188	5.159435
BARIUM	135		1363455.766	7.669	0.148	258.57796	2.31	PPB
Replicates			1246457.043	255.657794	1447803.597	254.631936	1396106.657	265.444150
BARIUM	137		2297506.436	7.838	0.249	256.90545	1.60	PPB
Replicates			2102097.143	254.257211	2456796.368	254.806938	2333625.795	261.652212
TERBIUM	159	Y	9223335.489	7.687	9223335.489	0		PPB
Replicates			8527014.760		9944328.354		9198663.352	
QC Calculated Values				193.870				
THALLIUM	205		127405.840	8.156	0.031	3.03282	4.31	PPB
Replicates			115416.392	2.919980	133801.696	3.002643	132999.433	3.175849
LEAD	206		528279.977	7.326	0.129	38.98053	1.88	PPB
Replicates			486682.483	38.169215	563226.782	39.179956	534930.666	39.592412
LEAD	207		953890.125	7.406	0.232	38.00976	2.01	PPB
Replicates			877541.261	37.167105	1016928.230	38.202763	967200.883	38.659399
LEAD	208		1476602.246	7.034	0.360	37.30145	1.88	PPB
Replicates			1363083.033	36.593858	1566866.695	37.310500	1499857.010	38.000000
BISMUTH	209	Y	4101053.158	6.002	4101053.158	0		PPB
Replicates			3860347.635		4352261.182		4090550.656	
QC Calculated Values				167.131				
KRYPTON	83		206.113	8.100	160.002	0		MG/L
Replicates			205.002		223.336		190.002	

Sample ID: **1601025-01** Client ID: WS-1 5X Date/Time: 01/14/16 15:22:42

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	357071.477	11.674	357071.477	0		PPB
Replicates			311296.000		392842.622		367075.807	
QC Calculated Values				89.242				
BERYLLIUM	9		877.261	11.948	0.002	2.18965	2.60	PPB
Replicates			756.695	2.166608	946.711	2.147956	928.376	2.254396
SCANDIUM	45	Y	2260019.120	13.951	2260019.120	0		PPB
Replicates			1909909.647		2521557.198		2348590.517	
QC Calculated Values				108.196				
VANADIUM	51		3031915.613	14.490	1.339	163.61422	0.65	PPB
Replicates			2541794.140	162.397288	3390291.375	164.068490	3163661.324	164.376872
CHROMIUM	52		1845155.071	13.484	0.812	110.92932	0.51	PPB
Replicates			1568014.419	111.500598	2049260.256	110.367287	1918190.536	110.920084
MANGANESE	55		29442079.785	11.837	13.054	1158.81239	2.26	PPB
Replicates			25538882.08(	1186.957881	32242088.79!	1135.010078	30545268.47	1154.469206
COBALT	59		973821.960	13.085	0.431	47.44040	0.94	PPB
Replicates			832414.682	47.943676	1079733.830	47.103315	1009317.370	47.274201
NICKEL	60		301164.058	13.630	0.133	67.51627	0.40	PPB
Replicates			255338.231	67.715298	334568.611	67.204661	313585.331	67.628862
COPPER	63		479237.732	13.225	0.212	49.11203	0.78	PPB
Replicates			408707.035	49.526391	531412.848	48.775070	497593.312	49.034625
COPPER	65		246094.426	12.781	0.109	50.66920	1.37	PPB
Replicates			210668.145	51.267634	270743.939	49.904829	256871.194	50.835126
ZINC	66		425639.544	11.944	0.189	169.32555	2.15	PPB
Replicates			368704.673	173.222190	466496.842	165.996729	441717.116	168.757722
ARSENIC	75		8671.976	11.269	0.004	3.40767	2.80	PPB
Replicates			7586.888	3.515046	9482.604	3.333079	8946.437	3.374896
SELENIUM	82		365.747	9.462	0.000	1.16084	7.54	PPB
Replicates			326.116	1.230112	381.118	1.062397	390.008	1.189997
SILVER	107		1341.758	13.500	0.000	0.05001	26.83	PPB
Replicates			1147.288	0.041033	1372.316	0.043557	1505.669	0.065431
SILVER	109		914.857	12.381	0.000	0.02077	40.35	PPB
Replicates			788.920	0.014923	947.267	0.017019	1008.384	0.030375
CADMIUM	111		2329.237	8.162	0.001	0.82838	0.65	PPB
Replicates			2165.191	0.823088	2537.576	0.828157	2284.944	0.833883
INDIUM	113		164619.121	9.011	-0.000	0		PPB
Replicates			152673.294		181223.180		159960.890	
INDIUM	115	Y	3797296.704	8.019	3797296.704	0		PPB
Replicates			3552740.742		4138337.689		3700811.680	
QC Calculated Values				93.306				
ANTIMONY	121		493.068	11.158	0.000	0.03011	19.37	PPB
Replicates			504.179	0.035535	541.681	0.030863	433.343	0.023942
BARIUM	135		1847611.901	8.111	0.398	696.19686	4.27	PPB
Replicates			1676682.348	677.547425	1956466.726	680.577023	1909686.628	730.466126

Sample ID: **1601025-01** Client ID: WS-1 5X Date/Time: 01/14/16 15:22:42

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		3184324.398	7.618	0.686	707.44278	1.59	PPB
Replicates			2937182.576	699.936282	3422048.753	701.987946	3193741.867	720.404110
TERBIUM	159	Y	4642814.885	7.649	4642814.885	0		PPB
Replicates			4328118.256		5027860.667		4572465.732	
QC Calculated Values				97.590				
THALLIUM	205		11307.791	5.314	0.006	0.54127	2.17	PPB
Replicates			10764.124	0.548105	11952.973	0.527701	11206.276	0.548013
LEAD	206		80523.976	7.080	0.040	12.01537	2.19	PPB
Replicates			74707.186	11.865792	86102.426	11.860732	80762.316	12.319576
LEAD	207		144730.509	7.870	0.071	11.65827	2.47	PPB
Replicates			133035.132	11.410789	155790.235	11.589234	145366.160	11.974792
LEAD	208		231074.424	9.250	0.114	11.78962	3.19	PPB
Replicates			209258.415	11.375891	251975.918	11.880513	231988.939	12.112444
BISMUTH	209	Y	2028933.422	7.436	2028933.422	0		PPB
Replicates			1905535.118		2197126.901		1984138.247	
QC Calculated Values				82.686				
KRYPTON	83		248.336	12.857	202.225	0		MG/L
Replicates			211.669		270.004		263.337	

Sample ID: **1601025-02** Client ID: WS-2 5X Date/Time: 01/14/16 15:24:25

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	361280.602	11.510	361280.602	0		PPB
Replicates			315714.671		397175.501		370951.634	
QC Calculated Values				90.294				
BERYLLIUM	9		581.128	6.915	0.002	1.43825	5.72	PPB
Replicates			543.348	1.532882	623.353	1.397574	576.683	1.384307
SCANDIUM	45	Y	2160499.136	12.294	2160499.136	0		PPB
Replicates			1875385.952		2400931.865		2205179.590	
QC Calculated Values				103.432				
VANADIUM	51		1834485.492	12.322	0.847	103.55098	2.99	PPB
Replicates			1575496.330	102.434708	1992041.063	101.164375	1935919.084	107.053847
CHROMIUM	52		1014103.180	12.271	0.464	63.44817	1.25	PPB
Replicates			875742.622	63.117277	1116854.602	62.872486	1049712.316	64.354750
MANGANESE	55		19430675.648	11.662	8.998	798.73315	0.67	PPB
Replicates			16981537.83	803.754622	21453014.45	793.131569	19857474.65	799.313266
COBALT	59		719575.390	12.239	0.333	36.63737	0.54	PPB
Replicates			623441.480	36.567472	796369.231	36.485845	738915.460	36.858799
NICKEL	60		178657.204	11.747	0.083	41.89849	1.67	PPB
Replicates			155096.265	41.882641	195350.750	41.205579	185524.596	42.607260
COPPER	63		821239.872	12.166	0.380	87.99723	0.74	PPB
Replicates			711542.154	87.826236	907040.330	87.450165	845137.133	88.715298

Sample ID: **1601025-02** Client ID: WS-2 5X Date/Time: 01/14/16 15:24:25

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	65		411051.037	10.966	0.190	88.54334	1.52	PPB
Replicates			361446.788	89.594762	449502.793	87.031936	422203.530	89.003312
ZINC	66		726409.954	9.589	0.337	302.51609	2.98	PPB
Replicates			648586.439	310.454765	782903.522	292.708609	747739.901	304.384896
ARSENIC	75		8995.557	10.522	0.004	3.68495	2.40	PPB
Replicates			7926.585	3.733530	9727.186	3.582965	9332.901	3.738361
SELENIUM	82		330.561	9.725	0.000	1.08129	4.09	PPB
Replicates			293.893	1.110017	353.895	1.030361	343.895	1.103498
SILVER	107		3134.756	13.478	0.001	0.18266	7.37	PPB
Replicates			2686.472	0.167224	3525.621	0.191931	3192.176	0.188831
SILVER	109		2665.172	10.080	0.001	0.15835	2.47	PPB
Replicates			2416.959	0.155599	2950.435	0.162822	2628.123	0.156633
CADMIUM	111		4008.414	8.311	0.001	1.40471	2.90	PPB
Replicates			3774.191	1.437674	4389.808	1.417196	3861.243	1.359255
INDIUM	113		169064.845	9.728	0.000	0		PPB
Replicates			153409.432		186200.881		167584.222	
INDIUM	115	Y	3858769.579	8.283	3858769.579	0		PPB
Replicates			3548942.549		4187384.375		3839981.812	
QC Calculated Values				94.816				
ANTIMONY	121		609.741	21.233	0.000	0.04017	21.46	PPB
Replicates			504.179	0.033008	754.195	0.049734	570.850	0.037759
BARIUM	135		1168368.493	8.691	0.242	422.41708	3.96	PPB
Replicates			1056501.173	409.573664	1254717.330	416.338999	1193886.977	441.338581
BARIUM	137		1977688.216	7.871	0.409	421.71984	2.26	PPB
Replicates			1818526.948	415.738786	2129606.064	416.714972	1984931.636	432.705754
TERBIUM	159	Y	4837883.574	8.077	4837883.574	0		PPB
Replicates			4511513.929		5270882.037		4731254.756	
QC Calculated Values				101.690				
THALLIUM	205		7669.637	12.450	0.004	0.34645	6.31	PPB
Replicates			6643.873	0.321248	8532.806	0.357981	7832.233	0.360134
LEAD	206		326991.280	7.939	0.153	46.39611	1.45	PPB
Replicates			301245.101	45.708114	353156.955	46.428539	326571.784	47.051672
LEAD	207		587563.954	8.366	0.275	45.01246	1.63	PPB
Replicates			539243.967	44.185758	637518.346	45.262043	585929.550	45.589593
LEAD	208		902713.216	8.596	0.423	43.83006	1.65	PPB
Replicates			827842.111	42.997335	982777.704	44.227714	897519.834	44.265131
BISMUTH	209	Y	2133259.865	7.324	2133259.865	0		PPB
Replicates			1995405.832		2302969.169		2101404.594	
QC Calculated Values				86.937				
KRYPTON	83		184.446	13.833	138.335	0		MG/L
Replicates			175.002		213.336		165.001	

Sample ID: **6A14005-CCV5** Client ID: CCV Date/Time: 01/14/16 15:26:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	376261.581	15.516	376261.581	0		PPB
Replicates			312078.154		426208.153		390498.436	
QC Calculated Values				94.038				
BERYLLIUM	9		125417.422	12.945	0.334	298.54004	3.56	PPB
Replicates			108513.920	310.452062	140890.565	295.142909	126847.781	290.025160
QC Calculated Values			99.513					
SCANDIUM	45	Y	1995899.868	13.003	1995899.868	0		PPB
Replicates			1738259.132		2257266.147		1992174.325	
QC Calculated Values				95.552				
VANADIUM	51		4978966.100	12.755	2.493	304.64705	1.12	PPB
Replicates			4318274.105	303.326018	5584844.541	302.093278	5033779.653	308.521860
QC Calculated Values			101.549					
CHROMIUM	52		4461214.440	12.498	2.231	304.90706	0.54	PPB
Replicates			3901229.169	306.025221	5016327.170	303.014555	4466086.980	305.681389
QC Calculated Values			101.636					
MANGANESE	55		6870560.732	10.947	3.449	306.12278	3.55	PPB
Replicates			6032800.017	308.032161	7487759.311	294.413249	7091122.868	315.922943
QC Calculated Values			102.041					
COBALT	59		5548794.079	13.428	2.779	305.74724	2.64	PPB
Replicates			4738573.239	299.900151	6204502.280	302.390294	5703306.718	314.951261
QC Calculated Values			101.916					
NICKEL	60		1219207.228	13.626	0.611	309.29471	2.50	PPB
Replicates			1039749.346	303.021854	1367616.487	306.931635	1250255.852	317.930651
QC Calculated Values			103.098					
COPPER	63		2650154.211	11.859	1.329	307.75677	3.08	PPB
Replicates			2302404.216	306.656605	2913903.155	298.866250	2734155.263	317.747469
QC Calculated Values			102.586					
COPPER	65		1342470.097	11.521	0.673	313.14035	2.45	PPB
Replicates			1175305.946	314.364785	1480479.391	304.941288	1371624.953	320.114987
QC Calculated Values			104.380					
ZINC	66		673699.986	11.611	0.338	303.37018	2.11	PPB
Replicates			590221.561	304.801696	745306.843	296.389268	685571.555	308.919572
QC Calculated Values			101.123					
ARSENIC	75		694688.777	11.618	0.349	299.57043	2.83	PPB
Replicates			606160.695	299.749811	764162.399	291.000001	713743.237	307.961486
QC Calculated Values			99.857					
SELENIUM	82		69381.183	10.891	0.035	297.69939	2.87	PPB
Replicates			61179.912	300.851629	76060.385	288.017567	70903.253	304.228964
QC Calculated Values			99.233					

Sample ID: **6A14005-CCV5** Client ID: CCV Date/Time: 01/14/16 15:26:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		4059354.596	11.111	1.039	302.07698	5.20	PPB
Replicates			3558132.148	290.806723	4432527.437	295.391530	4187404.203	320.032673
QC Calculated Values			100.692					
SILVER	109		3817364.972	9.612	0.978	299.72815	4.34	PPB
Replicates			3414747.019	294.227981	4132987.341	290.369825	3904360.556	314.586650
QC Calculated Values			99.909					
CADMIUM	111		868595.958	8.959	0.223	301.25192	1.96	PPB
Replicates			794901.498	302.541443	949964.678	294.809829	860921.697	306.404476
QC Calculated Values			100.417					
INDIUM	113		1021567.684	9.630	0.218	0		PPB
Replicates			930696.502		1126039.935		1007966.615	
INDIUM	115	Y	3907223.622	10.559	3907223.622	0		PPB
Replicates			3556533.328		4361781.138		3803356.399	
QC Calculated Values				96.007				
ANTIMONY	121		2673097.975	9.106	0.562	300.16198	2.48	PPB
Replicates			2435712.726	301.123904	2922095.370	292.293432	2661485.827	307.068592
QC Calculated Values			100.054					
BARIUM	135		810107.550	8.356	0.171	298.26802	3.87	PPB
Replicates			738738.044	299.245895	873400.478	286.257746	818184.129	309.300434
QC Calculated Values			99.423					
BARIUM	137		1392352.263	8.643	0.293	302.21372	3.14	PPB
Replicates			1270800.960	303.566758	1511444.268	292.129225	1394811.562	310.945181
QC Calculated Values			100.738					
TERBIUM	159	Y	4760118.045	10.973	4760118.045	0		PPB
Replicates			4317607.631		5336254.196		4626492.310	
QC Calculated Values				100.055				
THALLIUM	205		7138514.057	9.870	3.019	295.34556	4.43	PPB
Replicates			6352825.247	284.537465	7714126.205	291.614921	7348590.717	309.884309
QC Calculated Values			98.449					
LEAD	206		2290682.426	8.279	0.969	293.54185	1.80	PPB
Replicates			2098903.876	291.021167	2478123.749	290.004861	2295019.652	299.599513
QC Calculated Values			97.847					
LEAD	207		4239932.992	8.198	1.794	293.43815	1.95	PPB
Replicates			3884827.673	290.890831	4579521.144	289.420032	4255450.159	300.003600
QC Calculated Values			97.813					
LEAD	208		6654820.439	7.914	2.817	291.99626	2.03	PPB
Replicates			6115112.269	290.251837	7167423.363	287.133438	6681925.684	298.603515
QC Calculated Values			97.332					
BISMUTH	209	Y	2363584.603	8.689	2363584.603	0		PPB
Replicates			2183824.891		2587423.524		2319505.393	
QC Calculated Values				96.324				

Sample ID: **6A14005-CCV5** Client ID: CCV Date/Time: 01/14/16 15:26:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
KRYPTON	83		62.222	25.317	16.111	0		MG/L
Replicates			80.000		56.667		50.000	

Sample ID: **6A14005-CCB5** Client ID: CCB Date/Time: 01/14/16 15:27:52

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	386303.410	12.856	386303.410	0		PPB
Replicates			329807.072		423075.931		406027.226	
QC Calculated Values				96.547				
BERYLLIUM	9		32.778	92.276	0.000	0.07853	107.91	PPB
Replicates			65.000	0.172248	28.333	0.056075	5.000	0.007276
SCANDIUM	45	Y	2126878.977	13.585	2126878.977	0		PPB
Replicates			1819332.292		2392632.959		2168671.681	
QC Calculated Values				101.822				
VANADIUM	51		5225.473	20.738	0.001	0.09637	105.92	PPB
Replicates			6321.067	0.212832	5201.166	0.053923	4154.185	0.022365
CHROMIUM	52		12071.200	7.885	0.001	0.08642	177.96	PPB
Replicates			12856.593	0.263907	12344.281	0.003232	11012.727	-0.007864
MANGANESE	55		7934.511	62.133	0.003	0.29635	86.91	PPB
Replicates			12920.842	0.578142	7819.723	0.237823	3062.969	0.073077
COBALT	59		1349.552	51.630	0.001	0.06783	68.31	PPB
Replicates			2048.543	0.118725	1345.090	0.056698	655.021	0.028079
NICKEL	60		526.870	68.855	0.000	0.11750	91.02	PPB
Replicates			897.262	0.234585	511.124	0.092955	172.224	0.024962
COPPER	63		1582.538	24.982	0.001	0.15620	39.17	PPB
Replicates			1905.737	0.222413	1700.145	0.144405	1141.732	0.101778
COPPER	65		800.034	28.530	0.000	0.16072	46.24	PPB
Replicates			1036.165	0.245028	783.364	0.132448	580.572	0.104690
ZINC	66		965.790	30.807	0.000	0.25497	70.17	PPB
Replicates			1255.634	0.454248	980.604	0.202477	661.133	0.108182
ARSENIC	75		-72.712	154.899	0.000	0.07437	61.73	PPB
Replicates			32.320	0.116895	-58.806	0.080511	-191.649	0.025694
SELENIUM	82		86.111	11.949	0.000	0.12272	69.78	PPB
Replicates			96.112	0.221359	86.667	0.079309	75.556	0.067480
SILVER	107		1464.002	29.042	0.000	0.05460	68.92	PPB
Replicates			1894.624	0.096915	1452.883	0.041967	1044.499	0.024905
SILVER	109		1403.808	29.456	0.000	0.05531	68.13	PPB
Replicates			1800.162	0.096880	1436.214	0.045677	975.048	0.023386
CADMIUM	111		221.296	68.648	0.000	0.07492	77.93	PPB
Replicates			387.060	0.140583	188.110	0.055286	88.717	0.028877
INDIUM	113		171114.481	10.312	-0.001	0		PPB
Replicates			155512.375		190263.792		167567.275	

Sample ID: **6A14005-CCB5** Client ID: CCB Date/Time: 01/14/16 15:27:52

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	115	Y	4012650.847	9.954	4012650.847	0		PPB
Replicates			3677866.410		4454757.916		3905328.214	
QC Calculated Values				98.597				
ANTIMONY	121		1376.485	16.106	0.000	0.12656	26.42	PPB
Replicates			1608.463	0.165130	1354.258	0.108923	1166.735	0.105630
BARIUM	135		506.685	76.546	0.000	0.17813	86.66	PPB
Replicates			903.374	0.344118	488.345	0.151392	128.334	0.038889
BARIUM	137		842.270	72.485	0.000	0.17496	82.48	PPB
Replicates			1480.110	0.332539	783.364	0.143088	263.337	0.049254
TERBIUM	159	Y	4839389.769	9.142	4839389.769	0		PPB
Replicates			4477231.610		5332472.335		4708465.363	
QC Calculated Values				101.722				
THALLIUM	205		2590.701	62.663	0.001	0.09818	71.24	PPB
Replicates			4205.051	0.172718	2608.674	0.087849	958.379	0.033977
LEAD	206		911.165	68.022	0.000	0.10644	77.95	PPB
Replicates			1550.120	0.196501	870.871	0.089710	312.505	0.033112
LEAD	207		1669.535	65.146	0.001	0.10493	74.69	PPB
Replicates			2762.694	0.188834	1658.402	0.092336	587.509	0.033622
LEAD	208		2515.507	61.735	0.001	0.09816	72.10	PPB
Replicates			4042.140	0.173124	2566.856	0.088890	937.526	0.032481
BISMUTH	209	Y	2509280.736	9.143	2509280.736	0		PPB
Replicates			2321852.807		2765148.811		2440840.590	
QC Calculated Values				102.261				
KRYPTON	83		43.333	10.176	-2.778	0		MG/L
Replicates			41.667		40.000		48.333	

Sample ID: **1601025-03** Client ID: WS-3 5X Date/Time: 01/14/16 15:29:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	382320.805	13.537	382320.805	0		PPB
Replicates			324826.293		425180.776		396955.346	
QC Calculated Values				95.552				
BERYLLIUM	9		268.893	9.807	0.001	0.62652	4.10	PPB
Replicates			240.003	0.655976	291.671	0.608768	275.004	0.614831
SCANDIUM	45	Y	2127551.093	13.227	2127551.093	0		PPB
Replicates			1839366.003		2401659.839		2141627.438	
QC Calculated Values				101.854				
VANADIUM	51		1075157.987	12.878	0.504	61.55364	1.85	PPB
Replicates			924209.227	61.181349	1196255.805	60.647974	1105008.928	62.831598
CHROMIUM	52		591994.678	11.746	0.273	37.37599	1.71	PPB
Replicates			518149.971	37.797398	656222.364	36.640740	601611.698	37.689843

Sample ID: **1601025-03** Client ID: WS-3 5X Date/Time: 01/14/16 15:29:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
MANGANESE	55		7680413.905	10.442	3.618	321.20951	2.84	PPB
Replicates			6849418.259	330.508169	8449807.006	312.268335	7742016.449	320.852011
COBALT	59		243460.762	12.187	0.114	12.59571	1.09	PPB
Replicates			212582.467	12.709674	271752.985	12.443260	246046.833	12.634205
NICKEL	60		106198.351	10.515	0.050	25.33487	2.77	PPB
Replicates			94645.782	26.053155	116935.274	24.651696	107013.997	25.299754
COPPER	63		654317.541	10.957	0.308	71.33701	3.11	PPB
Replicates			574726.406	72.324590	713845.134	68.798552	674381.082	72.887889
COPPER	65		322049.778	11.223	0.152	70.49028	2.43	PPB
Replicates			282815.694	71.472660	353986.929	68.513339	329346.711	71.484853
ZINC	66		717469.252	10.396	0.338	303.48977	2.89	PPB
Replicates			639778.673	312.236772	788514.115	294.718050	724114.969	303.514492
ARSENIC	75		7229.794	10.932	0.004	3.02772	2.68	PPB
Replicates			6365.601	3.075416	7915.938	2.933865	7407.841	3.073886
SELENIUM	82		225.003	5.743	0.000	0.68162	13.34	PPB
Replicates			211.113	0.751281	227.225	0.578794	236.669	0.714789
SILVER	107		4274.071	12.696	0.001	0.26655	8.03	PPB
Replicates			3670.118	0.243327	4720.558	0.270834	4431.537	0.285485
SILVER	109		4216.634	8.263	0.001	0.28005	7.35	PPB
Replicates			3814.616	0.271400	4403.747	0.265205	4431.537	0.303552
CADMIUM	111		3344.278	7.891	0.001	1.16513	5.47	PPB
Replicates			3039.785	1.140293	3506.498	1.117609	3486.550	1.237503
INDIUM	113		167399.609	8.971	-0.001	0		PPB
Replicates			153870.603		183556.835		164771.388	
INDIUM	115	Y	3883492.667	8.377	3883492.667	0		PPB
Replicates			3602588.913		4239918.512		3807970.575	
QC Calculated Values				95.424				
ANTIMONY	121		1605.684	1.306	0.000	0.15314	12.25	PPB
Replicates			1608.463	0.166277	1583.459	0.131658	1625.132	0.161473
BARIUM	135		561731.674	8.195	0.117	204.93667	3.92	PPB
Replicates			514514.275	202.186688	606481.374	198.649593	564199.374	213.973722
BARIUM	137		958746.781	8.644	0.200	206.17467	2.89	PPB
Replicates			879347.646	203.776871	1044712.121	201.793028	952180.576	212.954121
TERBIUM	159	Y	4800572.492	9.867	4800572.492	0		PPB
Replicates			4450611.242		5339544.906		4611561.328	
QC Calculated Values				100.906				
THALLIUM	205		5265.285	10.428	0.002	0.22642	7.10	PPB
Replicates			4634.407	0.213674	5634.921	0.221127	5526.527	0.244470
LEAD	206		306242.505	7.860	0.137	41.56883	1.02	PPB
Replicates			284931.444	41.505950	332349.191	41.177711	301446.880	42.022840
LEAD	207		551309.977	7.666	0.247	40.41756	1.21	PPB
Replicates			513471.808	40.393403	596920.051	39.939936	543538.073	40.919328

Sample ID: **1601025-03** Client ID: WS-3 5X Date/Time: 01/14/16 15:29:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LEAD	208		859461.594	8.422	0.385	39.92457	1.80	PPB
Replicates			790097.918	39.397647	934531.658	39.635280	853755.205	40.740775
BISMUTH	209	Y	2231277.421	8.503	2231277.421	0		PPB
Replicates			2078399.941		2443605.322		2171827.000	
QC Calculated Values				90.932				
KRYPTON	83		118.334	13.583	72.223	0		MG/L
Replicates			100.001		130.001		125.001	

Sample ID: **1601025-05** Client ID: WS-5 5X Date/Time: 01/14/16 15:31:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	354314.623	14.017	354314.623	0		PPB
Replicates			299958.960		397319.384		365665.524	
QC Calculated Values				88.553				
BERYLLIUM	9		1023.942	10.946	0.003	2.58480	4.07	PPB
Replicates			895.040	2.660429	1098.394	2.464569	1078.391	2.629398
SCANDIUM	45	Y	2361730.452	11.539	2361730.452	0		PPB
Replicates			2076546.540		2619542.531		2389102.283	
QC Calculated Values				113.065				
VANADIUM	51		3192865.326	11.765	1.350	164.94123	1.34	PPB
Replicates			2781672.480	163.462912	3518061.817	163.883172	3278861.682	167.477599
CHROMIUM	52		1103228.189	11.394	0.462	63.15068	0.86	PPB
Replicates			976428.263	63.561551	1227796.278	63.355046	1105460.026	62.535451
MANGANESE	55		16382522.826	10.062	6.944	616.42629	1.54	PPB
Replicates			14623070.20	625.066096	17891341.98	606.241109	16633156.28	617.971654
COBALT	59		707929.533	10.987	0.300	32.98573	0.97	PPB
Replicates			623845.548	33.045993	777303.151	32.639802	722639.899	33.271397
NICKEL	60		231483.065	9.340	0.098	49.72784	2.31	PPB
Replicates			209099.624	50.999188	252250.215	48.769896	233099.355	49.414435
COPPER	63		590736.448	10.689	0.250	57.93112	1.08	PPB
Replicates			522725.213	58.263372	647502.821	57.210704	601981.310	58.319292
COPPER	65		297465.701	10.829	0.126	58.57633	0.91	PPB
Replicates			262905.571	58.848708	326652.123	57.961099	302839.408	58.919172
ZINC	66		585069.148	8.996	0.248	222.77985	2.63	PPB
Replicates			528521.030	228.432865	632633.806	216.744435	594052.609	223.162242
ARSENIC	75		11333.099	9.941	0.005	4.23021	1.64	PPB
Replicates			10125.822	4.291756	12356.337	4.154874	11517.138	4.243994
SELENIUM	82		447.603	6.580	0.000	1.39714	6.05	PPB
Replicates			417.787	1.490536	476.678	1.326095	448.343	1.374786
SILVER	107		1893.699	10.418	0.000	0.09653	17.24	PPB
Replicates			1694.588	0.092315	1897.402	0.082398	2089.107	0.114873
SILVER	109		1418.619	6.088	0.000	0.06481	12.06	PPB
Replicates			1319.531	0.066031	1458.440	0.056461	1477.887	0.071951

Sample ID: **1601025-05** Client ID: WS-5 5X Date/Time: 01/14/16 15:31:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CADMIUM	111		3801.768	12.139	0.001	1.38919	6.41	PPB
Replicates			3634.731	1.447862	4323.540	1.433054	3447.034	1.286656
INDIUM	113		158597.144	8.794	-0.001	0		PPB
Replicates			146989.074		174068.588		154733.770	
INDIUM	115	Y	3697860.455	9.432	3697860.455	0		PPB
Replicates			3393786.841		4078596.115		3621198.407	
QC Calculated Values				90.862				
ANTIMONY	121		368.062	9.151	0.000	0.01630	4.13	PPB
Replicates			337.506	0.015532	404.175	0.016780	362.507	0.016597
BARIUM	135		1331751.871	8.492	0.291	509.43030	2.63	PPB
Replicates			1214608.839	497.351176	1440311.914	507.058108	1340334.860	523.881627
BARIUM	137		2254778.326	8.555	0.493	508.58185	2.13	PPB
Replicates			2062139.626	497.947266	2447912.684	508.201188	2254282.670	519.597100
TERBIUM	159	Y	4571352.457	7.838	4571352.457	0		PPB
Replicates			4271292.119		4968038.511		4474726.742	
QC Calculated Values				96.088				
THALLIUM	205		8659.318	7.814	0.004	0.41471	2.96	PPB
Replicates			7961.501	0.400556	9312.668	0.422056	8703.786	0.421508
LEAD	206		132603.368	6.186	0.066	19.87459	1.00	PPB
Replicates			125950.715	19.828145	141768.678	20.093194	130090.711	19.702439
LEAD	207		239584.434	6.764	0.119	19.38776	1.40	PPB
Replicates			225224.378	19.147714	257155.566	19.682788	236373.359	19.332783
LEAD	208		377257.245	6.791	0.187	19.35060	1.90	PPB
Replicates			351258.990	18.928036	402478.824	19.525938	378033.920	19.597817
BISMUTH	209	Y	2019157.818	5.345	2019157.818	0		PPB
Replicates			1922883.517		2135833.326		1998756.612	
QC Calculated Values				82.287				
KRYPTON	83		318.894	8.384	272.783	0		MG/L
Replicates			293.338		346.673		316.672	

Sample ID: **1601025-06** Client ID: WS-6 5X Date/Time: 01/14/16 15:33:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	354190.657	14.194	354190.657	0		PPB
Replicates			296661.072		389685.979		376224.919	
QC Calculated Values				88.522				
BERYLLIUM	9		903.930	8.471	0.003	2.28894	6.68	PPB
Replicates			820.034	2.464301	970.047	2.218852	921.709	2.183660
SCANDIUM	45	Y	2296509.044	14.210	2296509.044	0		PPB
Replicates			1943233.313		2586710.893		2359582.928	
QC Calculated Values				109.943				

Sample ID: **1601025-06** Client ID: WS-6 5X Date/Time: 01/14/16 15:33:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
VANADIUM	51		2832943.651	12.490	1.234	150.77622	1.86	PPB
Replicates			2451572.114	153.935885	3150599.539	148.608647	2896659.301	149.784125
CHROMIUM	52		1130265.673	12.094	0.488	66.70604	2.33	PPB
Replicates			983612.061	68.475503	1254143.230	65.560111	1153041.728	66.082517
MANGANESE	55		27772293.674	12.139	12.118	1075.74461	2.31	PPB
Replicates			24175935.55	1104.340905	30860606.76	1059.011082	28280338.69	1063.881839
COBALT	59		827595.552	12.016	0.361	39.72886	2.35	PPB
Replicates			720362.392	40.777660	916784.403	38.986390	845639.861	39.422534
NICKEL	60		209150.240	11.312	0.091	46.25756	3.06	PPB
Replicates			183156.539	47.735367	229426.989	44.919064	214867.193	46.118246
COPPER	63		559738.527	11.675	0.244	56.55822	2.77	PPB
Replicates			489843.867	58.344077	619315.459	55.414084	570056.255	55.916505
COPPER	65		283609.029	11.392	0.124	57.56432	2.98	PPB
Replicates			248496.865	59.439648	312083.884	56.078328	290246.338	57.174983
ZINC	66		652036.858	12.030	0.284	255.39640	2.33	PPB
Replicates			565555.636	261.232906	718586.774	249.342149	671968.165	255.614154
ARSENIC	75		14789.976	11.757	0.007	5.64916	2.72	PPB
Replicates			12843.937	5.781150	16190.895	5.480133	15335.096	5.686199
SELENIUM	82		458.344	9.285	0.000	1.48672	8.24	PPB
Replicates			421.676	1.625730	505.013	1.439557	448.343	1.394869
SILVER	107		2544.771	10.716	0.001	0.15194	5.75	PPB
Replicates			2233.583	0.146459	2742.043	0.147358	2658.687	0.162008
SILVER	109		1956.673	3.736	0.000	0.11372	11.77	PPB
Replicates			1877.954	0.123529	1969.638	0.098475	2022.427	0.119169
CADMIUM	111		4426.042	7.400	0.001	1.65953	2.63	PPB
Replicates			4097.284	1.700433	4752.332	1.613712	4428.511	1.664449
INDIUM	113		159051.391	7.664	0.000	0		PPB
Replicates			147568.346		171843.091		157742.736	
INDIUM	115	Y	3612446.550	10.024	3612446.550	0		PPB
Replicates			3258062.515		3981786.295		3597490.839	
QC Calculated Values				88.763				
ANTIMONY	121		406.953	8.276	0.000	0.02088	14.50	PPB
Replicates			370.840	0.019977	412.509	0.018400	437.510	0.024251
BARIUM	135		1022493.550	8.926	0.223	390.61335	1.95	PPB
Replicates			928122.103	382.330695	1110309.017	397.269593	1029049.529	392.239771
BARIUM	137		1744183.608	8.454	0.381	393.02200	1.67	PPB
Replicates			1586695.903	385.448612	1878987.502	396.464196	1766867.418	397.153206
TERBIUM	159	Y	4574102.901	7.028	4574102.901	0		PPB
Replicates			4245703.167		4888128.291		4588477.245	
QC Calculated Values				96.145				
THALLIUM	205		9172.276	7.567	0.005	0.44195	2.39	PPB
Replicates			8420.210	0.435371	9788.121	0.436348	9308.497	0.454131

Sample ID: **1601025-06** Client ID: WS-6 5X Date/Time: 01/14/16 15:33:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	206		207337.157	7.769	0.103	31.22665	2.08	PPB
Replicates			190200.098	30.748540	222170.028	30.966139	209641.346	31.965263
LEAD	207		371527.368	8.002	0.185	30.21494	2.33	PPB
Replicates			339612.186	29.649627	398434.923	29.990353	376534.995	31.004842
LEAD	208		584519.839	8.228	0.291	30.12686	2.05	PPB
Replicates			534044.624	29.553198	629813.819	30.048870	589701.075	30.778515
BISMUTH	209	Y	2010106.363	7.522	2010106.363	0		PPB
Replicates			1872684.571		2172087.823		1985546.695	
QC Calculated Values				81.918				
KRYPTON	83		291.115	13.060	245.004	0		MG/L
Replicates			268.337		335.006		270.004	

Sample ID: **1601025-07** Client ID: WS-7 5X Date/Time: 01/14/16 15:34:45

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	360990.104	15.482	360990.104	0		PPB
Replicates			297400.901		402325.355		383244.056	
QC Calculated Values				90.221				
BERYLLIUM	9		1171.180	11.817	0.003	2.90516	4.17	PPB
Replicates			1011.718	3.033631	1260.079	2.792674	1241.744	2.889186
SCANDIUM	45	Y	2310661.938	13.167	2310661.938	0		PPB
Replicates			1972151.671		2561304.592		2398529.550	
QC Calculated Values				110.621				
VANADIUM	51		3181480.689	12.937	1.375	168.05495	0.95	PPB
Replicates			2715197.460	168.008483	3494254.739	166.478601	3334989.868	169.677762
CHROMIUM	52		1143354.309	12.592	0.490	66.95958	0.63	PPB
Replicates			982621.406	67.392480	1260501.470	66.556648	1186940.052	66.929608
MANGANESE	55		32410993.956	12.044	14.041	1246.40997	1.20	PPB
Replicates			28063778.24	1263.145066	35615707.96	1234.318777	33553495.65	1241.766077
COBALT	59		952164.525	12.005	0.412	45.37802	1.42	PPB
Replicates			822883.933	45.898724	1039858.170	44.659501	993751.472	45.575842
NICKEL	60		214599.775	11.513	0.093	47.10940	1.77	PPB
Replicates			187063.989	48.038954	234827.989	46.433083	221907.347	46.856170
COPPER	63		446498.535	10.562	0.194	44.82995	2.97	PPB
Replicates			392698.224	46.083223	480678.684	43.431646	466118.696	44.974982
COPPER	65		224788.043	10.873	0.097	45.31203	2.73	PPB
Replicates			196863.315	46.394245	242297.490	43.966014	235203.324	45.575840
ZINC	66		313779.004	9.836	0.136	122.19278	4.00	PPB
Replicates			278242.840	126.551828	333888.091	116.917000	329206.081	123.109521
ARSENIC	75		9974.804	11.215	0.004	3.81795	2.10	PPB
Replicates			8741.626	3.910449	10924.548	3.766687	10258.236	3.776704
SELENIUM	82		552.608	13.812	0.000	1.81414	0.98	PPB
Replicates			468.900	1.803351	618.352	1.834663	570.572	1.804407

Sample ID: **1601025-07** Client ID: WS-7 5X Date/Time: 01/14/16 15:34:45

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		1514.004	9.412	0.000	0.06875	7.27	PPB
Replicates			1350.091	0.068160	1608.463	0.064076	1583.459	0.074018
SILVER	109		845.407	13.414	0.000	0.01824	20.19	PPB
Replicates			716.692	0.014585	930.599	0.018182	888.928	0.021948
CADMIUM	111		2812.174	9.889	0.001	1.04901	0.77	PPB
Replicates			2539.962	1.058120	3095.790	1.045961	2800.770	1.042950
INDIUM	113		154776.361	9.618	-0.001	0		PPB
Replicates			140285.480		170029.144		154014.459	
INDIUM	115	Y	3623804.618	10.427	3623804.618	0		PPB
Replicates			3243582.219		3999260.683		3628570.951	
QC Calculated Values				89.043				
ANTIMONY	121		183.335	3.937	-0.000	-0.00476	45.66	PPB
Replicates			187.502	-0.002252	187.502	-0.005904	175.002	-0.006114
BARIUM	135		1145653.249	8.504	0.255	445.97380	1.63	PPB
Replicates			1035327.254	441.377921	1219866.463	442.211021	1181766.030	454.332461
BARIUM	137		1929032.894	8.535	0.429	442.80248	1.08	PPB
Replicates			1745797.964	438.899916	2064560.716	441.350391	1976740.002	448.157118
TERBIUM	159	Y	4492162.592	8.113	4492162.592	0		PPB
Replicates			4102532.736		4824671.620		4549283.419	
QC Calculated Values				94.423				
THALLIUM	205		10776.671	9.353	0.005	0.52267	7.69	PPB
Replicates			9667.170	0.501401	11026.910	0.497558	11635.932	0.569060
LEAD	206		106891.563	8.129	0.053	16.16283	1.64	PPB
Replicates			97977.641	15.864939	115336.310	16.248559	107360.739	16.374979
LEAD	207		191045.506	7.824	0.095	15.60326	2.07	PPB
Replicates			174998.111	15.302526	204570.175	15.563545	193568.231	15.943711
LEAD	208		301463.384	7.451	0.151	15.60988	2.64	PPB
Replicates			276447.732	15.321895	319909.935	15.426318	308032.486	16.081435
BISMUTH	209	Y	2000856.682	7.014	2000856.682	0		PPB
Replicates			1869356.111		2148613.688		1984600.246	
QC Calculated Values				81.541				
KRYPTON	83		351.117	15.377	305.006	0		MG/L
Replicates			316.672		413.342		323.339	

Sample ID: **1601025-08** Client ID: WS-DUP 5X Date/Time: 01/14/16 15:36:27

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	368989.539	13.608	368989.539	0		PPB
Replicates			312736.585		409280.916		384951.116	
QC Calculated Values				92.220				
BERYLLIUM	9		543.348	12.316	0.001	1.31313	2.91	PPB
Replicates			473.345	1.347657	606.685	1.319767	550.015	1.271975

Sample ID: **1601025-08** Client ID: WS-DUP 5X Date/Time: 01/14/16 15:36:27

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SCANDIUM	45	Y	2109769.462	12.663	2109769.462	0		PPB
Replicates			1817324.001		2341019.584		2170964.800	
QC Calculated Values				101.003				
VANADIUM	51		1768835.624	11.997	0.837	102.29689	2.27	PPB
Replicates			1526014.805	102.387365	1918710.898	99.931512	1861781.168	104.571792
CHROMIUM	52		1499372.094	13.205	0.705	96.38317	0.83	PPB
Replicates			1286823.988	96.070631	1678563.983	97.291802	1532728.312	95.787079
MANGANESE	55		20467360.704	12.401	9.703	861.33630	0.36	PPB
Replicates			17705009.27	864.774581	22696848.81	860.596369	21000224.01	858.637945
COBALT	59		654682.398	12.529	0.310	34.13743	1.29	PPB
Replicates			562180.290	34.027387	718564.715	33.763361	683302.189	34.621549
NICKEL	60		175956.962	11.440	0.083	42.28281	1.34	PPB
Replicates			153618.155	42.809188	192685.901	41.683820	181566.830	42.355409
COPPER	63		598026.394	11.194	0.284	65.69444	1.60	PPB
Replicates			523623.189	66.691316	653390.075	64.602010	617065.919	65.789982
COPPER	65		296484.969	11.392	0.141	65.39543	1.54	PPB
Replicates			258652.344	66.157486	323611.167	64.255388	307191.397	65.773424
ZINC	66		734585.233	10.520	0.349	313.15842	2.29	PPB
Replicates			650306.843	321.229080	802115.113	307.574699	751333.742	310.671487
ARSENIC	75		10299.506	11.506	0.005	4.30089	1.81	PPB
Replicates			8956.323	4.336459	11197.623	4.211795	10744.572	4.354428
SELENIUM	82		290.745	12.468	0.000	0.94902	4.98	PPB
Replicates			248.892	0.941020	311.116	0.906309	312.227	0.999740
SILVER	107		3192.180	10.119	0.001	0.19457	3.38	PPB
Replicates			2836.513	0.188757	3467.268	0.193244	3272.758	0.201697
SILVER	109		2780.946	12.072	0.001	0.17383	5.42	PPB
Replicates			2411.402	0.163403	3067.137	0.176366	2864.299	0.181726
CADMIUM	111		4271.100	12.036	0.001	1.53762	3.03	PPB
Replicates			3801.723	1.505852	4820.482	1.591141	4191.094	1.515867
INDIUM	113		163149.830	10.123	-0.000	0		PPB
Replicates			147242.766		180213.511		161993.215	
INDIUM	115	Y	3749073.960	9.112	3749073.960	0		PPB
Replicates			3413180.654		4096112.245		3737928.983	
QC Calculated Values				92.121				
ANTIMONY	121		563.905	4.202	0.000	0.03694	9.22	PPB
Replicates			537.514	0.037549	570.850	0.033268	583.350	0.039995
BARIUM	135		1029254.956	9.181	0.217	379.22474	4.02	PPB
Replicates			926594.737	362.582847	1112589.481	382.607747	1048580.650	392.483633
BARIUM	137		1756377.970	9.220	0.370	381.55937	3.33	PPB
Replicates			1590109.787	366.930095	1913607.611	388.070375	1765416.513	389.677630
TERBIUM	159	Y	4742698.567	6.622	4742698.567	0		PPB
Replicates			4469569.659		5085865.566		4672660.476	
QC Calculated Values				99.689				

Sample ID: **1601025-08** Client ID: WS-DUP 5X Date/Time: 01/14/16 15:36:27

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		7134.512	11.658	0.003	0.32364	6.15	PPB
Replicates			6197.753	0.303609	7786.364	0.323920	7419.418	0.343388
LEAD	206		356706.513	8.781	0.168	50.82338	1.72	PPB
Replicates			325345.261	50.052606	387991.982	50.645067	356782.297	51.772456
LEAD	207		640885.433	8.765	0.302	49.31459	2.07	PPB
Replicates			583352.080	48.465978	695588.610	49.033275	643715.610	50.444512
LEAD	208		991495.643	8.589	0.467	48.36583	2.26	PPB
Replicates			902959.440	47.552526	1072830.089	47.936735	998697.401	49.608224
BISMUTH	209	Y	2124666.500	8.417	2124666.500	0		PPB
Replicates			1968008.630		2319505.393		2086485.477	
QC Calculated Values				86.587				
KRYPTON	83		164.446	4.570	118.335	0		MG/L
Replicates			156.668		165.001		171.668	

Sample ID: **1601025-09** Client ID: WS-BG 5X Date/Time: 01/14/16 15:38:10

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	363991.864	14.121	363991.864	0		PPB
Replicates			304688.776		395707.315		391579.501	
QC Calculated Values				90.971				
BERYLLIUM	9		638.354	12.443	0.002	1.56489	2.05	PPB
Replicates			546.682	1.598256	681.690	1.534402	686.690	1.562017
SCANDIUM	45	Y	2120340.434	13.439	2120340.434	0		PPB
Replicates			1819371.966		2386008.393		2155640.942	
QC Calculated Values				101.509				
VANADIUM	51		2171572.717	10.880	1.025	125.22162	2.71	PPB
Replicates			1914540.544	128.364349	2379258.856	121.627415	2220918.750	125.673089
CHROMIUM	52		731879.423	12.640	0.340	46.50581	0.94	PPB
Replicates			632451.700	46.806597	815416.175	46.004112	747770.393	46.706715
MANGANESE	55		19733630.862	12.081	9.318	827.16995	2.22	PPB
Replicates			17074841.05	833.054261	21680758.77	806.565672	20445292.75	841.889930
COBALT	59		657870.503	12.536	0.310	34.15767	1.96	PPB
Replicates			566084.915	34.225185	725742.979	33.457624	681783.614	34.790199
NICKEL	60		159404.692	12.422	0.075	38.10826	1.08	PPB
Replicates			138558.879	38.567602	177961.210	37.771091	161693.986	37.986089
COPPER	63		387326.532	11.405	0.183	42.35670	2.87	PPB
Replicates			337684.656	42.953667	422302.005	40.959221	401992.935	43.157211
COPPER	65		198647.292	11.150	0.094	43.63570	2.89	PPB
Replicates			173876.399	44.417133	216541.624	42.178443	205523.853	44.311529
ZINC	66		347342.695	10.941	0.164	147.30852	2.60	PPB
Replicates			307022.436	151.400228	382497.380	143.816722	352508.270	146.708617
ARSENIC	75		6967.909	11.567	0.003	2.93041	2.45	PPB
Replicates			6068.670	2.967856	7625.120	2.847710	7209.938	2.975675

Sample ID: **1601025-09** Client ID: WS-BG 5X Date/Time: 01/14/16 15:38:10

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		211.299	12.887	0.000	0.62255	2.59	PPB
Replicates			184.446	0.636686	238.892	0.625932	210.558	0.605022
SILVER	107		1057.464	8.840	0.000	0.02927	6.01	PPB
Replicates			969.491	0.030780	1155.622	0.029685	1047.277	0.027337
SILVER	109		930.599	12.026	0.000	0.02289	12.94	PPB
Replicates			802.810	0.019872	1011.162	0.022998	977.826	0.025794
CADMIUM	111		1880.518	9.734	0.001	0.67765	1.76	PPB
Replicates			1704.158	0.682591	2069.579	0.686344	1867.817	0.664009
INDIUM	113		162457.589	9.845	-0.000	0		PPB
Replicates			147750.168		179483.897		160138.702	
INDIUM	115	Y	3745933.282	9.422	3745933.282	0		PPB
Replicates			3370234.114		4070588.877		3796976.856	
QC Calculated Values				92.043				
ANTIMONY	121		234.725	12.842	0.000	0.00026	1790.82	PPB
Replicates			254.170	0.005175	250.003	-0.000324	200.002	-0.004072
BARIUM	135		1415210.542	9.068	0.302	527.92807	0.64	PPB
Replicates			1277929.388	524.250346	1532170.004	528.590039	1435532.235	530.943814
BARIUM	137		2427724.224	8.820	0.518	534.14109	0.26	PPB
Replicates			2201514.345	532.588820	2627263.985	534.508178	2454394.342	535.326274
TERBIUM	159	Y	4687264.024	8.634	4687264.024	0		PPB
Replicates			4263384.593		5069608.477		4728799.002	
QC Calculated Values				98.524				
THALLIUM	205		8014.354	12.302	0.004	0.37082	6.91	PPB
Replicates			6894.042	0.343356	8749.659	0.375066	8399.359	0.394050
LEAD	206		78967.880	9.241	0.038	11.45293	2.69	PPB
Replicates			71248.752	11.121278	85753.614	11.508399	79901.274	11.729098
LEAD	207		141730.215	8.436	0.068	11.10519	2.31	PPB
Replicates			128969.020	10.871284	152672.609	11.064663	143549.016	11.379625
LEAD	208		223772.167	8.759	0.107	11.11021	1.85	PPB
Replicates			203736.919	10.884701	242908.264	11.157678	224671.318	11.288258
BISMUTH	209	Y	2085288.774	7.646	2085288.774	0		PPB
Replicates			1938920.674		2255186.262		2061759.387	
QC Calculated Values				84.982				
KRYPTON	83		146.112	20.543	100.001	0		MG/L
Replicates			111.667		166.668		160.001	

Sample ID: **6A14005-CRL5** Client ID: LLCCV Date/Time: 01/14/16 15:39:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	391220.031	14.898	391220.031	0		PPB
Replicates			325852.206		437771.966		410035.921	
QC Calculated Values				97.776				

Sample ID: **6A14005-CRL5** Client ID: LLCCV Date/Time: 01/14/16 15:39:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
BERYLLIUM	9		397.230	13.975	0.001	0.90375	1.01	PPB
Replicates			335.006	0.914210	441.676	0.897092	415.009	0.899957
QC Calculated Values			90.375					
SCANDIUM	45	Y	2012642.360	13.063	2012642.360	0		PPB
Replicates			1727700.759		2245800.553		2064425.769	
QC Calculated Values				96.353				
VANADIUM	51		91292.750	11.321	0.044	5.33942	1.90	PPB
Replicates			80066.983	5.450732	100413.112	5.251377	93398.155	5.316161
QC Calculated Values			106.788					
CHROMIUM	52		41953.956	9.957	0.016	2.15562	5.05	PPB
Replicates			37707.626	2.280937	46059.162	2.101041	42095.080	2.084870
QC Calculated Values			107.781					
MANGANESE	55		32473.603	6.068	0.016	1.39050	9.38	PPB
Replicates			31010.508	1.541031	34714.316	1.319855	31695.986	1.310621
QC Calculated Values			139.050					
COBALT	59		19695.105	11.609	0.010	1.07286	1.54	PPB
Replicates			17216.474	1.091143	21721.900	1.058939	20146.941	1.068496
QC Calculated Values			107.286					
NICKEL	60		4308.341	9.526	0.002	1.07272	3.77	PPB
Replicates			3853.520	1.114709	4651.081	1.033944	4420.421	1.069520
QC Calculated Values			107.272					
COPPER	63		19556.326	12.081	0.010	2.23165	1.04	PPB
Replicates			16989.420	2.256678	21640.056	2.210891	20039.503	2.227393
QC Calculated Values			111.583					
COPPER	65		9426.707	12.174	0.005	2.15976	0.95	PPB
Replicates			8172.783	2.179725	10424.876	2.138576	9682.463	2.160991
QC Calculated Values			107.988					
ZINC	66		5268.986	7.543	0.002	2.19776	6.41	PPB
Replicates			4815.048	2.337512	5554.320	2.055700	5437.589	2.200074
QC Calculated Values			109.888					
ARSENIC	75		2107.828	13.126	0.001	1.00150	0.07	PPB
Replicates			1807.737	1.000724	2352.769	1.001846	2162.979	1.001939
QC Calculated Values			100.150					
SELENIUM	82		1211.555	10.408	0.001	4.93278	4.31	PPB
Replicates			1066.168	5.048400	1291.194	4.687704	1277.304	5.062249
QC Calculated Values			98.656					
SILVER	107		14498.567	12.039	0.004	1.02101	6.95	PPB
Replicates			12493.911	0.969628	15681.731	0.991362	15320.060	1.102041
QC Calculated Values			102.101					

Sample ID: **6A14005-CRL5** Client ID: LLCCV Date/Time: 01/14/16 15:39:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	(Conc 3)	Units
SILVER	109		13637.136	10.341	0.003	1.01268	5.74		PPB
Replicates			12023.891	0.984256	14635.702	0.974290	14251.815	1.079507	
QC Calculated Values			101.268						
CADMIUM	111		2845.320	7.816	0.001	0.98172	4.76		PPB
Replicates			2722.221	1.035399	3102.047	0.959864	2711.692	0.949902	
QC Calculated Values			98.172						
INDIUM	113		170956.183	8.749	-0.000	0			PPB
Replicates			157361.804		186977.675		168529.069		
INDIUM	115	Y	3925063.634	10.474	3925063.634	0			PPB
Replicates			3552480.624		4366090.743		3856619.534		
QC Calculated Values				96.445					
ANTIMONY	121		18078.901	8.230	0.004	2.00656	0.15		PPB
Replicates			16734.824	2.004476	19677.675	2.005165	17824.204	2.010037	
QC Calculated Values			100.328						
BARIUM	135		27142.510	8.299	0.006	9.99222	0.39		PPB
Replicates			25215.083	10.018168	29618.799	10.011284	26593.647	9.947219	
QC Calculated Values			99.922						
BARIUM	137		46944.371	8.695	0.010	10.18957	0.73		PPB
Replicates			43129.474	10.105520	51249.322	10.215773	46454.317	10.247412	
QC Calculated Values			101.896						
TERBIUM	159	Y	4746709.631	8.243	4746709.631	0			PPB
Replicates			4398303.692		5169999.682		4671825.520		
QC Calculated Values				99.774					
THALLIUM	205		25103.912	10.231	0.010	0.99382	5.27		PPB
Replicates			22258.077	0.953383	27249.576	0.975137	25804.083	1.052930	
QC Calculated Values			99.382						
LEAD	206		8321.538	9.684	0.003	1.01846	2.27		PPB
Replicates			7540.342	0.998832	9150.018	1.012601	8274.255	1.043945	
QC Calculated Values			101.846						
LEAD	207		15311.485	7.477	0.006	1.01316	2.05		PPB
Replicates			14305.129	1.023395	16556.926	0.989303	15072.398	1.026794	
QC Calculated Values			101.316						
LEAD	208		23786.062	7.849	0.010	0.99579	1.81		PPB
Replicates			22118.231	1.001327	25802.981	0.975649	23436.974	1.010408	
QC Calculated Values			99.579						
BISMUTH	209	Y	2460350.205	9.462	2460350.205	0			PPB
Replicates			2273026.605		2720965.272		2387058.738		
QC Calculated Values				100.267					
KRYPTON	83		52.222	16.064	6.111	0			MG/L
Replicates			43.333		60.000		53.333		

Sample ID: **6A14005-CCV6** Client ID: CCV Date/Time: 01/14/16 15:41:37

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	389316.366	16.633	389316.366	0		PPB
Replicates			314753.403		431426.599		421769.095	
QC Calculated Values				97.300				
BERYLLIUM	9		132366.274	13.498	0.341	304.75895	3.59	PPB
Replicates			111872.290	317.339893	144663.867	299.381822	140562.665	297.555149
QC Calculated Values			101.586					
SCANDIUM	45	Y	2036510.691	13.124	2036510.691	0		PPB
Replicates			1728364.660		2205507.178		2175660.234	
QC Calculated Values				97.496				
VANADIUM	51		5045878.731	12.637	2.477	302.66810	0.65	PPB
Replicates			4309798.140	304.464500	5429594.390	300.586955	5398243.662	302.952830
QC Calculated Values			100.889					
CHROMIUM	52		4499160.255	12.422	2.206	301.43374	0.77	PPB
Replicates			3854722.785	304.103748	4850815.964	299.886045	4791942.017	300.311422
QC Calculated Values			100.478					
MANGANESE	55		6981004.736	12.710	3.429	304.39088	1.64	PPB
Replicates			5959361.858	306.024043	7424879.355	298.792918	7558772.994	308.355685
QC Calculated Values			101.464					
COBALT	59		5694008.332	12.507	2.798	307.77386	0.69	PPB
Replicates			4872447.065	310.138444	6134756.195	306.007864	6074821.736	307.175269
QC Calculated Values			102.591					
NICKEL	60		1248489.101	12.056	0.614	310.90030	1.49	PPB
Replicates			1076175.886	315.434038	1354282.676	311.072220	1315008.741	306.194657
QC Calculated Values			103.633					
COPPER	63		2681485.886	12.438	1.318	305.05767	1.26	PPB
Replicates			2300049.314	308.096790	2918182.183	306.329743	2826226.160	300.746477
QC Calculated Values			101.686					
COPPER	65		1339836.839	12.902	0.658	305.97283	1.15	PPB
Replicates			1142403.336	307.313002	1463980.608	308.619822	1413126.574	301.985678
QC Calculated Values			101.991					
ZINC	66		685169.832	12.637	0.336	302.20825	2.02	PPB
Replicates			587519.188	305.143252	752565.860	306.304956	715424.446	295.176542
QC Calculated Values			100.736					
ARSENIC	75		701052.508	11.091	0.345	296.48310	2.26	PPB
Replicates			611613.001	304.175936	752582.357	293.315123	738962.165	291.958233
QC Calculated Values			98.828					
SELENIUM	82		70099.613	10.014	0.034	295.11128	3.50	PPB
Replicates			62058.076	306.921666	75001.320	290.674431	73239.444	287.737757
QC Calculated Values			98.370					

Sample ID: **6A14005-CCV6** Client ID: CCV Date/Time: 01/14/16 15:41:37

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		4086203.369	10.918	1.023	297.43961	3.82	PPB
Replicates			3579791.135	286.936948	4421258.485	295.903691	4257560.487	309.478183
QC Calculated Values			99.147					
SILVER	109		3891194.337	9.281	0.975	298.97982	4.15	PPB
Replicates			3474466.725	293.603285	4112483.261	290.167810	4086633.025	313.168378
QC Calculated Values			99.660					
CADMIUM	111		875167.436	9.899	0.219	296.83761	3.18	PPB
Replicates			776779.339	289.945645	939996.970	292.966979	908726.000	307.600219
QC Calculated Values			98.946					
INDIUM	113		1034778.777	8.778	0.216	0		PPB
Replicates			936329.351		1115320.000		1052686.981	
INDIUM	115	Y	3989511.032	8.985	3989511.032	0		PPB
Replicates			3626430.844		4343163.058		3998939.193	
QC Calculated Values				98.029				
ANTIMONY	121		2672533.389	10.161	0.544	290.15064	0.84	PPB
Replicates			2366039.843	288.443794	2883138.981	289.048179	2768421.343	292.959942
QC Calculated Values			96.717					
BARIUM	135		820887.207	9.277	0.167	292.21499	1.93	PPB
Replicates			733304.140	292.916114	871465.428	286.269065	857892.053	297.459786
QC Calculated Values			97.405					
BARIUM	137		1422750.522	9.124	0.290	298.68739	1.64	PPB
Replicates			1274104.336	300.125710	1513748.585	293.235875	1480398.644	302.700597
QC Calculated Values			99.562					
TERBIUM	159	Y	4915599.987	9.883	4915599.987	0		PPB
Replicates			4378461.203		5324221.003		5044117.756	
QC Calculated Values				103.324				
THALLIUM	205		7261548.465	9.015	2.995	292.93597	1.14	PPB
Replicates			6523604.351	290.321123	7772259.307	296.689701	7488781.735	291.797081
QC Calculated Values			97.645					
LEAD	206		2331738.015	9.025	0.962	291.19131	1.12	PPB
Replicates			2094148.604	288.507953	2494688.818	294.802309	2406376.624	290.263655
QC Calculated Values			97.064					
LEAD	207		4314220.263	8.609	1.780	291.03500	1.19	PPB
Replicates			3900847.213	290.225476	4619918.007	294.832272	4421895.568	288.047243
QC Calculated Values			97.012					
LEAD	208		6827315.680	8.739	2.816	291.91705	0.93	PPB
Replicates			6154882.324	290.274333	7293295.717	295.037288	7033768.999	290.439515
QC Calculated Values			97.306					
BISMUTH	209	Y	2423487.119	8.134	2423487.119	0		PPB
Replicates			2197857.207		2562332.282		2510271.866	
QC Calculated Values				98.765				

Sample ID: **6A14005-CCV6** Client ID: CCV Date/Time: 01/14/16 15:41:37

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
KRYPTON	83		74.445	11.268	28.334	0		MG/L
Replicates			83.334		66.667		73.334	

Sample ID: **6A14005-CCB6** Client ID: CCB Date/Time: 01/14/16 15:43:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	399527.619	15.604	399527.619	0		PPB
Replicates			329032.162		447390.611		422160.086	
QC Calculated Values				99.852				
BERYLLIUM	9		27.778	38.575	0.000	0.06222	59.79	PPB
Replicates			40.000	0.104823	20.000	0.036195	23.333	0.045630
SCANDIUM	45	Y	2029050.581	12.771	2029050.581	0		PPB
Replicates			1741582.271		2244708.591		2100860.880	
QC Calculated Values				97.139				
VANADIUM	51		4977.887	11.998	0.001	0.09463	83.44	PPB
Replicates			5663.218	0.185631	4702.017	0.044256	4568.427	0.054011
CHROMIUM	52		11710.750	4.249	0.001	0.09880	143.25	PPB
Replicates			12270.857	0.261058	11541.657	0.000831	11319.737	0.034509
MANGANESE	55		6299.306	27.557	0.003	0.23279	50.76	PPB
Replicates			8265.915	0.369021	5651.597	0.171201	4980.407	0.158143
COBALT	59		1378.437	37.450	0.001	0.07275	54.93	PPB
Replicates			1960.192	0.118674	1200.072	0.053667	975.048	0.045910
NICKEL	60		362.970	32.849	0.000	0.07884	55.72	PPB
Replicates			497.235	0.129373	322.227	0.057454	269.448	0.049706
COPPER	63		1509.374	12.665	0.001	0.15591	29.62	PPB
Replicates			1725.149	0.209232	1441.771	0.128597	1361.204	0.129900
COPPER	65		680.579	15.719	0.000	0.13958	31.80	PPB
Replicates			786.142	0.190098	683.357	0.121764	572.239	0.106863
ZINC	66		794.476	8.922	0.000	0.19298	42.35	PPB
Replicates			875.038	0.285643	741.694	0.131142	766.696	0.162151
ARSENIC	75		-119.692	49.642	0.000	0.05236	40.94	PPB
Replicates			-53.572	0.075198	-136.892	0.049227	-168.612	0.032665
SELENIUM	82		68.334	13.433	0.000	0.06332	118.21	PPB
Replicates			77.223	0.148754	68.889	0.031978	58.889	0.009235
SILVER	107		1543.640	18.770	0.000	0.06361	56.72	PPB
Replicates			1875.176	0.105115	1416.767	0.039805	1338.979	0.045903
SILVER	109		1425.103	16.159	0.000	0.05976	51.62	PPB
Replicates			1672.362	0.095385	1386.207	0.042438	1216.741	0.041469
CADMIUM	111		159.169	35.074	0.000	0.05486	49.36	PPB
Replicates			223.107	0.085635	120.083	0.034692	134.318	0.044251
INDIUM	113		167496.404	10.189	-0.001	0		PPB
Replicates			151184.260		185228.912		166076.039	

Sample ID: **6A14005-CCB6** Client ID: CCB Date/Time: 01/14/16 15:43:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	115	Y	3946137.015	12.598	3946137.015	0		PPB
Replicates			3451154.248		4445375.619		3941881.179	
QC Calculated Values				96.963				
ANTIMONY	121		1475.113	23.026	0.000	0.13804	33.09	PPB
Replicates			1816.832	0.189452	1470.942	0.122567	1137.565	0.102105
BARIUM	135		372.785	35.961	0.000	0.12845	44.90	PPB
Replicates			521.680	0.194520	335.006	0.102562	261.670	0.088254
BARIUM	137		612.798	31.055	0.000	0.12473	40.29	PPB
Replicates			831.701	0.182705	520.014	0.093491	486.679	0.097998
TERBIUM	159	Y	4822264.981	8.250	4822264.981	0		PPB
Replicates			4488036.926		5262336.014		4716422.004	
QC Calculated Values				101.362				
THALLIUM	205		1739.054	36.763	0.001	0.06629	48.35	PPB
Replicates			2437.797	0.102792	1595.961	0.053368	1183.403	0.042724
LEAD	206		575.018	32.594	0.000	0.06675	45.25	PPB
Replicates			787.531	0.101573	504.179	0.050868	433.343	0.047797
LEAD	207		1072.253	35.178	0.000	0.06727	48.10	PPB
Replicates			1500.056	0.104562	929.188	0.050518	787.516	0.046721
LEAD	208		1648.695	32.605	0.001	0.06377	46.68	PPB
Replicates			2262.646	0.098130	1420.892	0.047197	1262.548	0.045978
BISMUTH	209	Y	2459880.722	9.698	2459880.722	0		PPB
Replicates			2223887.415		2700934.010		2454820.742	
QC Calculated Values				100.248				
KRYPTON	83		45.000	9.799	-1.111	0		MG/L
Replicates			46.667		40.000		48.333	

Sample ID: **6011103-BS2** Client ID: MLCSUB 2X Date/Time: 01/14/16 15:59:05

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	376708.097	11.992	376708.097	0		PPB
Replicates			326244.697		413374.230		390505.365	
QC Calculated Values				94.149				
BERYLLIUM	9		222659.956	11.349	0.591	528.04161	1.00	PPB
Replicates			194916.283	533.432291	244359.542	527.789215	228704.042	522.903339
SCANDIUM	45	Y	2145055.806	11.835	2145055.806	0		PPB
Replicates			1871060.077		2372322.477		2191784.864	
QC Calculated Values				102.692				
VANADIUM	51		8850610.109	12.544	4.122	503.64096	1.85	PPB
Replicates			7601424.094	496.179646	9724576.614	500.645532	9225829.618	514.097717
CHROMIUM	52		7883507.000	12.243	3.669	501.40439	0.52	PPB
Replicates			6834002.086	498.472836	8732958.428	502.396448	8083560.485	503.343889

Sample ID: **6011103-BS2** Client ID: MLCSUB 2X Date/Time: 01/14/16 15:59:05

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
MANGANESE	55		57621815.765	11.552	26.869	2385.13326	1.58	PPB
Replicates			50126274.66	2378.118709	62842416.34	2351.445275	59896756.28	2425.835797
COBALT	59		5655018.447	11.407	2.637	290.14141	1.88	PPB
Replicates			4924404.459	289.540502	6145845.462	285.004114	5894805.421	295.879622
NICKEL	60		5333737.005	11.578	2.487	1259.98046	1.41	PPB
Replicates			4640876.252	1256.575765	5826106.711	1244.173887	5534228.052	1279.191735
COPPER	63		2399902.872	12.267	1.118	258.93012	1.58	PPB
Replicates			2069527.453	256.072596	2634445.297	257.095953	2495735.867	263.621798
COPPER	65		1218940.156	11.603	0.568	264.24831	0.61	PPB
Replicates			1063517.476	264.270809	1340102.098	262.637210	1253200.894	265.836898
ZINC	66		2449626.825	10.900	1.143	1026.30014	1.31	PPB
Replicates			2152844.948	1033.256550	2670376.996	1010.835434	2525658.532	1034.808439
ARSENIC	75		1328935.795	11.365	0.620	532.67619	1.64	PPB
Replicates			1158699.768	532.236332	1446866.414	524.176223	1381241.203	541.616012
SELENIUM	82		136727.369	9.630	0.064	546.07356	3.04	PPB
Replicates			121689.269	556.128657	146183.506	526.896589	142309.332	555.195422
SILVER	107		2462239.710	9.437	0.670	194.92671	3.44	PPB
Replicates			2201777.309	189.283332	2648266.345	193.152376	2536675.475	202.344408
SILVER	109		2297767.327	8.528	0.626	191.90555	4.01	PPB
Replicates			2073019.126	187.881188	2432721.074	187.054753	2387561.781	200.780711
CADMIUM	111		1769732.458	8.161	0.482	652.79984	0.94	PPB
Replicates			1622168.978	649.483355	1910814.047	649.063731	1776214.350	659.852427
INDIUM	113		1846911.605	6.527	0.460	0		PPB
Replicates			1713743.646		1948584.062		1878407.106	
INDIUM	115	Y	3669879.696	8.254	3669879.696	0		PPB
Replicates			3380865.899		3985024.179		3643749.012	
QC Calculated Values				90.175				
ANTIMONY	121		351539.459	8.079	0.074	39.41530	2.15	PPB
Replicates			320918.099	39.111049	377012.946	38.761721	356687.331	40.373123
BARIUM	135		3071558.796	9.227	0.645	1128.31537	1.92	PPB
Replicates			2773872.923	1108.350388	3338158.722	1125.231157	3102644.743	1151.364554
BARIUM	137		5405156.628	8.574	1.136	1171.35885	1.97	PPB
Replicates			4910923.819	1157.156897	5829927.664	1158.874536	5474618.400	1198.045110
TERBIUM	159	Y	4759676.010	8.566	4759676.010	0		PPB
Replicates			4377233.326		5188663.409		4713131.294	
QC Calculated Values				100.046				
THALLIUM	205		28412920.808	9.315	13.900	1359.58464	4.78	PPB
Replicates			25414973.65	1294.514863	30425648.29	1359.669411	29398140.47	1424.569657
LEAD	206		8714689.026	6.806	4.267	1292.07262	2.64	PPB
Replicates			8057886.685	1270.571899	9211118.514	1274.284802	8875061.879	1331.361162
LEAD	207		15729040.704	7.148	7.700	1259.15153	2.40	PPB
Replicates			14506644.42	1235.296879	16718868.83	1249.071584	15961608.84	1293.086113

Sample ID: **6011103-BS2** Client ID: MLCSUB 2X Date/Time: 01/14/16 15:59:05

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	208		24402359.530	7.977	11.941	1237.81433	2.63	PPB
Replicates			22314913.50	1204.518942	26168195.23	1239.276771	24723969.85	1269.647270
BISMUTH	209	Y	2042545.308	6.650	2042545.308	0		PPB
Replicates			1920340.569		2188780.542		2018514.814	
QC Calculated Values				83.240				
KRYPTON	83		263.337	17.229	217.226	0		MG/L
Replicates			211.669		296.671		281.671	

Sample ID: **6011103-BS3** Client ID: MLCSUB 20X Date/Time: 01/14/16 16:00:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	374580.719	14.880	374580.719	0		PPB
Replicates			312571.544		420507.601		390663.013	
QC Calculated Values				93.618				
BERYLLIUM	9		26858.111	13.311	0.072	64.12252	1.69	PPB
Replicates			22867.784	65.317203	29769.245	63.204220	27937.304	63.846128
SCANDIUM	45	Y	2024448.027	13.288	2024448.027	0		PPB
Replicates			1735527.535		2267676.179		2070140.367	
QC Calculated Values				96.918				
VANADIUM	51		1025200.373	13.003	0.505	61.67982	0.31	PPB
Replicates			881484.561	61.846655	1144808.858	61.471799	1049307.699	61.721016
CHROMIUM	52		907515.961	13.212	0.443	60.57712	1.42	PPB
Replicates			784864.185	61.103779	1024471.697	61.040613	913212.000	59.586977
MANGANESE	55		6360742.974	12.539	3.144	279.04897	1.44	PPB
Replicates			5473371.746	279.903083	7017802.024	274.664652	6591055.154	282.579182
COBALT	59		660003.065	12.239	0.326	35.89580	1.14	PPB
Replicates			572069.832	36.258257	730904.311	35.454182	677035.051	35.974955
NICKEL	60		644689.260	11.350	0.319	161.62245	2.98	PPB
Replicates			561421.034	163.869603	698725.735	156.086346	673921.012	164.911404
COPPER	63		311895.215	11.908	0.154	35.69804	2.38	PPB
Replicates			269905.047	35.987407	340445.379	34.739915	325335.220	36.366783
COPPER	65		151450.833	11.981	0.075	34.80724	1.95	PPB
Replicates			131140.400	35.114392	166061.918	34.029955	157150.182	35.277385
ZINC	66		335796.676	10.785	0.166	149.15921	2.86	PPB
Replicates			295276.542	152.643817	365005.962	144.402208	347107.524	150.431606
ARSENIC	75		165520.540	10.551	0.082	70.53713	3.12	PPB
Replicates			145914.976	72.346457	179408.093	68.084483	171238.550	71.180439
SELENIUM	82		17594.633	9.566	0.009	74.38896	4.75	PPB
Replicates			15658.917	76.952321	18711.935	70.357043	18413.048	75.857524
SILVER	107		291760.915	9.794	0.078	22.66581	2.95	PPB
Replicates			259672.727	22.164397	314459.367	22.409509	301150.652	23.423534
SILVER	109		276012.202	10.183	0.074	22.59985	3.14	PPB
Replicates			244468.832	21.997949	298400.585	22.418416	285167.190	23.383189

Sample ID: **6011103-BS3** Client ID: MLCSUB 20X Date/Time: 01/14/16 16:00:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CADMIUM	111		210825.844	8.650	0.056	76.47428	0.52	PPB
Replicates			193108.672	76.925106	229541.303	76.340325	209827.556	76.157420
INDIUM	113		365629.288	9.220	0.054	0		PPB
Replicates			330364.182		397535.213		368988.470	
INDIUM	115	Y	3732483.043	9.003	3732483.043	0		PPB
Replicates			3398006.676		4070027.163		3729415.292	
QC Calculated Values				91.713				
ANTIMONY	121		41228.427	9.944	0.009	4.74754	4.63	PPB
Replicates			36725.648	4.536467	44745.719	4.731240	42213.913	4.974923
BARIUM	135		340245.362	9.283	0.074	129.09951	3.41	PPB
Replicates			306798.496	124.884255	369559.832	128.739224	344377.759	133.675058
BARIUM	137		590043.903	8.743	0.128	132.03419	1.45	PPB
Replicates			541517.188	129.989220	644227.195	132.344347	584387.325	133.769003
TERBIUM	159	Y	4607468.406	8.086	4607468.406	0		PPB
Replicates			4296439.035		5020395.176		4505571.006	
QC Calculated Values				96.847				
THALLIUM	205		2940146.336	8.426	1.273	124.54328	3.75	PPB
Replicates			2667302.015	120.744178	3150992.508	123.132709	3002144.485	129.752942
LEAD	206		978832.829	6.829	0.424	128.41624	1.31	PPB
Replicates			915137.483	128.244364	1048435.739	126.830964	972925.264	130.173392
LEAD	207		1764157.461	6.990	0.764	124.98001	1.26	PPB
Replicates			1646384.720	124.597346	1892344.824	123.625862	1753742.838	126.716808
LEAD	208		2674901.131	6.380	1.159	120.17040	2.52	PPB
Replicates			2495384.745	119.707966	2835060.533	117.402974	2694258.114	123.400252
BISMUTH	209	Y	2308898.562	7.609	2308898.562	0		PPB
Replicates			2160663.744		2502968.802		2263063.139	
QC Calculated Values				94.095				
KRYPTON	83		74.445	14.907	28.334	0		MG/L
Replicates			65.000		71.667		86.667	

Sample ID: **1601025-01RE1** Client ID: WS-1 10X Date/Time: 01/14/16 16:02:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	371090.678	15.422	371090.678	0		PPB
Replicates			305497.908		410837.849		396936.278	
QC Calculated Values				92.745				
BERYLLIUM	9		472.234	16.877	0.001	1.13377	7.83	PPB
Replicates			398.341	1.160473	556.682	1.206084	461.677	1.034754
SCANDIUM	45	Y	2084300.071	12.294	2084300.071	0		PPB
Replicates			1809527.401		2316741.643		2126631.169	
QC Calculated Values				99.784				

Sample ID: **1601025-01RE1** Client ID: WS-1 10X Date/Time: 01/14/16 16:02:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
VANADIUM	51		1540777.866	11.925	0.738	90.14264	1.93	PPB
Replicates			1333477.135	89.828704	1683533.566	88.577717	1605322.896	92.021495
CHROMIUM	52		924635.547	10.594	0.439	60.01381	1.92	PPB
Replicates			816587.906	60.972248	1007623.667	58.739104	949695.068	60.330070
MANGANESE	55		14101077.932	11.822	6.768	600.75667	1.61	PPB
Replicates			12232967.08	600.059307	15437263.97	591.452277	14633002.73	610.758437
COBALT	59		476842.331	11.166	0.229	25.18801	1.65	PPB
Replicates			417516.085	25.378795	520485.002	24.711049	492525.906	25.474178
NICKEL	60		148408.425	10.473	0.071	36.11479	1.99	PPB
Replicates			131990.362	36.938499	162893.779	35.605933	150341.135	35.799927
COPPER	63		243930.786	10.743	0.117	27.11268	1.61	PPB
Replicates			215698.697	27.579060	267474.363	26.711075	248619.297	27.047899
COPPER	65		124427.563	11.227	0.060	27.76271	1.40	PPB
Replicates			108987.922	27.985371	136190.566	27.313649	128104.201	27.989110
ZINC	66		220645.151	9.861	0.106	95.11383	2.87	PPB
Replicates			196169.320	97.202918	237791.236	92.021652	227974.896	96.116929
ARSENIC	75		4497.186	10.319	0.002	1.95879	2.13	PPB
Replicates			3981.562	1.992348	4881.279	1.912113	4628.718	1.971912
SELENIUM	82		229.817	6.069	0.000	0.71791	9.21	PPB
Replicates			216.669	0.793735	244.447	0.672054	228.336	0.687933
SILVER	107		964.862	6.779	0.000	0.02281	13.52	PPB
Replicates			897.262	0.026272	1027.831	0.020360	969.491	0.021797
SILVER	109		820.404	4.138	0.000	0.01481	30.68	PPB
Replicates			783.364	0.019689	850.036	0.010694	827.812	0.014059
CADMIUM	111		1171.087	4.973	0.000	0.42847	13.60	PPB
Replicates			1177.690	0.481668	1109.827	0.366195	1225.744	0.437559
INDIUM	113		159848.103	10.073	-0.001	0		PPB
Replicates			143053.448		175153.962		161336.898	
INDIUM	115	Y	3718071.308	10.638	3718071.308	0		PPB
Replicates			3296843.944		4081568.626		3775801.354	
QC Calculated Values				91.359				
ANTIMONY	121		204.169	3.535	-0.000	-0.00269	109.18	PPB
Replicates			208.336	0.000064	195.835	-0.005785	208.336	-0.002355
BARIUM	135		904181.243	8.863	0.197	345.09690	1.95	PPB
Replicates			816306.245	342.933124	973216.678	339.710449	923020.806	352.647124
BARIUM	137		1542293.633	8.413	0.337	347.22929	2.11	PPB
Replicates			1399372.749	346.679808	1652686.399	340.195479	1574821.752	354.812583
TERBIUM	159	Y	4583827.685	9.243	4583827.685	0		PPB
Replicates			4163189.848		5010523.047		4577770.160	
QC Calculated Values				96.350				
THALLIUM	205		7322.137	8.435	0.003	0.33488	13.73	PPB
Replicates			7969.841	0.387892	7256.799	0.305669	6739.770	0.311085

Sample ID: **1601025-01RE1** Client ID: WS-1 10X Date/Time: 01/14/16 16:02:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	206		39174.032	6.722	0.018	5.58771	3.15	PPB
Replicates			36232.187	5.515728	41310.151	5.459107	39979.760	5.788304
LEAD	207		70956.595	7.096	0.033	5.46440	2.91	PPB
Replicates			65403.841	5.376748	75225.900	5.368393	72240.045	5.648051
LEAD	208		114093.208	7.078	0.054	5.56760	2.25	PPB
Replicates			105486.747	5.495575	121506.013	5.495082	115286.865	5.712141
BISMUTH	209	Y	2121809.317	7.237	2121809.317	0		PPB
Replicates			1987032.232		2288989.017		2089406.702	
QC Calculated Values				86.471				
KRYPTON	83		126.112	11.240	80.001	0		MG/L
Replicates			111.667		140.001		126.667	

Sample ID: **1601025-05RE1** Client ID: WS-5 10X Date/Time: 01/14/16 16:04:13

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	386772.738	13.513	386772.738	0		PPB
Replicates			326539.075		420134.048		413645.093	
QC Calculated Values				96.665				
BERYLLIUM	9		586.128	10.095	0.002	1.35535	6.45	PPB
Replicates			526.681	1.436371	645.021	1.367047	586.684	1.262631
SCANDIUM	45	Y	2188455.891	12.239	2188455.891	0		PPB
Replicates			1919399.628		2455093.149		2190874.896	
QC Calculated Values				104.770				
VANADIUM	51		1688716.157	11.613	0.770	94.11892	1.24	PPB
Replicates			1481825.771	94.118067	1871890.800	92.948317	1712431.901	95.290363
CHROMIUM	52		576691.894	11.508	0.259	35.33394	0.76	PPB
Replicates			509970.153	35.609655	642693.046	35.074870	577412.483	35.317302
MANGANESE	55		8154659.647	10.395	3.731	331.23850	1.97	PPB
Replicates			7320978.829	338.533803	9015687.511	325.931682	8127312.601	329.250004
COBALT	59		362333.597	10.158	0.166	18.24120	2.15	PPB
Replicates			325719.658	18.664219	399330.494	17.889185	361950.641	18.170202
NICKEL	60		122852.169	9.980	0.056	28.47757	2.51	PPB
Replicates			109782.655	28.961502	134101.505	27.657164	124672.345	28.814039
COPPER	63		317929.141	9.391	0.146	33.69508	2.99	PPB
Replicates			286253.119	34.510043	345555.125	32.568290	321979.180	34.006908
COPPER	65		160914.567	10.293	0.074	34.22505	2.61	PPB
Replicates			142877.346	34.591901	175439.457	33.206676	164426.898	34.876571
ZINC	66		320377.016	9.666	0.147	131.59774	2.68	PPB
Replicates			287802.198	134.507660	349439.444	127.671414	323889.405	132.614146
ARSENIC	75		6041.769	11.581	0.003	2.47517	1.37	PPB
Replicates			5298.005	2.473470	6686.949	2.442075	6140.352	2.509950
SELENIUM	82		265.559	9.424	0.000	0.81143	9.00	PPB
Replicates			251.670	0.891095	294.449	0.795412	250.559	0.747771

Sample ID: **1601025-05RE1** Client ID: WS-5 10X Date/Time: 01/14/16 16:04:13

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		1134.324	7.002	0.000	0.03530	21.44	PPB
Replicates			1047.277	0.033729	1152.844	0.028645	1202.850	0.043535
SILVER	109		830.590	10.687	0.000	0.01466	20.69	PPB
Replicates			800.032	0.016590	930.599	0.016216	761.140	0.011162
CADMIUM	111		1995.643	9.484	0.001	0.71782	3.10	PPB
Replicates			1913.351	0.734616	2212.120	0.726230	1861.457	0.692627
INDIUM	113		164213.441	7.763	0.000	0		PPB
Replicates			152520.996		177804.289		162315.037	
INDIUM	115	Y	3752457.641	8.443	3752457.641	0		PPB
Replicates			3516649.962		4112603.456		3628119.506	
QC Calculated Values				92.204				
ANTIMONY	121		190.280	16.141	-0.000	-0.00489	83.87	PPB
Replicates			166.668	-0.006321	179.168	-0.008085	225.003	-0.000265
BARIUM	135		675267.066	8.556	0.144	251.70241	3.31	PPB
Replicates			615267.822	245.870261	730530.059	247.992487	680003.316	261.244476
BARIUM	137		1166342.079	8.463	0.249	256.37239	2.94	PPB
Replicates			1065964.117	251.202281	1263294.875	252.897379	1169767.244	265.017518
TERBIUM	159	Y	4693681.727	8.662	4693681.727	0		PPB
Replicates			4376594.830		5152023.566		4552426.783	
QC Calculated Values				98.659				
THALLIUM	205		5451.486	2.933	0.002	0.24223	6.83	PPB
Replicates			5280.561	0.250304	5476.499	0.223192	5597.399	0.253194
LEAD	206		70056.870	8.673	0.032	9.77128	1.59	PPB
Replicates			64293.521	9.595728	76403.262	9.824983	69473.829	9.893118
LEAD	207		125410.066	7.643	0.058	9.45128	1.76	PPB
Replicates			115838.523	9.336394	135007.818	9.375391	125383.856	9.642058
LEAD	208		195964.321	6.740	0.090	9.36415	1.88	PPB
Replicates			182737.468	9.334568	209154.351	9.205172	196001.145	9.552708
BISMUTH	209	Y	2168731.891	7.708	2168731.891	0		PPB
Replicates			2027643.644		2353360.313		2125191.717	
QC Calculated Values				88.383				
KRYPTON	83		167.224	10.082	121.112	0		MG/L
Replicates			158.335		186.668		156.668	

Sample ID: **1601025-09RE1** Client ID: WS-BG 10X Date/Time: 01/14/16 16:05:56

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	384005.735	14.664	384005.735	0		PPB
Replicates			321200.278		429983.043		400833.884	
QC Calculated Values				95.973				
BERYLLIUM	9		346.117	24.940	0.001	0.79244	12.27	PPB
Replicates			246.670	0.681955	401.675	0.830348	390.008	0.865014

Sample ID: **1601025-09RE1** Client ID: WS-BG 10X Date/Time: 01/14/16 16:05:56

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
SCANDIUM	45	Y	2104328.165	14.059	2104328.165	0		PPB
Replicates			1786185.833		2371194.117		2155604.544	
QC Calculated Values				100.743				
VANADIUM	51		1170974.473	13.922	0.555	67.78715	0.35	PPB
Replicates			994025.784	67.785035	1315056.995	67.551595	1203840.640	68.024834
CHROMIUM	52		385302.655	13.040	0.178	24.34934	1.51	PPB
Replicates			332733.320	24.756745	432840.786	24.245581	390333.860	24.045682
MANGANESE	55		9976405.654	11.967	4.750	421.67319	2.73	PPB
Replicates			8631329.865	428.907365	10910337.248	408.395396	10387549.848	427.716805
COBALT	59		339904.859	12.397	0.162	17.79464	1.79	PPB
Replicates			294824.608	18.153692	378302.813	17.546726	346587.157	17.683490
NICKEL	60		83941.061	13.323	0.040	20.20978	1.14	PPB
Replicates			72187.392	20.459375	94449.494	20.164407	85186.296	20.005571
COPPER	63		209587.191	12.696	0.100	23.07064	1.70	PPB
Replicates			180115.943	23.327324	231851.397	22.618838	216794.231	23.265749
COPPER	65		106164.594	11.569	0.051	23.49609	2.63	PPB
Replicates			92957.837	24.178476	117244.418	22.970791	108291.528	23.338996
ZINC	66		190218.354	11.703	0.090	81.20963	2.58	PPB
Replicates			165576.185	83.091993	208872.734	78.950934	196206.143	81.585974
ARSENIC	75		3660.482	10.987	0.002	1.60091	3.04	PPB
Replicates			3228.359	1.654710	4023.881	1.559828	3729.205	1.588201
SELENIUM	82		141.482	1.976	0.000	0.35215	23.29	PPB
Replicates			141.112	0.445263	144.445	0.290555	138.890	0.320625
SILVER	107		631.502	9.062	-0.000	-0.00452	59.50	PPB
Replicates			566.683	-0.004509	652.799	-0.007209	675.023	-0.001833
SILVER	109		613.908	7.954	-0.000	-0.00343	150.08	PPB
Replicates			577.794	-0.001174	594.462	-0.009319	669.467	0.000205
CADMIUM	111		902.004	10.526	0.000	0.31897	1.21	PPB
Replicates			807.641	0.318917	997.516	0.322862	900.856	0.315141
INDIUM	113		164694.278	10.025	-0.000	0		PPB
Replicates			147162.430		179946.262		166974.143	
INDIUM	115	Y	3804216.623	9.905	3804216.623	0		PPB
Replicates			3407991.427		4158058.862		3846599.579	
QC Calculated Values				93.476				
ANTIMONY	121		133.334	17.399	-0.000	-0.01147	29.48	PPB
Replicates			129.168	-0.010723	112.501	-0.015154	158.335	-0.008518
BARIUM	135		727648.324	9.641	0.154	268.57785	2.01	PPB
Replicates			655262.380	264.708109	795327.706	266.263677	732354.887	274.761772
BARIUM	137		1247254.951	9.082	0.263	271.58608	2.25	PPB
Replicates			1128486.552	268.836012	1354083.808	267.331567	1259194.491	278.590649
TERBIUM	159	Y	4738409.184	9.545	4738409.184	0		PPB
Replicates			4329395.248		5224124.490		4661707.816	
QC Calculated Values				99.599				

Sample ID: **1601025-09RE1** Client ID: WS-BG 10X Date/Time: 01/14/16 16:05:56

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		4730.287	4.791	0.002	0.20667	6.38	PPB
Replicates			4480.170	0.208884	4788.646	0.192515	4922.044	0.218612
LEAD	206		40543.352	6.334	0.018	5.58592	2.27	PPB
Replicates			37854.847	5.573968	42971.295	5.465398	40803.912	5.718389
LEAD	207		72590.683	7.144	0.033	5.39850	1.75	PPB
Replicates			67319.024	5.352815	77685.612	5.335716	72767.414	5.506963
LEAD	208		114190.352	8.124	0.052	5.37937	2.57	PPB
Replicates			104398.049	5.260315	122846.813	5.346902	115326.193	5.530886
BISMUTH	209	Y	2197057.348	7.527	2197057.348	0		PPB
Replicates			2054351.994		2378295.061		2158524.990	
QC Calculated Values				89.537				
KRYPTON	83		103.334	14.061	57.223	0		MG/L
Replicates			120.001		96.667		93.334	

Sample ID: **6A14005-IBL1** Client ID: IBL Date/Time: 01/14/16 16:10:25

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	384370.737	13.348	384370.737	0		PPB
Replicates			325680.065		406724.730		420707.414	
QC Calculated Values				96.064				
BERYLLIUM	9		3.333	50.000	0.000	0.00447	115.05	PPB
Replicates			5.000	0.009988	3.333	0.003598	1.667	-0.000182
SCANDIUM	45	Y	2014022.267	10.881	2014022.267	0		PPB
Replicates			1768421.186		2189564.542		2084081.074	
QC Calculated Values				96.419				
VANADIUM	51		3907.714	1.716	0.000	0.02748	105.68	PPB
Replicates			3921.545	0.059264	3834.838	0.002311	3966.759	0.020876
CHROMIUM	52		10967.680	2.373	0.000	0.04938	196.62	PPB
Replicates			11087.810	0.155015	10669.022	-0.035940	11146.208	0.029058
MANGANESE	55		3678.454	1.053	0.001	0.11122	17.29	PPB
Replicates			3696.516	0.133256	3704.853	0.097904	3633.994	0.102488
COBALT	59		191.669	18.589	0.000	0.00548	48.47	PPB
Replicates			203.335	0.007500	151.668	0.002471	220.002	0.006464
NICKEL	60		359.266	11.267	0.000	0.07515	6.07	PPB
Replicates			313.894	0.074654	372.229	0.070855	391.674	0.079941
COPPER	63		720.397	12.172	0.000	0.06262	3.08	PPB
Replicates			619.464	0.060988	777.808	0.062132	763.918	0.064752
COPPER	65		336.117	8.629	0.000	0.05808	9.83	PPB
Replicates			316.672	0.063476	369.451	0.058669	322.227	0.052104
ZINC	66		1024.127	7.679	0.000	0.29225	5.88	PPB
Replicates			933.377	0.308423	1072.280	0.274222	1066.724	0.294090
ARSENIC	75		-246.635	8.372	-0.000	-0.00406	224.98	PPB
Replicates			-228.405	-0.009353	-242.444	0.006484	-269.056	-0.009394

Sample ID: **6A14005-IBL1** Client ID: IBL Date/Time: 01/14/16 16:10:25

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		57.408	2.794	0.000	0.01549	202.10	PPB
Replicates			58.334	0.051625	58.334	-0.002650	55.556	-0.002516
SILVER	107		176.853	8.931	-0.000	-0.03925	5.71	PPB
Replicates			194.446	-0.036781	163.890	-0.041159	172.224	-0.039796
SILVER	109		184.261	5.707	-0.000	-0.03823	4.68	PPB
Replicates			188.891	-0.036681	172.224	-0.040185	191.669	-0.037820
CADMIUM	111		21.590	22.245	0.000	0.00575	22.69	PPB
Replicates			16.058	0.004306	24.017	0.006104	24.696	0.006843
INDIUM	113		164221.082	8.172	-0.001	0		PPB
Replicates			151556.498		178287.784		162818.964	
INDIUM	115	Y	3809248.010	7.338	3809248.010	0		PPB
Replicates			3517726.661		4074960.132		3835057.238	
QC Calculated Values				93.599				
ANTIMONY	121		75.000	24.216	-0.000	-0.01776	12.84	PPB
Replicates			62.500	-0.018735	66.667	-0.019382	95.834	-0.015149
BARIUM	135		132.223	26.571	0.000	0.04322	38.86	PPB
Replicates			153.335	0.054840	91.667	0.023960	151.668	0.050852
BARIUM	137		254.448	9.833	0.000	0.04997	17.52	PPB
Replicates			280.004	0.060082	253.337	0.044932	230.003	0.044899
TERBIUM	159	Y	4520027.208	7.661	4520027.208	0		PPB
Replicates			4215251.823		4896576.083		4448253.718	
QC Calculated Values				95.009				
THALLIUM	205		327.783	28.005	0.000	0.00932	50.02	PPB
Replicates			433.343	0.014624	266.670	0.005869	283.337	0.007469
LEAD	206		193.057	5.432	0.000	0.01915	9.49	PPB
Replicates			183.335	0.019298	191.669	0.017258	204.169	0.020885
LEAD	207		329.169	7.595	0.000	0.01709	10.83	PPB
Replicates			304.169	0.016619	329.169	0.015514	354.170	0.019125
LEAD	208		523.620	9.724	0.000	0.01561	4.48	PPB
Replicates			479.174	0.014993	579.177	0.016369	512.508	0.015473
BISMUTH	209	Y	2362280.484	6.633	2362280.484	0		PPB
Replicates			2224669.886		2532807.036		2329364.530	
QC Calculated Values				96.270				
KRYPTON	83		46.667	21.724	0.556	0		MG/L
Replicates			35.000		53.333		51.667	

Sample ID: **6A14005-CRL6** Client ID: LLCCV Date/Time: 01/14/16 16:12:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	370235.458	13.844	370235.458	0		PPB
Replicates			312406.505		410056.749		388243.120	
QC Calculated Values				92.532				

Sample ID: **6A14005-CRL6** Client ID: LLCCV Date/Time: 01/14/16 16:12:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
BERYLLIUM	9		394.452	15.573	0.001	0.94588	1.91	PPB
Replicates			325.005	0.925136	441.676	0.957977	416.675	0.954515
QC Calculated Values			94.588					
SCANDIUM	45	Y	1974455.198	13.097	1974455.198	0		PPB
Replicates			1693689.622		2202886.471		2026789.501	
QC Calculated Values				94.525				
VANADIUM	51		89082.298	12.016	0.043	5.30647	1.86	PPB
Replicates			77026.013	5.345061	97469.232	5.194518	92751.648	5.379835
QC Calculated Values			106.129					
CHROMIUM	52		40979.279	9.345	0.016	2.14444	5.37	PPB
Replicates			36665.428	2.256738	43978.158	2.026538	42294.251	2.150049
QC Calculated Values			107.222					
MANGANESE	55		26025.783	11.411	0.013	1.11976	2.40	PPB
Replicates			22938.779	1.149971	28862.425	1.110772	26276.143	1.098550
QC Calculated Values			111.976					
COBALT	59		18837.876	11.258	0.010	1.04625	1.94	PPB
Replicates			16518.632	1.067829	20678.024	1.027535	19316.973	1.043382
QC Calculated Values			104.625					
NICKEL	60		4193.475	7.225	0.002	1.06694	7.07	PPB
Replicates			3909.097	1.154025	4512.129	1.022427	4159.198	1.024368
QC Calculated Values			106.694					
COPPER	63		18665.671	10.113	0.009	2.17501	3.57	PPB
Replicates			16713.956	2.264742	20482.065	2.132643	18800.991	2.127644
QC Calculated Values			108.750					
COPPER	65		8907.708	12.044	0.004	2.08035	2.11	PPB
Replicates			7808.603	2.123915	9952.172	2.080848	8962.348	2.036284
QC Calculated Values			104.017					
ZINC	66		5052.211	10.358	0.002	2.13839	3.34	PPB
Replicates			4462.106	2.200614	5459.823	2.060446	5234.703	2.154097
QC Calculated Values			106.919					
ARSENIC	75		1972.449	14.614	0.001	0.95882	1.86	PPB
Replicates			1651.019	0.939269	2208.033	0.962925	2058.294	0.974274
QC Calculated Values			95.882					
SELENIUM	82		1116.729	10.305	0.001	4.62152	4.53	PPB
Replicates			983.937	4.739080	1187.293	4.380036	1178.958	4.745449
QC Calculated Values			92.430					
SILVER	107		13955.183	11.275	0.004	1.03978	4.52	PPB
Replicates			12221.352	0.989414	15292.239	1.047507	14351.958	1.082410
QC Calculated Values			103.978					

Sample ID: **6A14005-CRL6** Client ID: LLCCV Date/Time: 01/14/16 16:12:09

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	(Conc 3)	Units
SILVER	109		12722.955	9.791	0.003	0.99810	4.32		PPB
Replicates			11311.950	0.963904	13670.449	0.983885	13186.466	1.046515	
QC Calculated Values			99.810						
CADMIUM	111		2807.099	6.048	0.001	1.02447	3.65		PPB
Replicates			2615.300	1.036596	2938.130	0.982471	2867.869	1.054354	
QC Calculated Values			102.447						
INDIUM	113		162722.779	9.721	0.000	0			PPB
Replicates			148092.679		179509.348		160566.310		
INDIUM	115	Y	3708269.286	8.548	3708269.286	0			PPB
Replicates			3409015.266		4040405.389		3675387.204		
QC Calculated Values				91.118					
ANTIMONY	121		17650.372	9.129	0.004	2.07403	2.67		PPB
Replicates			15895.957	2.021307	19063.988	2.069122	17991.170	2.131653	
QC Calculated Values			103.701						
BARIUM	135		25830.670	7.652	0.006	10.07100	1.13		PPB
Replicates			24140.770	10.181307	28004.157	10.077837	25347.083	9.953845	
QC Calculated Values			100.710						
BARIUM	137		44810.598	7.979	0.010	10.30125	1.35		PPB
Replicates			41069.161	10.214630	48192.513	10.227821	45170.120	10.461297	
QC Calculated Values			103.012						
TERBIUM	159	Y	4483092.675	7.971	4483092.675	0			PPB
Replicates			4143494.705		4855908.805		4449874.516		
QC Calculated Values				94.232					
THALLIUM	205		23491.529	6.619	0.010	0.98203	3.99		PPB
Replicates			21706.867	0.978026	24555.111	0.945044	24212.610	1.023013	
QC Calculated Values			98.203						
LEAD	206		7747.454	7.071	0.003	1.00118	3.65		PPB
Replicates			7123.370	0.992417	8149.152	0.969816	7969.841	1.041295	
QC Calculated Values			100.118						
LEAD	207		14255.137	7.549	0.006	0.99422	2.20		PPB
Replicates			13095.986	0.985188	15222.486	0.978304	14446.938	1.019156	
QC Calculated Values			99.422						
LEAD	208		22673.558	7.300	0.010	1.00090	0.84		PPB
Replicates			21221.734	1.010551	24475.963	0.995625	22322.975	0.996519	
QC Calculated Values			100.090						
BISMUTH	209	Y	2331937.991	7.964	2331937.991	0			PPB
Replicates			2161133.227		2529624.987		2305055.759		
QC Calculated Values				95.034					
KRYPTON	83		55.000	18.924	8.889	0			MG/L
Replicates			66.667		51.667		46.667		

Sample ID: **6A14005-CCV7** Client ID: CCV Date/Time: 01/14/16 16:13:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	375305.500	15.909	375305.500	0		PPB
Replicates			308784.920		424250.836		392880.743	
QC Calculated Values				93.799				
BERYLLIUM	9		129327.647	13.189	0.346	308.62804	2.95	PPB
Replicates			110143.255	318.474320	142778.730	300.478291	135060.955	306.931513
QC Calculated Values			102.876					
SCANDIUM	45	Y	2017103.523	13.738	2017103.523	0		PPB
Replicates			1712948.042		2255264.218		2083098.309	
QC Calculated Values				96.567				
VANADIUM	51		4975682.295	13.774	2.465	301.19185	2.20	PPB
Replicates			4192995.340	298.875047	5468195.151	296.041844	5265856.393	308.658652
QC Calculated Values			100.397					
CHROMIUM	52		4502258.612	11.604	2.232	304.99288	2.39	PPB
Replicates			3936562.847	313.376619	4966546.563	300.267483	4603666.425	301.334523
QC Calculated Values			101.664					
MANGANESE	55		6997350.396	11.640	3.476	308.52627	2.27	PPB
Replicates			6107880.562	316.475406	7706626.921	303.289522	7177543.704	305.813883
QC Calculated Values			102.842					
COBALT	59		5676738.341	13.271	2.816	309.84337	2.25	PPB
Replicates			4904207.906	314.969605	6409334.311	312.650700	5716672.807	301.909811
QC Calculated Values			103.281					
NICKEL	60		1250894.059	13.016	0.621	314.43598	1.73	PPB
Replicates			1079850.474	319.359889	1403985.511	315.373987	1268846.192	308.574066
QC Calculated Values			104.812					
COPPER	63		2630759.780	13.350	1.305	302.06231	0.47	PPB
Replicates			2242727.571	303.121870	2926855.112	300.461256	2722696.658	302.603803
QC Calculated Values			100.687					
COPPER	65		1326900.568	13.299	0.658	306.01937	1.34	PPB
Replicates			1139824.081	309.378889	1490365.824	307.250287	1350511.797	301.428922
QC Calculated Values			102.006					
ZINC	66		676931.894	11.063	0.336	302.11554	3.65	PPB
Replicates			600133.386	314.505108	749751.940	298.422769	680910.356	293.418743
QC Calculated Values			100.705					
ARSENIC	75		705955.929	12.089	0.351	301.31753	1.79	PPB
Replicates			610916.231	306.563091	776044.237	295.785370	730907.318	301.604144
QC Calculated Values			100.439					
SELENIUM	82		69693.759	9.854	0.035	296.45686	4.20	PPB
Replicates			61928.946	309.041178	74971.655	284.143780	72180.677	296.185632
QC Calculated Values			98.819					

Sample ID: **6A14005-CCV7** Client ID: CCV Date/Time: 01/14/16 16:13:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		4069074.982	11.495	1.068	310.45541	5.44	PPB
Replicates			3534715.330	298.471016	4404182.414	303.141790	4268327.201	329.753432
QC Calculated Values			103.485					
SILVER	109		3853729.315	11.056	1.011	309.98380	4.33	PPB
Replicates			3375059.673	300.449747	4191543.473	304.156362	3994584.799	325.345282
QC Calculated Values			103.328					
CADMIUM	111		868108.259	10.835	0.228	308.35981	1.16	PPB
Replicates			774760.807	304.650956	962860.030	308.624005	866703.940	311.804473
QC Calculated Values			102.787					
INDIUM	113		1003211.527	10.281	0.220	0		PPB
Replicates			906196.510		1111549.469		991888.603	
INDIUM	115	Y	3809371.267	10.302	3809371.267	0		PPB
Replicates			3442417.631		4223105.691		3762590.479	
QC Calculated Values				93.602				
ANTIMONY	121		2614930.425	9.530	0.559	298.66216	3.18	PPB
Replicates			2361279.015	300.942351	2859426.397	288.228901	2624085.863	306.815240
QC Calculated Values			99.554					
BARIUM	135		798676.001	9.339	0.171	298.93148	3.27	PPB
Replicates			722947.660	301.898922	872064.420	288.022863	801015.922	306.872667
QC Calculated Values			99.644					
BARIUM	137		1386415.509	10.584	0.296	305.72213	2.86	PPB
Replicates			1235692.563	304.301433	1528807.248	297.762726	1394746.716	315.102227
QC Calculated Values			101.907					
TERBIUM	159	Y	4682958.269	12.021	4682958.269	0		PPB
Replicates			4188189.419		5295439.572		4565245.817	
QC Calculated Values				98.434				
THALLIUM	205		6967892.353	10.711	3.046	297.91328	3.77	PPB
Replicates			6168090.002	287.312814	7645814.564	296.738094	7089772.494	309.688941
QC Calculated Values			99.304					
LEAD	206		2241596.871	10.268	0.980	296.75145	3.20	PPB
Replicates			1998572.864	288.193122	2456280.852	295.112010	2269936.899	306.949232
QC Calculated Values			98.917					
LEAD	207		4153434.868	9.938	1.816	296.99644	3.00	PPB
Replicates			3718452.481	289.569055	4539620.675	294.547038	4202231.449	306.873219
QC Calculated Values			98.999					
LEAD	208		6570137.798	9.373	2.874	297.87829	2.14	PPB
Replicates			5943312.207	293.380256	7174378.810	295.074542	6592722.376	305.180069
QC Calculated Values			99.293					
BISMUTH	209	Y	2286432.945	9.366	2286432.945	0		PPB
Replicates			2099839.651		2520235.333		2239223.850	
QC Calculated Values				93.179				

Sample ID: **6A14005-CCV7** Client ID: CCV Date/Time: 01/14/16 16:13:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
KRYPTON	83		67.778	6.188	21.667	0		MG/L
Replicates			68.334		63.334		71.667	

Sample ID: **6A14005-CCB7** Client ID: CCB Date/Time: 01/14/16 16:15:35

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	401371.825	14.683	401371.825	0		PPB
Replicates			335195.190		448202.445		420717.839	
QC Calculated Values				100.313				
BERYLLIUM	9		24.444	51.174	0.000	0.05216	55.25	PPB
Replicates			25.000	0.062873	11.667	0.019522	36.667	0.074095
SCANDIUM	45	Y	2052081.459	11.501	2052081.459	0		PPB
Replicates			1794331.885		2257630.134		2104282.359	
QC Calculated Values				98.241				
VANADIUM	51		4453.928	4.346	0.000	0.05656	71.23	PPB
Replicates			4545.389	0.097832	4231.568	0.017330	4584.828	0.054532
CHROMIUM	52		11571.694	2.495	0.001	0.07652	132.52	PPB
Replicates			11608.401	0.182293	11266.343	-0.019858	11840.339	0.067123
MANGANESE	55		2822.623	9.041	0.001	0.07075	22.27	PPB
Replicates			2683.693	0.080470	2667.022	0.052568	3117.152	0.079199
COBALT	59		997.272	11.546	0.000	0.04871	15.71	PPB
Replicates			936.711	0.052282	925.043	0.039928	1130.064	0.053931
NICKEL	60		292.597	13.703	0.000	0.05744	19.08	PPB
Replicates			269.448	0.060806	269.448	0.045194	338.895	0.066320
COPPER	63		1309.345	4.061	0.001	0.12861	10.36	PPB
Replicates			1252.856	0.141547	1316.753	0.114925	1358.426	0.129351
COPPER	65		633.354	12.742	0.000	0.12360	2.22	PPB
Replicates			550.015	0.122740	711.136	0.126675	638.909	0.121389
ZINC	66		721.322	3.275	0.000	0.15281	24.43	PPB
Replicates			722.248	0.195897	744.472	0.130548	697.247	0.131975
ARSENIC	75		-134.504	28.687	0.000	0.04596	25.34	PPB
Replicates			-90.588	0.058249	-149.957	0.044554	-162.967	0.035082
SELENIUM	82		73.334	4.545	0.000	0.07876	61.93	PPB
Replicates			76.667	0.134954	73.334	0.047316	70.000	0.054015
SILVER	107		1238.966	6.029	0.000	0.04087	37.20	PPB
Replicates			1277.859	0.051726	1152.844	0.023495	1286.194	0.047401
SILVER	109		1175.995	6.020	0.000	0.04066	37.74	PPB
Replicates			1222.297	0.052319	1094.504	0.023277	1211.184	0.046389
CADMIUM	111		149.953	5.588	0.000	0.05088	15.90	PPB
Replicates			159.622	0.058949	144.780	0.042768	145.459	0.050916
INDIUM	113		166018.301	9.732	-0.001	0		PPB
Replicates			151086.973		183170.684		163797.246	

Sample ID: **6A14005-CCB7** Client ID: CCB Date/Time: 01/14/16 16:15:35

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
INDIUM	115	Y	3890787.305	11.343	3890787.305	0		PPB
Replicates			3552461.742		4390009.571		3729890.603	
QC Calculated Values				95.603				
ANTIMONY	121		1323.699	1.790	0.000	0.12656	11.77	PPB
Replicates			1350.091	0.142730	1316.753	0.113389	1304.252	0.123565
BARIUM	135		193.335	10.452	0.000	0.06462	16.82	PPB
Replicates			190.002	0.069317	175.002	0.052196	215.002	0.072349
BARIUM	137		287.782	2.193	0.000	0.05581	7.33	PPB
Replicates			283.337	0.060249	295.004	0.052187	285.004	0.054990
TERBIUM	159	Y	4636495.413	8.244	4636495.413	0		PPB
Replicates			4255035.031		5019461.990		4634989.217	
QC Calculated Values				97.457				
THALLIUM	205		1533.452	10.785	0.001	0.05794	19.13	PPB
Replicates			1658.471	0.067436	1345.924	0.045763	1595.961	0.060631
LEAD	206		466.678	12.877	0.000	0.05308	20.50	PPB
Replicates			483.345	0.059182	400.008	0.040523	516.680	0.059548
LEAD	207		865.297	6.765	0.000	0.05292	13.95	PPB
Replicates			870.853	0.057349	804.183	0.044398	920.855	0.057019
LEAD	208		1408.393	5.707	0.001	0.05322	14.66	PPB
Replicates			1466.732	0.060020	1316.716	0.044703	1441.729	0.054950
BISMUTH	209	Y	2426530.062	7.596	2426530.062	0		PPB
Replicates			2257272.852		2622895.551		2399421.783	
QC Calculated Values				98.889				
KRYPTON	83		31.111	18.814	-15.000	0		MG/L
Replicates			31.667		36.667		25.000	

Sample ID: **6011301-BLK1** Client ID: PBSUE Date/Time: 01/14/16 16:33:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	518592.920	15.365	518592.920	0		PPB
Replicates			427105.237		572787.551		555885.972	
QC Calculated Values				129.610				
BERYLLIUM	9		7.222	35.251	0.000	0.00858	37.94	PPB
Replicates			5.000	0.006733	6.667	0.006673	10.000	0.012343
SCANDIUM	45	Y	2088896.235	14.109	2088896.235	0		PPB
Replicates			1752302.005		2300653.412		2213733.287	
QC Calculated Values				100.004				
VANADIUM	51		6219.220	4.488	0.001	0.15571	24.70	PPB
Replicates			5902.885	0.199912	6430.843	0.129848	6323.932	0.137357
CHROMIUM	52		21226.452	6.276	0.005	0.69810	17.10	PPB
Replicates			19706.064	0.835062	22189.592	0.616270	21783.701	0.642968

Sample ID: **6011301-BLK1** Client ID: PBSUE Date/Time: 01/14/16 16:33:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	(Conc 3)	Units
MANGANESE	55		104286.118	13.252	0.049	4.38338	0.96		PPB
Replicates			88519.223	4.431994	114303.721	4.358066	110035.410	4.360077	
COBALT	59		358.896	23.613	0.000	0.01449	54.11		PPB
Replicates			456.677	0.023522	306.671	0.009515	313.338	0.010422	
NICKEL	60		940.786	17.168	0.000	0.21263	7.47		PPB
Replicates			786.142	0.212016	1108.395	0.228805	927.821	0.197063	
COPPER	63		2873.564	11.119	0.001	0.29941	3.86		PPB
Replicates			2516.983	0.312455	3133.824	0.295266	2969.885	0.290503	
COPPER	65		1259.339	11.132	0.001	0.26140	3.55		PPB
Replicates			1100.061	0.272112	1363.982	0.255879	1313.975	0.256199	
ZINC	66		8495.302	10.936	0.004	3.49906	3.71		PPB
Replicates			7424.978	3.640112	9093.021	3.384221	8967.908	3.472842	
ARSENIC	75		-292.133	1.466	-0.000	-0.02042	98.22		PPB
Replicates			-296.045	-0.043543	-292.796	-0.007728	-287.558	-0.009989	
SELENIUM	82		55.741	9.473	0.000	0.00311	1850.28		PPB
Replicates			61.111	0.067781	50.556	-0.042574	55.556	-0.015872	
SILVER	107		616.686	7.524	-0.000	-0.00719	112.78		PPB
Replicates			658.355	0.001001	566.683	-0.015209	625.020	-0.007353	
SILVER	109		586.128	2.066	-0.000	-0.00768	50.27		PPB
Replicates			572.239	-0.003791	594.462	-0.011508	591.684	-0.007730	
CADMIUM	111		50.257	46.408	0.000	0.01486	46.40		PPB
Replicates			23.337	0.007014	63.037	0.017623	64.396	0.019953	
INDIUM	113		172689.328	10.661	-0.000	0			PPB
Replicates			153164.047		189733.016		175170.922		
INDIUM	115	Y	3974886.504	10.354	3974886.504	0			PPB
Replicates			3554213.007		4376693.551		3993752.955		
QC Calculated Values				97.669					
ANTIMONY	121		422.231	14.176	0.000	0.01923	13.00		PPB
Replicates			354.173	0.016452	466.678	0.019948	445.843	0.021296	
BARIUM	135		842.258	9.905	0.000	0.29192	0.71		PPB
Replicates			756.695	0.292928	923.376	0.293294	846.703	0.289544	
BARIUM	137		1479.555	10.417	0.000	0.30305	3.74		PPB
Replicates			1301.751	0.297649	1575.124	0.295442	1561.789	0.316074	
TERBIUM	159	Y	4898966.350	9.863	4898966.350	0			PPB
Replicates			4386565.190		5346322.785		4964011.075		
QC Calculated Values				102.974					
THALLIUM	205		697.247	9.568	0.000	0.02520	16.35		PPB
Replicates			700.025	0.027963	629.186	0.020465	762.529	0.027175	
LEAD	206		1850.172	8.389	0.001	0.23638	4.22		PPB
Replicates			1675.140	0.234306	1904.348	0.227595	1971.028	0.247240	
LEAD	207		3290.554	7.986	0.001	0.22671	2.93		PPB
Replicates			2987.726	0.225392	3425.297	0.220831	3458.638	0.233913	

Sample ID: **6011301-BLK1** Client ID: PBSUE Date/Time: 01/14/16 16:33:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	208		4984.070	9.612	0.002	0.21571	4.52	PPB
Replicates			4438.074	0.210300	5179.952	0.209858	5334.184	0.226958
BISMUTH	209	Y	2315332.214	7.917	2315332.214	0		PPB
Replicates			2113819.803		2472191.602		2359985.235	
QC Calculated Values				94.357				
KRYPTON	83		38.333	7.531	-7.778	0		MG/L
Replicates			40.000		40.000		35.000	

Sample ID: **6011301-BS1** Client ID: MLCSUE Date/Time: 01/14/16 16:35:21

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	363020.796	11.035	363020.796	0		PPB
Replicates			318074.375		394962.036		376025.975	
QC Calculated Values				90.728				
BERYLLIUM	9		366616.936	11.467	1.010	901.37999	0.79	PPB
Replicates			318872.533	895.085029	398083.906	899.901841	382894.369	909.153103
SCANDIUM	45	Y	2120441.010	13.709	2120441.010	0		PPB
Replicates			1786769.258		2318852.769		2255701.003	
QC Calculated Values				101.514				
VANADIUM	51		15999643.947	13.436	7.546	921.98314	0.84	PPB
Replicates			13519888.46(	924.319563	17337341.55	913.325622	17141701.82	928.304250
CHROMIUM	52		13883042.529	13.290	6.545	894.46795	0.46	PPB
Replicates			11764516.67(	899.149570	15138052.79	891.497760	14746558.11	892.756522
MANGANESE	55		102934593.25	13.633	48.547	4309.53201	0.72	PPB
Replicates			86753067.30	4309.992162	111754888.8(	4278.124609	110295823.6(	4340.479262
COBALT	59		10010943.721	12.970	4.725	519.78714	0.95	PPB
Replicates			8527417.089	525.044167	10940667.65	519.059813	10564746.41(	515.257436
NICKEL	60		8886787.281	12.246	4.197	2126.43926	1.83	PPB
Replicates			7649162.622	2168.822778	9694154.563	2117.948204	9317044.657	2092.546783
COPPER	63		3941961.157	12.417	1.861	430.96750	1.44	PPB
Replicates			3381264.905	438.131567	4284024.927	427.732401	4160593.638	427.038538
COPPER	65		1964103.485	10.903	0.929	431.87826	3.07	PPB
Replicates			1717770.037	446.994458	2105930.576	422.255521	2068609.843	426.384798
ZINC	66		3770388.426	11.727	1.781	1600.03776	2.17	PPB
Replicates			3263137.396	1640.120628	4074123.140	1577.858844	3973904.743	1582.133823
ARSENIC	75		2031328.379	9.192	0.962	827.02462	5.02	PPB
Replicates			1815719.514	873.311594	2140291.443	793.220228	2137974.181	814.542046
SELENIUM	82		210879.163	10.015	0.100	853.66509	4.07	PPB
Replicates			186517.817	892.751195	224046.481	826.293853	222073.191	841.950234
SILVER	107		4199709.019	10.845	1.269	368.79344	2.73	PPB
Replicates			3675027.900	363.727017	4493486.499	362.256608	4430612.657	380.396683
SILVER	109		3942035.231	11.182	1.191	364.88920	3.33	PPB
Replicates			3433175.533	358.221944	4206481.261	357.514137	4186448.900	378.931532

Sample ID: **6011301-BS1** Client ID: MLCSUE Date/Time: 01/14/16 16:35:21

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CADMIUM	111		2813229.271	10.410	0.850	1150.56800	1.21	PPB
Replicates			2482470.194	1144.127201	3039488.503	1141.061315	2917729.115	1166.515472
INDIUM	113		2888864.063	10.097	0.829	0		PPB
Replicates			2563252.064		3126254.466		2977085.657	
INDIUM	115	Y	3309503.862	10.298	3309503.862	0		PPB
Replicates			2937041.968		3605719.522		3385750.095	
QC Calculated Values				81.320				
ANTIMONY	121		695096.290	10.957	0.162	86.30150	2.44	PPB
Replicates			611332.110	84.173847	760186.115	88.391327	713770.644	86.339314
BARIUM	135		5793605.159	10.065	1.349	2358.67201	1.51	PPB
Replicates			5135549.559	2317.477927	6246065.209	2380.227287	5999200.708	2378.310805
BARIUM	137		10204303.611	9.924	2.375	2450.06574	1.43	PPB
Replicates			9056249.396	2409.991106	10970683.46	2465.380606	10585977.97	2474.825516
TERBIUM	159	Y	4292427.971	8.657	4292427.971	0		PPB
Replicates			3875817.570		4589656.007		4411810.336	
QC Calculated Values				90.225				
THALLIUM	205		54979486.031	8.329	29.459	2881.45294	1.13	PPB
Replicates			49740056.59	2846.774607	58215369.65	2911.277950	56983031.84	2886.306254
LEAD	206		16787189.899	7.766	8.997	2724.40300	0.52	PPB
Replicates			15286109.05	2708.349395	17636310.76	2730.327072	17439149.87	2734.532541
LEAD	207		30085261.514	7.742	16.125	2636.80949	0.48	PPB
Replicates			27406729.02	2622.353718	31636545.45	2644.979539	31212510.07	2643.095217
LEAD	208		46993643.502	8.668	25.176	2609.72049	1.74	PPB
Replicates			42408979.08	2572.209102	50196480.54	2660.240804	48375470.87	2596.711553
BISMUTH	209	Y	1865341.315	7.288	1865341.315	0		PPB
Replicates			1709029.803		1955917.119		1931077.021	
QC Calculated Values				76.019				
KRYPTON	83		468.900	10.678	422.789	0		MG/L
Replicates			441.676		526.681		438.343	

Sample ID: **6011301-BS2** Client ID: MLCSUE 10X Date/Time: 01/14/16 16:37:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	380649.151	13.710	380649.151	0		PPB
Replicates			322151.831		422424.230		397371.391	
QC Calculated Values				95.134				
BERYLLIUM	9		50333.082	11.832	0.132	118.28973	2.47	PPB
Replicates			43854.283	121.539036	55568.968	117.448486	51575.995	115.881672
SCANDIUM	45	Y	2103961.429	14.176	2103961.429	0		PPB
Replicates			1785340.418		2376471.930		2150071.939	
QC Calculated Values				100.725				

Sample ID: **6011301-BS2** Client ID: MLCSUE 10X Date/Time: 01/14/16 16:37:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
VANADIUM	51		1934573.644	11.897	0.920	112.38761	2.43	PPB
Replicates			1682985.756	114.968125	2134501.957	109.532325	1986233.219	112.662390
CHROMIUM	52		1718277.496	13.222	0.812	111.01607	1.04	PPB
Replicates			1472619.056	112.026846	1920811.070	109.761208	1761402.363	111.260160
MANGANESE	55		11942173.352	10.836	5.694	505.47636	3.49	PPB
Replicates			10546118.39	524.316677	13101672.45	489.342593	12178729.20	502.769811
COBALT	59		1250327.106	11.825	0.596	65.52512	2.46	PPB
Replicates			1089997.875	67.161808	1381282.522	63.939011	1279700.921	65.474531
NICKEL	60		1197574.309	11.900	0.570	288.99912	2.61	PPB
Replicates			1039411.200	294.934495	1315983.702	280.527785	1237328.026	291.535074
COPPER	63		571985.267	12.426	0.272	63.03269	1.86	PPB
Replicates			494670.176	64.131625	634481.652	61.795775	586803.973	63.170678
COPPER	65		279479.689	12.222	0.133	61.86267	2.16	PPB
Replicates			241961.727	62.996158	308775.182	60.393785	287702.158	62.198055
ZINC	66		613193.710	10.855	0.292	262.45838	3.53	PPB
Replicates			539791.424	271.389309	669638.884	252.916067	630150.822	263.069761
ARSENIC	75		316034.499	10.083	0.151	129.69856	4.36	PPB
Replicates			280569.152	135.140028	342257.614	123.855510	325276.731	130.100147
SELENIUM	82		33002.820	9.143	0.016	134.62421	5.29	PPB
Replicates			29660.589	141.887570	35526.885	127.653140	33820.985	134.331930
SILVER	107		563781.513	10.745	0.145	42.19560	4.01	PPB
Replicates			494582.670	40.925073	607229.216	41.546804	589532.653	44.114909
SILVER	109		528914.384	10.367	0.136	41.74364	3.95	PPB
Replicates			466136.148	40.662985	567414.987	40.927663	553192.018	43.640277
CADMIUM	111		394106.447	9.354	0.102	137.58648	0.58	PPB
Replicates			358400.115	138.256729	432026.194	137.801584	391893.030	136.701117
INDIUM	113		550783.969	8.725	0.098	0		PPB
Replicates			502437.868		598542.138		551371.900	
INDIUM	115	Y	3877746.233	9.475	3877746.233	0		PPB
Replicates			3508949.416		4243762.762		3880526.523	
QC Calculated Values				95.282				
ANTIMONY	121		92358.000	10.177	0.019	10.19756	2.96	PPB
Replicates			82703.082	9.928303	101478.966	10.140152	92891.951	10.524225
BARIUM	135		685985.378	10.079	0.142	248.81558	2.98	PPB
Replicates			614720.663	242.422233	752784.786	247.090802	690450.685	256.933699
BARIUM	137		1181108.133	9.135	0.245	252.76640	2.42	PPB
Replicates			1071797.673	249.256646	1287537.690	249.221037	1183989.035	259.821506
TERBIUM	159	Y	4821053.476	9.518	4821053.476	0		PPB
Replicates			4434894.419		5328346.669		4699919.340	
QC Calculated Values				101.336				
THALLIUM	205		5859498.371	9.053	2.530	247.43598	4.41	PPB
Replicates			5275106.795	238.425183	6310642.022	244.326871	5992746.296	259.555874

Sample ID: **6011301-BS2** Client ID: MLCSUE 10X Date/Time: 01/14/16 16:37:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	206		1865511.844	7.111	0.806	244.04888	2.87	PPB
Replicates			1726623.850	241.589283	1990891.271	238.618422	1879020.412	251.938935
LEAD	207		3385486.536	7.232	1.463	239.16285	2.77	PPB
Replicates			3130556.867	236.552493	3618762.568	234.230013	3407140.173	246.706057
LEAD	208		5214488.327	7.485	2.252	233.46534	2.50	PPB
Replicates			4815436.725	230.649764	5595469.890	229.578100	5232558.367	240.168147
BISMUTH	209	Y	2316236.402	8.115	2316236.402	0		PPB
Replicates			2164054.453		2526338.608		2258316.147	
QC Calculated Values				94.394				
KRYPTON	83		103.889	1.852	57.778	0		MG/L
Replicates			101.667		105.001		105.001	

Sample ID: **6011301-BSD1** Client ID: MLCSDUE Date/Time: 01/14/16 16:38:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	351467.911	11.280	351467.911	0		PPB
Replicates			307276.165		383907.109		363220.460	
QC Calculated Values				87.841				
BERYLLIUM	9		350970.451	11.432	0.998	891.48597	1.29	PPB
Replicates			305137.140	886.629231	379754.650	883.187240	368019.561	904.641449
SCANDIUM	45	Y	2064254.531	13.606	2064254.531	0		PPB
Replicates			1742911.811		2262871.549		2186980.234	
QC Calculated Values				98.824				
VANADIUM	51		15429088.712	13.657	7.472	913.00233	0.07	PPB
Replicates			13019326.12	912.492518	16925612.65	913.694156	16342327.36	912.820328
CHROMIUM	52		13477576.799	12.979	6.528	892.16480	0.72	PPB
Replicates			11480217.89	899.500011	14736657.86	889.327415	14215854.64	887.666965
MANGANESE	55		101016702.44	13.238	48.953	4345.56517	0.57	PPB
Replicates			85654388.66	4362.489387	110050560.4	4317.103676	107345158.1	4357.102458
COBALT	59		9776720.491	12.963	4.739	521.38390	0.75	PPB
Replicates			8330578.503	525.831451	10693820.89	519.899938	10305762.07	518.420305
NICKEL	60		8823642.691	12.109	4.281	2168.72934	1.66	PPB
Replicates			7596601.029	2208.119651	9548717.414	2137.783584	9325609.630	2160.284777
COPPER	63		3856227.434	12.063	1.871	433.16894	1.69	PPB
Replicates			3324029.316	441.553576	4185176.510	428.200563	4059476.474	429.752688
COPPER	65		1921362.541	12.301	0.932	433.32261	1.50	PPB
Replicates			1649593.807	440.054928	2078788.225	427.125047	2035705.592	432.787858
ZINC	66		3826317.159	10.952	1.858	1669.05699	2.91	PPB
Replicates			3347690.392	1724.967560	4127173.187	1637.953753	4004087.896	1644.249645
ARSENIC	75		1976792.399	10.499	0.961	825.51354	3.38	PPB
Replicates			1738642.496	857.284081	2119021.157	804.764171	2072713.545	814.492359
SELENIUM	82		203482.329	10.032	0.099	846.02604	4.02	PPB
Replicates			179920.811	882.842670	215854.222	815.771732	214671.955	839.463704

Sample ID: **6011301-BSD1** Client ID: MLCSDUE Date/Time: 01/14/16 16:38:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		4051444.357	10.944	1.212	352.26712	3.23	PPB
Replicates			3539643.534	349.078718	4295824.698	342.820452	4318864.838	364.902179
SILVER	109		3823612.637	10.743	1.144	350.49439	2.42	PPB
Replicates			3349869.845	348.284257	4080720.805	343.320206	4040247.260	359.878697
CADMIUM	111		2738528.315	9.361	0.820	1109.80525	1.40	PPB
Replicates			2452948.470	1126.497555	2948806.480	1095.836115	2813829.996	1107.082078
INDIUM	113		2825095.360	9.951	0.802	0		PPB
Replicates			2503769.556		3025698.500		2945818.025	
INDIUM	115	Y	3343506.685	10.692	3343506.685	0		PPB
Replicates			2947532.352		3642512.508		3440475.195	
QC Calculated Values				82.155				
ANTIMONY	121		666805.900	10.110	0.155	82.71096	1.43	PPB
Replicates			589891.822	82.574242	715634.543	81.605620	694891.337	83.953019
BARIUM	135		5631850.847	10.477	1.309	2288.83779	0.66	PPB
Replicates			4969487.293	2279.896620	6101355.411	2280.279644	5824709.836	2306.337095
BARIUM	137		9915011.945	10.282	2.304	2376.60332	0.59	PPB
Replicates			8771475.827	2373.092292	10728726.96	2364.549235	10244833.04	2392.168431
TERBIUM	159	Y	4303102.313	10.338	4303102.313	0		PPB
Replicates			3812311.784		4679831.277		4417163.879	
QC Calculated Values				90.449				
THALLIUM	205		53637457.840	9.811	28.848	2821.75655	1.95	PPB
Replicates			47668251.60	2758.232955	57607595.42	2851.227111	55636526.49	2855.809573
LEAD	206		16694801.758	10.047	8.978	2718.54505	2.13	PPB
Replicates			14809745.77	2652.835098	18022428.39	2761.380907	17252231.10	2741.419146
LEAD	207		29895254.001	10.355	16.074	2628.54092	2.44	PPB
Replicates			26460133.97	2559.652532	32469482.99	2686.672416	30756145.04	2639.297817
LEAD	208		46244639.062	9.485	24.879	2578.83739	1.84	PPB
Replicates			41531840.96	2546.739688	50207927.40	2633.455781	46994148.81	2556.316714
BISMUTH	209	Y	1857420.596	8.016	1857420.596	0		PPB
Replicates			1690420.313		1976261.370		1905580.104	
QC Calculated Values				75.696				
KRYPTON	83		464.455	12.038	418.344	0		MG/L
Replicates			400.008		493.346		500.013	

Sample ID: **6011301-BSD2** Client ID: MLCSDUE 10X Date/Time: 01/14/16 16:40:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	368589.778	13.774	368589.778	0		PPB
Replicates			310522.501		404608.075		390638.760	
QC Calculated Values				92.120				
BERYLLIUM	9		48654.773	12.063	0.132	118.07811	2.66	PPB
Replicates			42145.291	121.177035	53542.960	118.149483	50276.067	114.907818

Sample ID: **6011301-BSD2** Client ID: MLCSDUE 10X Date/Time: 01/14/16 16:40:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SCANDIUM	45	Y	2109877.112	14.364	2109877.112	0		PPB
Replicates			1766979.945		2341856.755		2220794.637	
QC Calculated Values				101.008				
VANADIUM	51		1897249.419	12.098	0.900	109.92945	2.76	PPB
Replicates			1642690.550	113.378575	2088426.323	108.750496	1960631.384	107.659266
CHROMIUM	52		1680515.880	12.922	0.793	108.35874	3.15	PPB
Replicates			1449314.064	111.395666	1880178.309	109.022701	1712055.266	104.657838
MANGANESE	55		12163335.090	11.693	5.781	513.21853	3.45	PPB
Replicates			10609975.96	532.973418	13401564.48	507.944010	12478464.82	498.738165
COBALT	59		1229997.189	11.889	0.585	64.30531	3.16	PPB
Replicates			1069403.933	66.577522	1355472.789	63.671696	1265114.845	62.666715
NICKEL	60		1185818.494	11.447	0.564	285.63838	3.69	PPB
Replicates			1037653.016	297.495185	1304173.443	282.119574	1215629.024	277.300368
COPPER	63		560586.042	11.417	0.267	61.72619	5.01	PPB
Replicates			495314.828	64.882689	623234.136	61.597467	563209.163	58.698400
COPPER	65		274059.039	12.678	0.130	60.50517	3.26	PPB
Replicates			237043.233	62.356677	305968.643	60.729531	279165.242	58.429304
ZINC	66		614768.730	10.686	0.292	262.56006	4.17	PPB
Replicates			541739.888	275.201410	669060.354	256.435008	633505.948	256.043770
ARSENIC	75		308118.598	10.528	0.147	126.10623	4.46	PPB
Replicates			272414.401	132.577517	335781.534	123.308486	316159.860	122.432686
SELENIUM	82		32253.344	9.371	0.015	131.23421	5.64	PPB
Replicates			28920.092	139.779356	34815.501	126.944828	33024.441	126.978436
SILVER	107		551229.094	8.927	0.139	40.54187	3.33	PPB
Replicates			495912.845	39.210343	590139.125	40.506819	567635.312	41.908456
SILVER	109		517859.999	9.131	0.131	40.15452	4.07	PPB
Replicates			463786.133	38.658416	551452.560	39.903665	538341.304	41.901491
CADMIUM	111		388388.753	9.501	0.098	133.11376	2.42	PPB
Replicates			353231.540	130.210637	426814.163	136.579599	385120.556	132.551037
INDIUM	113		543744.095	7.597	0.094	0		PPB
Replicates			502148.881		584757.202		544326.203	
INDIUM	115	Y	3944993.596	7.078	3944993.596	0		PPB
Replicates			3672044.149		4230075.942		3932860.697	
QC Calculated Values				96.935				
ANTIMONY	121		91873.719	8.946	0.019	10.13380	1.88	PPB
Replicates			83471.930	10.028755	99896.486	10.018647	92252.741	10.353990
BARIUM	135		668153.246	8.615	0.138	242.13260	1.70	PPB
Replicates			610018.771	240.757235	725118.351	238.890208	669322.617	246.750344
BARIUM	137		1153248.478	9.289	0.239	246.34720	1.10	PPB
Replicates			1049298.773	244.216173	1263281.688	245.430741	1147164.971	249.394675
TERBIUM	159	Y	4828076.931	9.209	4828076.931	0		PPB
Replicates			4431407.249		5308700.641		4744122.904	
QC Calculated Values				101.484				

Sample ID: **6011301-BSD2** Client ID: MLCSDUE 10X Date/Time: 01/14/16 16:40:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		5770200.050	9.983	2.463	240.91702	3.53	PPB
Replicates			5170907.932	231.893185	6319771.227	242.085968	5819920.991	248.771917
LEAD	206		1852107.173	8.137	0.791	239.61788	2.72	PPB
Replicates			1694341.641	235.223754	1994601.428	236.528298	1867378.450	247.101600
LEAD	207		3354490.585	8.384	1.433	234.33333	2.52	PPB
Replicates			3064650.358	229.766704	3626254.485	232.226237	3372566.913	241.007058
LEAD	208		5204135.822	8.486	2.223	230.41626	1.95	PPB
Replicates			4767003.461	226.549491	5650114.944	229.362181	5195289.062	235.337094
BISMUTH	209	Y	2340910.327	8.188	2340910.327	0		PPB
Replicates			2181060.160		2553412.110		2288258.711	
QC Calculated Values				95.400				
KRYPTON	83		93.334	6.439	47.223	0		MG/L
Replicates			100.001		88.334		91.667	

Sample ID: **1601032-01** Client ID: BORING16 Date/Time: 01/14/16 16:42:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	449158.684	15.243	449158.684	0		PPB
Replicates			371850.788		502127.865		473497.399	
QC Calculated Values				112.257				
BERYLLIUM	9		190.002	11.471	0.000	0.37574	5.64	PPB
Replicates			165.001	0.392464	200.002	0.351910	205.002	0.382842
SCANDIUM	45	Y	2108549.133	15.573	2108549.133	0		PPB
Replicates			1737589.704		2361912.445		2226145.248	
QC Calculated Values				100.945				
VANADIUM	51		708981.707	16.134	0.334	40.84471	1.19	PPB
Replicates			578267.335	40.451218	790760.210	40.695347	757917.577	41.387559
CHROMIUM	52		477840.361	14.674	0.222	30.30139	1.57	PPB
Replicates			397435.532	30.557814	526290.672	29.750914	509794.880	30.595447
MANGANESE	55		3514264.839	13.794	1.670	148.20208	2.45	PPB
Replicates			2956687.512	150.998691	3835560.040	144.102921	3750546.964	149.504615
COBALT	59		21360.850	13.637	0.010	1.11198	3.20	PPB
Replicates			17997.848	1.134377	23101.654	1.070895	22983.047	1.130659
NICKEL	60		16481.313	12.899	0.008	3.95859	4.82	PPB
Replicates			14037.624	4.077600	17501.413	3.738701	17904.904	4.059472
COPPER	63		47055.268	13.313	0.022	5.16037	2.90	PPB
Replicates			39845.894	5.289340	51172.263	4.996196	50147.647	5.195562
COPPER	65		24187.937	14.105	0.011	5.32329	1.81	PPB
Replicates			20376.294	5.432802	26955.726	5.286761	25231.792	5.250320
ZINC	66		49572.216	13.586	0.023	20.99783	2.34	PPB
Replicates			41865.230	21.474460	54324.938	20.492370	52526.479	21.026647
ARSENIC	75		8243.254	14.189	0.004	3.46645	2.32	PPB
Replicates			6895.525	3.511663	8993.187	3.373442	8841.049	3.514256

Sample ID: **1601032-01** Client ID: BORING16 Date/Time: 01/14/16 16:42:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		183.520	11.377	0.000	0.51760	7.02	PPB
Replicates			159.446	0.554423	196.669	0.481745	194.446	0.516647
SILVER	107		1941.857	13.153	0.000	0.08714	5.81	PPB
Replicates			1650.136	0.084297	2125.226	0.084146	2050.210	0.092990
SILVER	109		1438.993	11.532	0.000	0.05638	6.04	PPB
Replicates			1250.078	0.056396	1561.233	0.052962	1505.669	0.059777
CADMIUM	111		1437.707	7.527	0.000	0.48354	7.84	PPB
Replicates			1316.595	0.507618	1471.637	0.439821	1524.889	0.503177
INDIUM	113		171616.332	12.918	-0.001	0		PPB
Replicates			146811.494		189495.237		178542.264	
INDIUM	115	Y	4031668.581	12.608	4031668.581	0		PPB
Replicates			3497972.782		4510031.046		4087001.914	
QC Calculated Values				99.064				
ANTIMONY	121		731.971	2.301	0.000	0.04956	13.47	PPB
Replicates			729.193	0.057089	750.028	0.044370	716.692	0.047214
BARIUM	135		101602.609	9.333	0.020	34.46935	1.83	PPB
Replicates			91091.334	34.264341	109513.057	33.966232	104203.437	35.177482
BARIUM	137		175975.831	9.612	0.034	35.20369	2.62	PPB
Replicates			156842.068	34.791424	188943.273	34.558708	182142.151	36.260924
TERBIUM	159	Y	5155297.904	9.602	5155297.904	0		PPB
Replicates			4648544.977		5637673.384		5179675.351	
QC Calculated Values				108.362				
THALLIUM	205		7547.312	10.449	0.003	0.31728	11.86	PPB
Replicates			7077.504	0.325389	7106.691	0.276258	8457.742	0.350183
LEAD	206		83464.963	7.878	0.036	10.97215	1.27	PPB
Replicates			76071.581	10.968675	88657.944	10.834459	85665.363	11.113331
LEAD	207		148795.120	7.694	0.065	10.56424	1.39	PPB
Replicates			135891.636	10.581305	157733.192	10.409415	152760.532	10.701994
LEAD	208		230471.937	7.982	0.100	10.36874	0.33	PPB
Replicates			210632.091	10.394770	246964.360	10.329595	233819.360	10.381851
BISMUTH	209	Y	2302795.286	8.276	2302795.286	0		PPB
Replicates			2098952.851		2476521.276		2332911.733	
QC Calculated Values				93.846				
KRYPTON	83		75.556	28.105	29.445	0		MG/L
Replicates			61.667		100.001		65.000	

Sample ID: **6A14005-SRD3** Client ID: BORING16L Date/Time: 01/14/16 16:43:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	379329.885	14.949	379329.885	0		PPB
Replicates			314380.270		419001.310		404608.075	
QC Calculated Values				94.805				

Sample ID: **6A14005-SRD3** Client ID: BORING16L Date/Time: 01/14/16 16:43:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
BERYLLIUM	9		86.667	19.231	0.000	0.20757	35.75	PPB
Replicates			103.334	0.289752	70.000	0.145444	86.667	0.187529
SCANDIUM	45	Y	2145791.665	14.790	2145791.665	0		PPB
Replicates			1796429.972		2416255.723		2224689.300	
QC Calculated Values				102.728				
VANADIUM	51		147106.790	12.983	0.067	8.18104	2.05	PPB
Replicates			126223.977	8.373477	163687.552	8.065634	151408.840	8.104015
CHROMIUM	52		106929.055	10.698	0.045	6.13853	5.05	PPB
Replicates			94590.260	6.494294	117180.902	5.926074	109016.003	5.995214
MANGANESE	55		767228.992	14.272	0.357	31.70479	1.78	PPB
Replicates			642817.332	31.712248	848961.005	31.137332	809908.638	32.264776
COBALT	59		5124.650	6.764	0.002	0.25983	8.73	PPB
Replicates			4739.456	0.285098	5411.464	0.241240	5223.030	0.253138
NICKEL	60		4229.601	6.558	0.002	0.99212	9.06	PPB
Replicates			3934.107	1.094204	4484.339	0.924966	4270.356	0.957199
COPPER	63		11050.585	9.666	0.005	1.17871	5.57	PPB
Replicates			9849.292	1.249313	11893.179	1.119527	11409.283	1.167299
COPPER	65		5489.490	14.208	0.003	1.17129	3.70	PPB
Replicates			4723.337	1.202754	6282.528	1.189186	5462.603	1.121921
ZINC	66		14122.055	8.988	0.006	5.78305	6.84	PPB
Replicates			12810.979	6.239457	15345.098	5.538374	14210.089	5.571312
ARSENIC	75		1992.265	8.319	0.001	0.90493	6.19	PPB
Replicates			1811.796	0.968268	2137.646	0.861836	2027.354	0.884697
SELENIUM	82		102.223	11.957	0.000	0.18212	38.79	PPB
Replicates			102.223	0.256221	114.445	0.174624	90.000	0.115518
SILVER	107		756.511	16.175	0.000	0.00314	455.81	PPB
Replicates			894.484	0.019684	713.914	-0.005443	661.133	-0.004811
SILVER	109		682.431	16.884	0.000	0.00025	5835.35	PPB
Replicates			811.144	0.016208	588.906	-0.011910	647.243	-0.003556
CADMIUM	111		532.078	21.796	0.000	0.18215	31.82	PPB
Replicates			664.599	0.249057	482.496	0.147310	449.141	0.150082
INDIUM	113		171255.932	8.876	-0.001	0		PPB
Replicates			155436.205		185750.963		172580.630	
INDIUM	115	Y	3988030.990	9.944	3988030.990	0		PPB
Replicates			3585143.960		4377974.114		4000974.895	
QC Calculated Values				97.992				
ANTIMONY	121		245.836	4.484	0.000	0.00025	421.76	PPB
Replicates			237.503	0.001442	258.337	-0.000534	241.670	-0.000161
BARIUM	135		19878.730	8.832	0.004	7.10215	3.32	PPB
Replicates			17887.651	6.923228	21204.124	7.014273	20544.415	7.368952
BARIUM	137		34834.186	8.448	0.007	7.34064	2.69	PPB
Replicates			31537.987	7.198961	37197.387	7.256918	35767.184	7.566039

Sample ID: **6A14005-SRD3** Client ID: BORING16L Date/Time: 01/14/16 16:43:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4888095.548	7.856	4888095.548	0		PPB
Replicates			4513232.957		5280655.936		4870397.751	
QC Calculated Values				102.745				
THALLIUM	205		5237.608	37.046	0.002	0.21245	44.79	PPB
Replicates			7411.079	0.318240	3679.844	0.133861	4621.901	0.185258
LEAD	206		16364.796	5.610	0.007	2.05163	1.96	PPB
Replicates			15587.138	2.095232	17377.586	2.016030	16129.664	2.043639
LEAD	207		29599.959	5.770	0.012	2.00365	1.72	PPB
Replicates			28099.128	2.039556	31458.326	1.970713	29242.423	2.000667
LEAD	208		46098.900	5.538	0.019	1.97657	1.90	PPB
Replicates			43706.401	2.009279	48786.694	1.935638	45803.606	1.984806
BISMUTH	209	Y	2410880.638	7.453	2410880.638	0		PPB
Replicates			2246579.079		2602759.959		2383302.877	
QC Calculated Values				98.251				
KRYPTON	83		54.445	30.816	8.333	0		MG/L
Replicates			70.000		36.667		56.667	

Sample ID: **1601032-02** Client ID: BORING30 Date/Time: 01/14/16 16:45:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	393057.293	12.585	393057.293	0		PPB
Replicates			336571.961		428640.545		413959.372	
QC Calculated Values				98.235				
BERYLLIUM	9		1221.742	12.019	0.003	2.77294	0.68	PPB
Replicates			1053.389	2.790680	1323.421	2.752936	1288.416	2.775202
SCANDIUM	45	Y	1968013.194	13.392	1968013.194	0		PPB
Replicates			1668721.810		2165359.399		2069958.373	
QC Calculated Values				94.217				
VANADIUM	51		3269407.686	13.220	1.660	202.80362	0.21	PPB
Replicates			2777783.015	203.179128	3589554.736	202.336123	3440885.306	202.895619
CHROMIUM	52		1730665.411	12.679	0.875	119.56517	0.88	PPB
Replicates			1479931.479	120.503775	1887623.288	118.436189	1824441.465	119.755535
MANGANESE	55		3043277.801	12.917	1.547	137.28952	1.76	PPB
Replicates			2589770.452	137.713912	3286885.493	134.694969	3253177.457	139.459688
COBALT	59		146945.213	11.979	0.075	8.22075	1.97	PPB
Replicates			126668.868	8.345822	158309.927	8.038057	155856.843	8.278378
NICKEL	60		69871.351	11.620	0.036	18.00252	1.94	PPB
Replicates			60675.184	18.405545	76046.391	17.776956	72892.479	17.825056
COPPER	63		134449.407	11.703	0.068	15.82342	1.88	PPB
Replicates			116449.095	16.137077	145585.431	15.546768	141313.695	15.786409
COPPER	65		66805.793	11.367	0.034	15.79516	2.41	PPB
Replicates			58068.107	16.160214	71815.282	15.401183	70533.989	15.824097

Sample ID: **1601032-02** Client ID: BORING30 Date/Time: 01/14/16 16:45:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
ZINC	66		266664.563	9.732	0.136	121.96607	3.97	PPB
Replicates			237171.214	127.487305	285998.773	118.462299	276823.703	119.948592
ARSENIC	75		62934.277	10.769	0.032	27.65018	2.86	PPB
Replicates			55169.459	28.510449	67659.776	26.951301	65973.596	27.488787
SELENIUM	82		306.671	7.237	0.000	1.11064	8.43	PPB
Replicates			281.115	1.210536	317.783	1.024873	321.116	1.096509
SILVER	107		2776.314	10.660	0.001	0.16479	6.15	PPB
Replicates			2533.654	0.170706	3106.038	0.170567	2689.250	0.153097
SILVER	109		1080.614	9.800	0.000	0.03616	7.15	PPB
Replicates			958.379	0.036012	1144.510	0.033653	1138.954	0.038817
CADMIUM	111		3782.405	5.635	0.001	1.38417	7.91	PPB
Replicates			3673.640	1.507346	4027.982	1.347131	3645.595	1.298023
INDIUM	113		159253.809	10.798	-0.001	0		PPB
Replicates			141231.997		175484.684		161044.745	
INDIUM	115	Y	3711009.043	10.258	3711009.043	0		PPB
Replicates			3294923.378		4041801.840		3796301.912	
QC Calculated Values				91.185				
ANTIMONY	121		956.990	6.463	0.000	0.07961	6.05	PPB
Replicates			904.208	0.085018	1025.053	0.078061	941.711	0.075759
BARIUM	135		164895.081	10.340	0.034	59.80440	0.92	PPB
Replicates			146255.097	59.169561	179701.927	60.134896	168728.219	60.108756
BARIUM	137		285120.838	9.465	0.059	61.01689	0.11	PPB
Replicates			255991.849	61.073983	309272.994	61.031989	290097.671	60.944692
TERBIUM	159	Y	4819088.874	9.510	4819088.874	0		PPB
Replicates			4322568.253		5225843.517		4908854.851	
QC Calculated Values				101.295				
THALLIUM	205		6736.999	7.348	0.003	0.31522	2.42	PPB
Replicates			6168.569	0.314158	7073.334	0.308180	6969.094	0.323335
LEAD	206		183880.128	9.109	0.089	26.97439	1.70	PPB
Replicates			165521.118	26.458504	198330.776	27.129291	187788.491	27.335371
LEAD	207		329896.158	9.267	0.160	26.13348	2.27	PPB
Replicates			295628.713	25.519963	354376.362	26.177899	339683.399	26.702580
LEAD	208		512227.721	9.718	0.248	25.71561	3.10	PPB
Replicates			455556.137	24.926419	548879.544	25.699995	532247.484	26.520422
BISMUTH	209	Y	2062278.256	7.776	2062278.256	0		PPB
Replicates			1893884.901		2213193.643		2079756.224	
QC Calculated Values				84.044				
KRYPTON	83		104.445	4.016	58.334	0		MG/L
Replicates			105.001		100.001		108.334	

Sample ID: **1601032-03** Client ID: BORING28 Date/Time: 01/14/16 16:47:18

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)

Sample ID: **1601032-03** Client ID: BORING28 Date/Time: 01/14/16 16:47:18

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	398296.647	16.815	398296.647	0		PPB
Replicates			321377.505		443687.649		429824.786	
QC Calculated Values				99.545				
BERYLLIUM	9		672.801	17.420	0.002	1.50411	3.06	PPB
Replicates			543.348	1.505806	771.696	1.549193	703.358	1.457323
SCANDIUM	45	Y	1942745.237	13.932	1942745.237	0		PPB
Replicates			1633393.306		2135949.239		2058893.165	
QC Calculated Values				93.007				
VANADIUM	51		2106877.569	13.401	1.083	132.36664	0.63	PPB
Replicates			1783231.374	133.181573	2302632.528	131.507994	2234768.804	132.410367
CHROMIUM	52		1732655.062	14.556	0.886	121.10805	0.86	PPB
Replicates			1443102.960	120.043845	1904359.543	121.147476	1850502.684	122.132836
MANGANESE	55		2178206.151	13.088	1.122	99.56205	1.21	PPB
Replicates			1849983.476	100.488530	2364176.876	98.202647	2320458.100	99.994985
COBALT	59		127745.273	13.345	0.066	7.23328	1.21	PPB
Replicates			108094.413	7.275389	138580.284	7.132604	136561.123	7.291850
NICKEL	60		47890.711	13.131	0.025	12.48385	1.43	PPB
Replicates			40637.960	12.589148	51825.614	12.277088	51208.559	12.585306
COPPER	63		93770.180	12.901	0.048	11.16732	1.68	PPB
Replicates			79811.674	11.293186	101215.202	10.951449	100283.665	11.257314
COPPER	65		47089.605	12.873	0.024	11.26266	1.42	PPB
Replicates			40108.050	11.397570	51018.703	11.086357	50142.064	11.304040
ZINC	66		147194.132	12.134	0.076	68.00835	1.97	PPB
Replicates			126722.879	69.515797	159602.453	66.946560	155257.065	67.562696
ARSENIC	75		86448.671	11.944	0.045	38.41565	2.24	PPB
Replicates			74569.930	39.331003	93273.183	37.625210	91502.901	38.290732
SELENIUM	82		279.634	2.949	0.000	1.01458	14.71	PPB
Replicates			270.559	1.186422	286.671	0.917556	281.671	0.939750
SILVER	107		2143.748	2.858	0.000	0.11356	11.97	PPB
Replicates			2091.885	0.129091	2211.356	0.103850	2128.004	0.107725
SILVER	109		983.382	7.474	0.000	0.02706	9.11	PPB
Replicates			900.041	0.029389	1038.943	0.024477	1011.162	0.027302
CADMIUM	111		3152.697	4.895	0.001	1.13570	5.68	PPB
Replicates			2976.591	1.203520	3264.252	1.075120	3217.246	1.128465
INDIUM	113		161148.002	10.062	-0.001	0		PPB
Replicates			143831.151		175972.308		163640.545	
INDIUM	115	Y	3766058.395	10.286	3766058.395	0		PPB
Replicates			3342654.981		4102716.754		3852803.451	
QC Calculated Values				92.538				
ANTIMONY	121		679.190	11.246	0.000	0.04787	11.64	PPB
Replicates			595.851	0.046668	695.858	0.042992	745.861	0.053937
BARIUM	135		418050.952	10.501	0.086	150.07590	1.14	PPB
Replicates			369540.815	148.971278	455048.114	149.201371	429563.928	152.055065

Sample ID: **1601032-03** Client ID: BORING28 Date/Time: 01/14/16 16:47:18

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		725103.526	9.608	0.149	153.61086	1.96	PPB
Replicates			646354.783	153.656568	778727.847	150.570781	750227.950	156.605239
TERBIUM	159	Y	4871052.618	10.295	4871052.618	0		PPB
Replicates			4338383.305		5333994.903		4940779.647	
QC Calculated Values				102.387				
THALLIUM	205		5408.408	3.280	0.002	0.24293	6.19	PPB
Replicates			5226.365	0.256063	5418.134	0.226525	5580.723	0.246207
LEAD	206		149775.390	9.454	0.070	21.11950	2.04	PPB
Replicates			133839.699	20.645352	160913.491	21.228234	154572.978	21.484912
LEAD	207		267612.778	10.076	0.125	20.37117	2.32	PPB
Replicates			238151.760	19.838593	291071.739	20.736877	273614.834	20.538040
LEAD	208		417447.771	10.943	0.194	20.13268	3.18	PPB
Replicates			369344.915	19.501418	460246.885	20.783361	422751.513	20.113247
BISMUTH	209	Y	2145023.494	7.857	2145023.494	0		PPB
Replicates			1962465.232		2294674.974		2177930.275	
QC Calculated Values				87.417				
KRYPTON	83		77.223	23.774	31.111	0		MG/L
Replicates			58.334		78.334		95.000	

Sample ID: **6A14005-CRL7** Client ID: LLCCV Date/Time: 01/14/16 16:49:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	347785.342	15.776	347785.342	0		PPB
Replicates			284827.718		385382.254		373146.054	
QC Calculated Values				86.921				
BERYLLIUM	9		398.341	5.858	0.001	1.03099	11.19	PPB
Replicates			371.674	1.161365	408.342	0.942321	415.009	0.989296
QC Calculated Values			103.099					
SCANDIUM	45	Y	2039507.509	14.416	2039507.509	0		PPB
Replicates			1728546.625		2312992.576		2076983.325	
QC Calculated Values				97.639				
VANADIUM	51		92444.401	12.148	0.044	5.33903	2.53	PPB
Replicates			80214.348	5.458378	102293.341	5.192000	94825.514	5.366708
QC Calculated Values			106.781					
CHROMIUM	52		43314.080	8.766	0.016	2.21821	8.82	PPB
Replicates			39785.654	2.443777	47331.750	2.094810	42824.836	2.116040
QC Calculated Values			110.910					
MANGANESE	55		30761.377	8.874	0.015	1.29411	6.09	PPB
Replicates			27913.905	1.381225	33355.537	1.227846	31014.688	1.273262
QC Calculated Values			129.411					

Sample ID: **6A14005-CRL7** Client ID: LLCCV Date/Time: 01/14/16 16:49:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
COBALT	59		19779.751	12.652	0.010	1.06373	1.94	PPB
Replicates			17161.380	1.087100	22147.833	1.048286	20030.040	1.055812
QC Calculated Values			106.373					
NICKEL	60		4834.517	13.860	0.002	1.18647	1.38	PPB
Replicates			4153.640	1.202118	5493.175	1.187910	4856.735	1.169387
QC Calculated Values			118.647					
COPPER	63		19753.927	11.650	0.010	2.22880	3.57	PPB
Replicates			17159.154	2.278299	21548.191	2.136885	20554.436	2.271207
QC Calculated Values			111.440					
COPPER	65		9628.736	9.592	0.005	2.18652	5.58	PPB
Replicates			8723.248	2.326721	10569.472	2.104944	9593.488	2.127887
QC Calculated Values			109.326					
ZINC	66		5566.368	6.791	0.003	2.30481	8.76	PPB
Replicates			5190.235	2.531235	5946.212	2.143347	5562.658	2.239855
QC Calculated Values			115.241					
ARSENIC	75		2282.604	12.726	0.001	1.06496	2.01	PPB
Replicates			1961.215	1.076581	2526.430	1.040211	2360.165	1.078075
QC Calculated Values			106.496					
SELENIUM	82		1232.669	11.389	0.001	4.95542	3.55	PPB
Replicates			1076.725	5.098061	1348.980	4.758544	1272.303	5.009652
QC Calculated Values			99.108					
SILVER	107		14365.943	10.514	0.003	0.98509	3.54	PPB
Replicates			12658.006	0.970083	15525.932	0.960253	14913.891	1.024941
QC Calculated Values			98.509					
SILVER	109		13771.586	10.698	0.003	0.99588	4.36	PPB
Replicates			12085.076	0.976476	14808.178	0.965549	14421.503	1.045607
QC Calculated Values			99.588					
CADMIUM	111		3072.364	13.994	0.001	1.02883	3.95	PPB
Replicates			2614.693	0.981948	3467.772	1.051689	3134.627	1.052860
QC Calculated Values			102.883					
INDIUM	113		171338.088	9.772	-0.001	0		PPB
Replicates			155089.213		188535.688		170389.364	
INDIUM	115	Y	4025310.664	10.657	4025310.664	0		PPB
Replicates			3597538.805		4455448.874		4022944.314	
QC Calculated Values				98.908				
ANTIMONY	121		18144.335	10.063	0.004	2.00606	4.08	PPB
Replicates			16208.959	1.932556	19836.321	1.991219	18387.723	2.094408
QC Calculated Values			100.303					
BARIUM	135		27355.395	10.083	0.006	10.02966	2.78	PPB
Replicates			24631.966	9.745983	30147.040	10.038980	27287.179	10.304003
QC Calculated Values			100.297					

Sample ID: **6A14005-CRL7** Client ID: LLCCV Date/Time: 01/14/16 16:49:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		47192.913	9.785	0.010	10.20636	2.91	PPB
Replicates			42552.008	9.929044	51787.082	10.170083	47239.650	10.519966
QC Calculated Values			102.064					
TERBIUM	159	Y	4763998.136	9.068	4763998.136	0		PPB
Replicates			4416476.268		5247699.723		4627818.417	
QC Calculated Values				100.137				
THALLIUM	205		27079.930	10.294	0.011	1.06098	3.29	PPB
Replicates			24170.843	1.028487	29727.454	1.056645	27341.494	1.097814
QC Calculated Values			106.098					
LEAD	206		8891.465	7.260	0.004	1.07915	2.52	PPB
Replicates			8432.721	1.109928	9629.634	1.058386	8612.040	1.069131
QC Calculated Values			107.915					
LEAD	207		16383.178	8.284	0.007	1.07296	1.47	PPB
Replicates			15105.780	1.073466	17807.977	1.056911	16235.778	1.088509
QC Calculated Values			107.296					
LEAD	208		25935.202	9.776	0.010	1.07417	1.86	PPB
Replicates			23466.315	1.055390	28532.369	1.071930	25806.921	1.095204
QC Calculated Values			107.417					
BISMUTH	209	Y	2485180.624	9.313	2485180.624	0		PPB
Replicates			2288884.688		2740370.557		2426286.627	
QC Calculated Values				101.279				
KRYPTON	83		56.111	6.183	10.000	0		MG/L
Replicates			60.000		53.333		55.000	

Sample ID: **6A14005-CCV8** Client ID: CCV Date/Time: 01/14/16 16:50:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	335690.090	13.460	335690.090	0		PPB
Replicates			283658.513		365036.491		358375.266	
QC Calculated Values				83.898				
BERYLLIUM	9		117898.547	12.933	0.351	313.81478	2.33	PPB
Replicates			100859.412	317.463056	130257.866	318.595970	122578.363	305.385329
QC Calculated Values			104.605					
SCANDIUM	45	Y	1934240.557	13.088	1934240.557	0		PPB
Replicates			1659032.234		2157206.087		1986483.351	
QC Calculated Values				92.600				
VANADIUM	51		4779707.479	13.251	2.469	301.67174	1.46	PPB
Replicates			4067767.225	299.372046	5280546.228	298.879882	4990808.984	306.763292
QC Calculated Values			100.557					

Sample ID: **6A14005-CCV8** Client ID: CCV Date/Time: 01/14/16 16:50:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CHROMIUM	52		4313036.443	12.415	2.226	304.25007	1.04	PPB
Replicates			3742949.185	307.634177	4805364.780	303.736871	4390795.365	301.379165
QC Calculated Values			101.417					
MANGANESE	55		6663776.397	12.019	3.448	306.07526	1.74	PPB
Replicates			5761806.174	308.244633	7291806.909	300.008254	6937716.109	309.972888
QC Calculated Values			102.025					
COBALT	59		5319473.932	12.258	2.752	302.80716	2.39	PPB
Replicates			4575166.255	303.386148	5790219.054	295.288713	5593036.487	309.746613
QC Calculated Values			100.936					
NICKEL	60		1189174.338	12.561	0.615	311.60496	1.48	PPB
Replicates			1021136.753	311.809624	1306874.930	306.903953	1239511.332	316.101308
QC Calculated Values			103.868					
COPPER	63		2565253.319	12.097	1.327	307.32397	1.52	PPB
Replicates			2217426.741	309.442516	2813733.696	301.978612	2664599.520	310.550794
QC Calculated Values			102.441					
COPPER	65		1290484.748	12.309	0.668	310.41877	1.49	PPB
Replicates			1112050.891	311.649961	1416464.115	305.288612	1342939.237	314.317750
QC Calculated Values			103.473					
ZINC	66		654142.689	11.405	0.339	304.04895	1.86	PPB
Replicates			571319.837	309.132462	716071.140	297.972343	675037.089	305.042057
QC Calculated Values			101.350					
ARSENIC	75		685341.484	11.191	0.355	305.10886	2.63	PPB
Replicates			598175.282	309.923473	742477.320	295.855168	715371.851	309.547942
QC Calculated Values			101.703					
SELENIUM	82		67553.447	10.299	0.035	299.32939	3.60	PPB
Replicates			59587.003	307.016304	72434.167	287.007887	70639.172	303.963977
QC Calculated Values			99.776					
SILVER	107		3970625.991	10.144	1.047	304.33514	5.02	PPB
Replicates			3506025.019	298.900241	4221807.463	292.511379	4184045.490	321.593786
QC Calculated Values			101.445					
SILVER	109		3754437.572	10.548	0.989	303.23665	4.49	PPB
Replicates			3300244.939	296.619017	4027447.934	294.182527	3935619.844	318.908412
QC Calculated Values			101.079					
CADMIUM	111		846627.783	9.684	0.223	302.07485	1.31	PPB
Replicates			760718.452	302.010647	924032.601	298.140055	855132.297	306.073850
QC Calculated Values			100.692					
INDIUM	113		991422.801	9.406	0.218	0		PPB
Replicates			896371.628		1082766.990		995129.786	
INDIUM	115	Y	3795585.906	10.356	3795585.906	0		PPB
Replicates			3409574.106		4195322.673		3781860.940	
QC Calculated Values				93.263				

Sample ID: **6A14005-CCV8** Client ID: CCV Date/Time: 01/14/16 16:50:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
ANTIMONY	121		2596299.109	10.185	0.557	297.32786	2.43	PPB
Replicates			2319484.441	291.728470	2846334.121	294.786855	2623078.765	305.468267
QC Calculated Values			99.109					
BARIUM	135		785519.628	9.747	0.169	294.81540	1.61	PPB
Replicates			708255.113	291.874768	861356.727	292.297013	786947.044	300.274424
QC Calculated Values			98.272					
BARIUM	137		1360814.424	9.404	0.292	301.26171	2.05	PPB
Replicates			1228378.344	298.523171	1483784.755	296.928037	1370280.173	308.333912
QC Calculated Values			100.421					
TERBIUM	159	Y	4660512.682	9.866	4660512.682	0		PPB
Replicates			4243984.140		5153939.054		4583614.853	
QC Calculated Values				97.962				
THALLIUM	205		7108468.127	9.523	3.041	297.47990	4.79	PPB
Replicates			6328743.033	285.497934	7545655.637	293.689716	7451005.713	313.252054
QC Calculated Values			99.160					
LEAD	206		2265286.138	9.425	0.969	293.36194	2.83	PPB
Replicates			2034368.043	284.101996	2455497.016	295.862945	2305993.356	300.120871
QC Calculated Values			97.787					
LEAD	207		4186220.462	8.713	1.791	292.87117	2.20	PPB
Replicates			3792911.671	286.051213	4513377.763	293.683155	4252371.952	298.879143
QC Calculated Values			97.624					
LEAD	208		6611677.790	8.272	2.829	293.27518	1.97	PPB
Replicates			6019391.090	287.763658	7097533.155	292.750108	6718109.125	299.311767
QC Calculated Values			97.758					
BISMUTH	209	Y	2335937.288	7.389	2335937.288	0		PPB
Replicates			2168227.632		2513036.598		2326547.634	
QC Calculated Values				95.197				
KRYPTON	83		66.667	22.221	20.556	0		MG/L
Replicates			50.000		71.667		78.334	

Sample ID: **6A14005-CCB8** Client ID: CCB Date/Time: 01/14/16 16:52:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	357063.058	15.491	357063.058	0		PPB
Replicates			294260.005		398522.535		378406.633	
QC Calculated Values				89.239				
BERYLLIUM	9		3.333	50.000	0.000	0.00514	111.84	PPB
Replicates			5.000	0.011452	3.333	0.003749	1.667	0.000213
SCANDIUM	45	Y	2038906.561	13.232	2038906.561	0		PPB
Replicates			1751094.522		2286057.529		2079567.633	
QC Calculated Values				97.611				

Sample ID: **6A14005-CCB8** Client ID: CCB Date/Time: 01/14/16 16:52:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
VANADIUM	51		3661.697	1.081	0.000	0.01065	309.96	PPB
Replicates			3705.883	0.046897	3629.477	-0.017698	3649.730	0.002754
CHROMIUM	52		10781.366	2.029	0.000	0.03002	348.98	PPB
Replicates			10772.466	0.138882	10567.247	-0.070133	11004.385	0.021324
MANGANESE	55		1812.666	13.846	0.000	0.02850	78.31	PPB
Replicates			2100.221	0.054169	1700.145	0.013719	1637.634	0.017606
COBALT	59		266.671	46.566	0.000	0.00988	89.99	PPB
Replicates			398.341	0.019876	250.003	0.006881	151.668	0.002874
NICKEL	60		164.816	11.472	0.000	0.02655	39.29	PPB
Replicates			186.113	0.038574	158.335	0.019818	150.001	0.021272
COPPER	63		586.129	16.051	0.000	0.04817	42.51	PPB
Replicates			694.469	0.071708	538.903	0.034464	525.014	0.038337
COPPER	65		270.374	11.548	0.000	0.04295	32.92	PPB
Replicates			297.227	0.059136	277.782	0.036712	236.114	0.033006
ZINC	66		762.066	8.759	0.000	0.17154	10.34	PPB
Replicates			697.247	0.192000	830.590	0.160700	758.362	0.161907
ARSENIC	75		-236.169	16.678	0.000	0.00225	386.15	PPB
Replicates			-191.230	0.007791	-252.573	0.006693	-264.705	-0.007747
SELENIUM	82		62.593	10.737	0.000	0.03525	132.90	PPB
Replicates			65.000	0.086985	67.778	0.023072	55.000	-0.004307
SILVER	107		686.135	12.726	-0.000	-0.00228	391.59	PPB
Replicates			763.918	0.007973	702.802	-0.006519	591.684	-0.008289
SILVER	109		600.018	15.762	-0.000	-0.00640	159.67	PPB
Replicates			697.247	0.005389	594.462	-0.011823	508.346	-0.012775
CADMIUM	111		23.510	107.940	0.000	0.00664	144.48	PPB
Replicates			52.575	0.017617	5.758	-0.000106	12.196	0.002403
INDIUM	113		168539.300	9.692	-0.001	0		PPB
Replicates			154348.721		186396.135		164873.043	
INDIUM	115	Y	3973822.616	9.862	3973822.616	0		PPB
Replicates			3651352.604		4409980.292		3860134.952	
QC Calculated Values				97.643				
ANTIMONY	121		959.769	14.467	0.000	0.08169	29.76	PPB
Replicates			1108.395	0.109751	937.544	0.066896	833.368	0.068436
BARIUM	135		70.000	40.054	0.000	0.01744	73.45	PPB
Replicates			101.667	0.032209	60.000	0.010832	48.333	0.009286
BARIUM	137		122.779	30.120	0.000	0.01829	50.68	PPB
Replicates			153.335	0.028027	133.334	0.017273	81.667	0.009572
TERBIUM	159	Y	4788899.477	10.755	4788899.477	0		PPB
Replicates			4337892.155		5350153.761		4678652.515	
QC Calculated Values				100.660				
THALLIUM	205		651.411	23.602	0.000	0.02123	36.24	PPB
Replicates			820.867	0.030076	612.519	0.017528	520.847	0.016086

Sample ID: **6A14005-CCB8** Client ID: CCB Date/Time: 01/14/16 16:52:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	206		163.890	24.030	0.000	0.01435	42.91	PPB
Replicates			208.336	0.021455	150.001	0.010990	133.334	0.010602
LEAD	207		293.058	26.839	0.000	0.01358	47.17	PPB
Replicates			379.170	0.020908	275.002	0.010742	225.001	0.009078
LEAD	208		451.396	38.298	0.000	0.01158	72.69	PPB
Replicates			637.512	0.021065	420.838	0.008653	295.836	0.005015
BISMUTH	209	Y	2512932.268	8.057	2512932.268	0		PPB
Replicates			2326912.787		2728581.325		2483302.693	
QC Calculated Values				102.410				
KRYPTON	83		41.667	20.785	-4.444	0		MG/L
Replicates			31.667		46.667		46.667	

Sample ID: **6011301-BLK2** Client ID: PBSUE Date/Time: 01/14/16 16:57:57

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	459783.046	13.207	459783.046	0		PPB
Replicates			389765.663		498023.393		491560.081	
QC Calculated Values				114.912				
BERYLLIUM	9		9.444	36.735	0.000	0.01470	41.91	PPB
Replicates			8.333	0.015370	6.667	0.008233	13.333	0.020499
SCANDIUM	45	Y	2210263.260	14.764	2210263.260	0		PPB
Replicates			1834895.438		2426447.362		2369446.979	
QC Calculated Values				105.814				
VANADIUM	51		6763.547	7.625	0.001	0.16531	19.92	PPB
Replicates			6221.060	0.202572	7247.526	0.153267	6822.056	0.140106
CHROMIUM	52		22840.026	6.944	0.005	0.72248	17.04	PPB
Replicates			21032.094	0.864647	23997.092	0.649740	23490.892	0.653058
MANGANESE	55		10499.974	7.349	0.004	0.37290	9.68	PPB
Replicates			9646.317	0.414377	11147.877	0.355538	10705.728	0.348784
COBALT	59		363.896	14.297	0.000	0.01353	42.91	PPB
Replicates			423.342	0.020232	341.673	0.010342	326.672	0.010018
NICKEL	60		813.922	4.692	0.000	0.17337	12.28	PPB
Replicates			772.252	0.197950	847.258	0.161628	822.256	0.160538
COPPER	63		2751.305	6.397	0.001	0.27081	10.32	PPB
Replicates			2553.104	0.302043	2811.506	0.248160	2889.306	0.262216
COPPER	65		1257.488	18.602	0.001	0.24372	5.65	PPB
Replicates			988.938	0.230814	1366.760	0.242120	1416.767	0.258233
ZINC	66		4831.729	9.225	0.002	1.80964	6.66	PPB
Replicates			4317.599	1.947783	5109.638	1.725724	5067.951	1.755421
ARSENIC	75		-312.695	8.918	-0.000	-0.02292	133.40	PPB
Replicates			-339.419	-0.057321	-283.778	0.001135	-314.887	-0.012564
SELENIUM	82		61.482	7.304	0.000	0.00952	237.37	PPB
Replicates			56.667	0.033632	62.222	-0.011189	65.556	0.006123

Sample ID: **6011301-BLK2** Client ID: PBSUE Date/Time: 01/14/16 16:57:57

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		757.436	8.080	-0.000	-0.00224	22.84	PPB
Replicates			694.469	-0.001691	816.700	-0.002704	761.140	-0.002337
SILVER	109		697.247	7.601	-0.000	-0.00401	24.91	PPB
Replicates			647.243	-0.002870	752.806	-0.004406	691.691	-0.004743
CADMIUM	111		48.134	10.744	0.000	0.01310	7.38	PPB
Replicates			45.458	0.013719	54.096	0.013592	44.850	0.011985
INDIUM	113		184703.470	9.090	-0.001	0		PPB
Replicates			165627.017		197230.160		191253.233	
INDIUM	115	Y	4353927.384	9.068	4353927.384	0		PPB
Replicates			3946430.928		4734730.654		4380620.571	
QC Calculated Values				106.983				
ANTIMONY	121		531.959	7.064	0.000	0.02662	32.70	PPB
Replicates			570.850	0.036023	495.846	0.018849	529.181	0.024982
BARIUM	135		898.929	3.864	0.000	0.28423	5.93	PPB
Replicates			868.371	0.303579	936.711	0.272831	891.706	0.276272
BARIUM	137		1519.005	7.461	0.000	0.28353	8.52	PPB
Replicates			1421.768	0.293161	1491.778	0.256047	1643.468	0.301386
TERBIUM	159	Y	5383732.097	8.983	5383732.097	0		PPB
Replicates			4862293.764		5817631.003		5471271.525	
QC Calculated Values				113.163				
THALLIUM	205		886.150	4.108	0.000	0.03016	13.99	PPB
Replicates			916.709	0.035029	895.873	0.027597	845.869	0.027854
LEAD	206		1898.792	9.623	0.001	0.22211	0.39	PPB
Replicates			1704.312	0.221442	2066.880	0.223080	1925.185	0.221805
LEAD	207		3339.174	6.910	0.001	0.21099	3.43	PPB
Replicates			3125.246	0.219153	3583.662	0.208438	3308.614	0.205370
LEAD	208		5095.217	5.184	0.002	0.20280	8.26	PPB
Replicates			5021.582	0.221724	5388.364	0.196801	4875.705	0.189869
BISMUTH	209	Y	2523817.312	9.283	2523817.312	0		PPB
Replicates			2272452.793		2736145.213		2562853.929	
QC Calculated Values				102.854				
KRYPTON	83		48.889	17.159	2.778	0		MG/L
Replicates			56.667		50.000		40.000	

Sample ID: **IBL2** Client ID: BLANK Date/Time: 01/14/16 17:03:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	352826.074	11.896	352826.074	0		PPB
Replicates			305083.885		383910.572		369483.763	
QC Calculated Values				88.181				
BERYLLIUM	9		1.667	0.000	0.000	0.00054	99.74	PPB
Replicates			1.667	0.001159	1.667	0.000157	1.667	0.000308

Sample ID: **IBL2** Client ID: BLANK Date/Time: 01/14/16 17:03:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SCANDIUM	45	Y	2089446.087	13.048	2089446.087	0		PPB
Replicates			1792570.595		2328571.225		2147196.441	
QC Calculated Values				100.030				
VANADIUM	51		3813.310	2.197	0.000	0.01400	225.99	PPB
Replicates			3842.394	0.050219	3878.685	-0.008163	3718.850	-0.000067
CHROMIUM	52		11355.891	2.391	0.000	0.04987	212.12	PPB
Replicates			11451.553	0.171204	11566.686	-0.023008	11049.434	0.001413
MANGANESE	55		3153.277	7.300	0.001	0.08238	9.95	PPB
Replicates			2904.588	0.091539	3358.897	0.075749	3196.344	0.079845
COBALT	59		104.445	11.977	0.000	0.00047	301.88	PPB
Replicates			116.667	0.002010	91.667	-0.000819	105.001	0.000230
NICKEL	60		187.039	3.738	0.000	0.03075	25.41	PPB
Replicates			194.446	0.039684	186.113	0.025221	180.557	0.027330
COPPER	63		502.790	6.789	0.000	0.03592	10.38	PPB
Replicates			463.900	0.039802	527.792	0.032363	516.680	0.035598
COPPER	65		225.929	11.621	0.000	0.03157	41.01	PPB
Replicates			255.559	0.046502	216.669	0.023478	205.558	0.024726
ZINC	66		958.379	3.292	0.000	0.25014	17.51	PPB
Replicates			922.265	0.296469	972.269	0.209389	980.604	0.244553
ARSENIC	75		-307.562	15.813	-0.000	-0.02454	19.71	PPB
Replicates			-252.364	-0.019343	-344.124	-0.025358	-326.198	-0.028911
SELENIUM	82		61.111	8.672	0.000	0.02416	218.35	PPB
Replicates			64.445	0.076987	55.000	-0.028500	63.889	0.023981
SILVER	107		158.335	9.283	-0.000	-0.04136	0.93	PPB
Replicates			141.668	-0.041434	169.446	-0.041697	163.890	-0.040937
SILVER	109		136.112	13.383	-0.000	-0.04262	4.57	PPB
Replicates			133.334	-0.041810	119.445	-0.044849	155.557	-0.041216
CADMIUM	111		7.678	14.790	0.000	0.00076	80.32	PPB
Replicates			8.333	0.001253	6.366	0.000078	8.333	0.000947
INDIUM	113		172340.993	10.320	-0.001	0		PPB
Replicates			154242.941		189796.708		172983.332	
INDIUM	115	Y	4007563.518	10.097	4007563.518	0		PPB
Replicates			3607323.164		4416443.723		3998923.668	
QC Calculated Values				98.472				
ANTIMONY	121		108.334	16.765	-0.000	-0.01456	21.26	PPB
Replicates			129.168	-0.011015	100.001	-0.016738	95.834	-0.015922
BARIUM	135		43.333	24.019	0.000	0.00690	56.74	PPB
Replicates			35.000	0.005098	40.000	0.004208	55.000	0.011389
BARIUM	137		71.111	5.413	0.000	0.00683	32.99	PPB
Replicates			73.334	0.008719	66.667	0.004336	73.334	0.007429
TERBIUM	159	Y	4854942.875	10.162	4854942.875	0		PPB
Replicates			4410238.654		5385614.842		4768975.130	
QC Calculated Values				102.049				

Sample ID: **IBL2** Client ID: BLANK Date/Time: 01/14/16 17:03:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		70.834	11.765	-0.000	-0.00164	28.02	PPB
Replicates			79.167	-0.001110	70.834	-0.001864	62.500	-0.001940
LEAD	206		108.334	24.019	0.000	0.00740	31.25	PPB
Replicates			100.001	0.007323	137.501	0.009757	87.500	0.005131
LEAD	207		176.390	1.364	0.000	0.00586	15.10	PPB
Replicates			175.001	0.006528	175.001	0.004855	179.167	0.006190
LEAD	208		280.558	21.021	0.000	0.00447	70.94	PPB
Replicates			312.503	0.006551	212.502	0.000820	316.670	0.006030
BISMUTH	209	Y	2496830.750	7.509	2496830.750	0		PPB
Replicates			2333016.062		2701299.163		2456177.025	
QC Calculated Values				101.754				
KRYPTON	83		52.222	9.213	6.111	0		MG/L
Replicates			46.667		55.000		55.000	

Sample ID: **6A14005-CRL8** Client ID: LLCCV Date/Time: 01/14/16 17:05:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	353615.316	11.127	353615.316	0		PPB
Replicates			312832.861		391347.340		356665.748	
QC Calculated Values				88.378				
BERYLLIUM	9		394.452	7.931	0.001	0.99517	5.23	PPB
Replicates			358.340	1.019009	411.675	0.935507	413.342	1.031008
QC Calculated Values			99.517					
SCANDIUM	45	Y	2028668.636	13.500	2028668.636	0		PPB
Replicates			1732865.503		2273427.176		2079713.228	
QC Calculated Values				97.120				
VANADIUM	51		92737.923	12.436	0.044	5.37948	1.17	PPB
Replicates			80286.792	5.449354	103054.221	5.326936	94872.756	5.362161
QC Calculated Values			107.590					
CHROMIUM	52		42223.857	8.806	0.016	2.15532	6.52	PPB
Replicates			38161.008	2.307804	45458.088	2.030846	43052.477	2.127300
QC Calculated Values			107.766					
MANGANESE	55		25149.939	11.903	0.012	1.04985	1.79	PPB
Replicates			21865.546	1.067812	27725.883	1.030305	25858.390	1.051432
QC Calculated Values			104.985					
COBALT	59		19271.521	12.462	0.009	1.04104	1.36	PPB
Replicates			16732.320	1.057138	21506.435	1.035581	19575.809	1.030391
QC Calculated Values			104.104					
NICKEL	60		4380.599	12.341	0.002	1.08046	3.46	PPB
Replicates			3864.636	1.114591	4942.888	1.086221	4334.272	1.040560
QC Calculated Values			108.046					

Sample ID: **6A14005-CRL8** Client ID: LLCCV Date/Time: 01/14/16 17:05:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	63		19296.507	10.212	0.009	2.18904	3.49	PPB
Replicates			17122.981	2.267737	20966.401	2.115172	19800.138	2.184223
QC Calculated Values			109.452					
COPPER	65		9153.315	13.844	0.004	2.07835	2.63	PPB
Replicates			7911.462	2.103050	10444.340	2.116329	9104.142	2.015663
QC Calculated Values			103.917					
ZINC	66		5200.435	9.909	0.002	2.14459	4.09	PPB
Replicates			4628.849	2.233543	5629.362	2.058353	5343.094	2.141875
QC Calculated Values			107.230					
ARSENIC	75		1978.502	10.599	0.001	0.94237	4.47	PPB
Replicates			1736.381	0.962661	2096.166	0.893918	2102.961	0.970523
QC Calculated Values			94.237					
SELENIUM	82		1176.736	7.623	0.001	4.75943	6.62	PPB
Replicates			1074.502	5.073809	1242.299	4.443955	1213.407	4.760518
QC Calculated Values			95.189					
SILVER	107		14492.022	8.239	0.004	1.03406	4.77	PPB
Replicates			13147.526	1.025626	15428.560	0.989541	14899.981	1.087001
QC Calculated Values			103.406					
SILVER	109		13625.976	7.268	0.003	1.02456	3.71	PPB
Replicates			12574.568	1.034295	14541.120	0.982591	13762.241	1.056789
QC Calculated Values			102.456					
CADMIUM	111		2878.054	13.010	0.001	0.99956	3.00	PPB
Replicates			2556.640	0.974575	3289.217	1.032820	2788.305	0.991280
QC Calculated Values			99.956					
INDIUM	113		167462.576	8.609	-0.000	0		PPB
Replicates			155613.937		183514.400		163259.391	
INDIUM	115	Y	3882564.388	9.943	3882564.388	0		PPB
Replicates			3544222.944		4303106.016		3800364.203	
QC Calculated Values				95.401				
ANTIMONY	121		17790.881	8.130	0.004	2.01177	2.46	PPB
Replicates			16392.592	1.974784	19281.070	1.992546	17698.982	2.067979
QC Calculated Values			100.588					
BARIUM	135		26560.931	7.959	0.006	9.96153	0.57	PPB
Replicates			24872.560	9.940847	28931.792	9.918159	25878.441	10.025582
QC Calculated Values			99.615					
BARIUM	137		45922.976	8.869	0.010	10.15363	2.48	PPB
Replicates			42039.849	9.908695	50162.164	10.141302	45566.915	10.410895
QC Calculated Values			101.536					
TERBIUM	159	Y	4660136.133	8.262	4660136.133	0		PPB
Replicates			4372272.704		5097456.722		4510678.973	
QC Calculated Values				97.954				

Sample ID: **6A14005-CRL8** Client ID: LLCCV Date/Time: 01/14/16 17:05:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		24844.862	8.508	0.010	1.00803	2.72	PPB
Replicates			22642.271	0.985062	26856.849	1.000656	25035.466	1.038366
QC Calculated Values			100.803					
LEAD	206		8085.222	6.877	0.003	1.01503	1.18	PPB
Replicates			7598.719	1.022345	8691.275	1.001258	7965.671	1.021478
QC Calculated Values			101.503					
LEAD	207		14870.862	6.402	0.006	1.00834	1.65	PPB
Replicates			14025.784	1.018985	15902.208	0.989192	14684.594	1.016831
QC Calculated Values			100.834					
LEAD	208		23139.385	9.270	0.010	0.99181	4.28	PPB
Replicates			20774.850	0.954792	24960.003	0.982573	23683.300	1.038079
QC Calculated Values			99.181					
BISMUTH	209	Y	2400065.148	8.041	2400065.148	0		PPB
Replicates			2238232.720		2613662.391		2348300.333	
QC Calculated Values				97.810				
KRYPTON	83		50.000	35.277	3.889	0		MG/L
Replicates			43.333		70.000		36.667	

Sample ID: **6A14005-CCV9** Client ID: CCV Date/Time: 01/14/16 17:06:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	349831.759	16.327	349831.759	0		PPB
Replicates			284042.518		386738.121		378714.636	
QC Calculated Values				87.432				
BERYLLIUM	9		123630.855	14.668	0.354	316.33275	3.80	PPB
Replicates			103585.399	325.602625	138897.979	320.665012	128409.186	302.730611
QC Calculated Values			105.444					
SCANDIUM	45	Y	1996146.400	12.653	1996146.400	0		PPB
Replicates			1714902.779		2203614.445		2069921.975	
QC Calculated Values				95.563				
VANADIUM	51		4915671.515	13.523	2.459	300.44874	0.96	PPB
Replicates			4181492.833	297.714592	5476771.937	303.461191	5088749.773	300.170435
QC Calculated Values			100.150					
CHROMIUM	52		4431296.419	13.085	2.214	302.64596	1.99	PPB
Replicates			3822135.730	303.899460	4976462.339	307.936776	4495291.189	296.101650
QC Calculated Values			100.882					
MANGANESE	55		6846733.087	11.570	3.433	304.73986	1.44	PPB
Replicates			5981886.022	309.592659	7537070.023	303.569062	7021243.215	301.057872
QC Calculated Values			101.580					

Sample ID: **6A14005-CCV9** Client ID: CCV Date/Time: 01/14/16 17:06:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COBALT	59		5527096.025	11.416	2.772	304.99832	2.09	PPB
Replicates			4854936.834	311.449733	6106648.097	304.867417	5619703.144	298.677822
QC Calculated Values			101.666					
NICKEL	60		1224423.683	12.356	0.614	310.98196	3.16	PPB
Replicates			1073184.095	317.026456	1375755.499	316.276103	1224331.456	299.643320
QC Calculated Values			103.661					
COPPER	63		2620373.326	11.689	1.314	304.21434	1.65	PPB
Replicates			2290543.554	309.232092	2895839.339	304.245314	2674737.083	299.165619
QC Calculated Values			101.405					
COPPER	65		1323124.373	11.486	0.664	308.57588	2.43	PPB
Replicates			1163999.390	315.580988	1466751.580	309.469604	1338622.150	300.677039
QC Calculated Values			102.859					
ZINC	66		673835.700	10.324	0.338	303.74868	3.55	PPB
Replicates			602343.860	315.304137	741296.829	301.975114	677866.412	293.966794
QC Calculated Values			101.250					
ARSENIC	75		700146.104	10.916	0.351	301.97151	1.90	PPB
Replicates			615579.625	308.550459	764279.812	298.128328	720578.874	299.235744
QC Calculated Values			100.657					
SELENIUM	82		69602.411	9.950	0.035	298.78659	3.00	PPB
Replicates			62020.063	309.143174	75593.532	293.223260	71193.639	293.993346
QC Calculated Values			99.596					
SILVER	107		4092721.992	9.884	1.059	307.76568	4.35	PPB
Replicates			3626781.721	298.587938	4354241.184	301.571385	4297143.071	323.137703
QC Calculated Values			102.589					
SILVER	109		3825059.244	9.741	0.990	303.37594	5.44	PPB
Replicates			3395972.577	294.751598	4012227.114	292.956453	4066978.040	322.419780
QC Calculated Values			101.125					
CADMIUM	111		863564.505	8.833	0.223	302.46540	1.64	PPB
Replicates			780396.900	299.194414	930275.668	300.037586	880020.947	308.164192
QC Calculated Values			100.822					
INDIUM	113		1021981.145	10.029	0.221	0		PPB
Replicates			913392.414		1117029.256		1035521.765	
INDIUM	115	Y	3864395.217	8.621	3864395.217	0		PPB
Replicates			3530697.142		4196956.028		3865532.483	
QC Calculated Values				94.954				
ANTIMONY	121		2629655.421	9.287	0.559	298.38527	3.24	PPB
Replicates			2374966.395	291.217909	2861852.588	294.547084	2652147.281	309.390824
QC Calculated Values			99.462					
BARIUM	135		815818.964	8.735	0.173	303.39474	2.86	PPB
Replicates			742600.661	298.356690	884941.983	298.429436	819914.248	313.398087
QC Calculated Values			101.132					

Sample ID: **6A14005-CCV9** Client ID: CCV Date/Time: 01/14/16 17:06:47

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		1403543.435	8.320	0.298	307.84571	1.99	PPB
Replicates			1290555.403	305.770912	1523766.049	303.028941	1396308.851	314.737284
QC Calculated Values			102.615					
TERBIUM	159	Y	4705010.936	9.168	4705010.936	0		PPB
Replicates			4353117.827		5186256.770		4575658.212	
QC Calculated Values				98.897				
THALLIUM	205		7160637.514	7.844	3.040	297.30600	2.29	PPB
Replicates			6555923.837	296.982625	7666119.176	290.667407	7259869.530	304.267980
QC Calculated Values			99.102					
LEAD	206		2305993.356	8.577	0.978	296.23961	0.98	PPB
Replicates			2107264.794	295.512311	2502840.712	293.774027	2307874.563	299.432485
QC Calculated Values			98.747					
LEAD	207		4281350.211	8.008	1.817	297.12694	1.39	PPB
Replicates			3932271.887	297.801116	4617623.807	292.701504	4294154.939	300.878196
QC Calculated Values			99.042					
LEAD	208		6746825.741	8.215	2.863	296.77333	1.47	PPB
Replicates			6174969.977	296.435309	7281646.067	292.582451	6783861.180	301.302230
QC Calculated Values			98.924					
BISMUTH	209	Y	2357568.269	8.961	2357568.269	0		PPB
Replicates			2159203.131		2579703.142		2333798.533	
QC Calculated Values				96.078				
KRYPTON	83		68.889	11.934	22.778	0		MG/L
Replicates			78.334		65.000		63.334	

Sample ID: **6A14005-CCB9** Client ID: CCB Date/Time: 01/14/16 17:08:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	365279.341	12.502	365279.341	0		PPB
Replicates			315943.394		406074.072		373820.557	
QC Calculated Values				91.293				
BERYLLIUM	9		10.000	16.667	0.000	0.02123	33.06	PPB
Replicates			11.667	0.029251	10.000	0.018268	8.333	0.016185
SCANDIUM	45	Y	1976638.964	14.070	1976638.964	0		PPB
Replicates			1673633.460		2220285.055		2035998.375	
QC Calculated Values				94.630				
VANADIUM	51		4015.859	0.686	0.000	0.03992	90.21	PPB
Replicates			3999.070	0.080269	4047.635	0.011060	4000.872	0.028416
CHROMIUM	52		10871.462	0.366	0.000	0.06039	187.82	PPB
Replicates			10889.259	0.187333	10899.270	-0.030981	10825.857	0.024816
MANGANESE	55		2196.075	6.360	0.001	0.04711	18.12	PPB
Replicates			2058.545	0.056887	2337.773	0.041168	2191.907	0.043269

Sample ID: **6A14005-CCB9** Client ID: CCB Date/Time: 01/14/16 17:08:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
COBALT	59		536.126	13.595	0.000	0.02549	34.52	PPB
Replicates			620.019	0.035607	500.013	0.019626	488.345	0.021238
NICKEL	60		224.077	9.305	0.000	0.04335	29.80	PPB
Replicates			236.114	0.056202	200.002	0.030365	236.114	0.043481
COPPER	63		696.321	12.260	0.000	0.06244	23.45	PPB
Replicates			708.358	0.077879	775.030	0.060705	605.574	0.048749
COPPER	65		336.117	12.883	0.000	0.05966	13.05	PPB
Replicates			311.116	0.066648	386.119	0.061074	311.116	0.051264
ZINC	66		786.142	10.405	0.000	0.19302	9.70	PPB
Replicates			691.691	0.205570	833.368	0.171491	833.368	0.202004
ARSENIC	75		-191.490	16.004	0.000	0.01840	35.92	PPB
Replicates			-156.845	0.021102	-202.572	0.023232	-215.052	0.010868
SELENIUM	82		70.926	5.332	0.000	0.08076	62.09	PPB
Replicates			72.222	0.138597	73.889	0.054131	66.667	0.049553
SILVER	107		922.266	17.484	0.000	0.01714	84.87	PPB
Replicates			1011.162	0.032265	1019.496	0.015912	736.138	0.003248
SILVER	109		786.142	8.444	0.000	0.00966	74.77	PPB
Replicates			800.032	0.017859	844.480	0.006911	713.914	0.004219
CADMIUM	111		91.667	19.027	0.000	0.03042	20.61	PPB
Replicates			76.896	0.028264	87.196	0.025510	110.909	0.037480
INDIUM	113		165535.575	13.237	-0.001	0		PPB
Replicates			145412.103		188879.587		162315.037	
INDIUM	115	Y	3859684.672	11.142	3859684.672	0		PPB
Replicates			3453761.630		4310352.973		3814939.414	
QC Calculated Values				94.839				
ANTIMONY	121		1090.338	17.204	0.000	0.09835	28.23	PPB
Replicates			1275.081	0.129861	1095.893	0.087728	900.041	0.077476
BARIUM	135		109.445	11.631	0.000	0.03200	9.56	PPB
Replicates			106.667	0.034115	123.334	0.033392	98.334	0.028490
BARIUM	137		199.446	17.556	0.000	0.03534	16.89	PPB
Replicates			198.335	0.038606	235.003	0.038958	165.001	0.028451
TERBIUM	159	Y	4692715.797	8.286	4692715.797	0		PPB
Replicates			4349041.276		5114794.342		4614311.772	
QC Calculated Values				98.639				
THALLIUM	205		1006.996	14.157	0.000	0.03543	18.35	PPB
Replicates			1116.729	0.042624	1058.389	0.033707	845.869	0.029968
LEAD	206		318.061	26.245	0.000	0.03280	20.49	PPB
Replicates			254.170	0.027497	412.509	0.040358	287.504	0.030537
LEAD	207		598.620	16.941	0.000	0.03360	12.64	PPB
Replicates			579.175	0.035059	708.346	0.036932	508.340	0.028820
LEAD	208		898.635	17.537	0.000	0.03028	21.82	PPB
Replicates			987.527	0.036761	991.695	0.030534	716.681	0.023551

Sample ID: **6A14005-CCB9** Client ID: CCB Date/Time: 01/14/16 17:08:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BISMUTH	209	Y	2480468.408	8.348	2480468.408	0		PPB
Replicates			2321435.489		2714601.173		2405368.564	
QC Calculated Values				101.087				
KRYPTON	83		46.111	7.524	0.000	0		MG/L
Replicates			43.333		50.000		45.000	

Sample ID: **6011202-BLK1** Client ID: PBSUC Date/Time: 01/14/16 17:37:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	482558.261	15.422	482558.261	0		PPB
Replicates			396629.457		525972.925		525072.402	
QC Calculated Values				120.604				
BERYLLIUM	9		2.778	124.900	0.000	0.00223	357.87	PPB
Replicates			6.667	0.011288	0.000	-0.003719	1.667	-0.000885
SCANDIUM	45	Y	2178175.032	14.192	2178175.032	0		PPB
Replicates			1840801.940		2447849.805		2245873.350	
QC Calculated Values				104.278				
VANADIUM	51		9657.888	9.525	0.003	0.33264	8.35	PPB
Replicates			8611.219	0.359891	10338.364	0.304355	10024.081	0.333666
CHROMIUM	52		31514.312	9.344	0.009	1.28511	7.99	PPB
Replicates			28199.705	1.391768	33828.789	1.186842	32514.440	1.276717
MANGANESE	55		9326.597	9.763	0.004	0.32951	5.56	PPB
Replicates			8349.317	0.350334	10150.983	0.315820	9479.491	0.322385
COBALT	59		356.673	6.884	0.000	0.01302	13.53	PPB
Replicates			330.005	0.014573	361.673	0.011105	378.340	0.013383
NICKEL	60		867.631	15.901	0.000	0.18631	5.92	PPB
Replicates			708.358	0.179681	944.489	0.180205	950.045	0.199038
COPPER	63		1657.545	7.812	0.001	0.15733	9.09	PPB
Replicates			1541.786	0.173807	1797.384	0.149892	1633.467	0.148282
COPPER	65		843.554	6.506	0.000	0.16218	13.33	PPB
Replicates			794.476	0.180891	833.368	0.138512	902.819	0.167127
ZINC	66		4987.373	15.027	0.002	1.88919	2.53	PPB
Replicates			4136.967	1.852869	5551.541	1.871329	5273.612	1.943369
ARSENIC	75		-296.857	10.860	-0.000	-0.01736	138.06	PPB
Replicates			-312.143	-0.044078	-318.609	-0.010213	-259.819	0.002222
SELENIUM	82		63.519	5.954	0.000	0.02398	224.61	PPB
Replicates			67.778	0.084419	60.556	-0.018931	62.222	0.006449
SILVER	107		737.064	5.492	-0.000	-0.00287	175.51	PPB
Replicates			741.694	0.002925	775.030	-0.005319	694.469	-0.006222
SILVER	109		712.062	6.061	-0.000	-0.00234	145.65	PPB
Replicates			663.911	-0.000503	725.026	-0.006260	747.250	-0.000243
CADMIUM	111		40.511	21.243	0.000	0.01108	36.21	PPB
Replicates			50.233	0.015715	37.429	0.008814	33.870	0.008715

Sample ID: **6011202-BLK1** Client ID: PBSUC Date/Time: 01/14/16 17:37:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	113		186350.778	9.898	-0.000	0		PPB
Replicates			167181.735		203975.974		187894.623	
INDIUM	115	Y	4312073.219	10.145	4312073.219	0		PPB
Replicates			3865967.337		4740330.112		4329922.207	
QC Calculated Values				105.954				
ANTIMONY	121		300.005	20.175	0.000	0.00387	130.85	PPB
Replicates			241.670	0.000377	295.838	0.001554	362.507	0.009668
BARIUM	135		650.022	20.066	0.000	0.21165	29.75	PPB
Replicates			800.032	0.284354	586.684	0.174468	563.349	0.176132
BARIUM	137		1366.776	50.698	0.000	0.25663	45.46	PPB
Replicates			968.380	0.200810	2166.901	0.390702	965.047	0.178370
TERBIUM	159	Y	5233816.530	8.046	5233816.530	0		PPB
Replicates			4773444.601		5599560.090		5328444.900	
QC Calculated Values				110.012				
THALLIUM	205		630.575	1.009	0.000	0.02117	8.32	PPB
Replicates			629.186	0.023147	637.520	0.019775	625.020	0.020580
LEAD	206		990.327	10.910	0.000	0.11817	4.76	PPB
Replicates			866.704	0.111937	1066.724	0.119717	1037.554	0.122864
LEAD	207		1788.971	12.238	0.001	0.11497	5.44	PPB
Replicates			1554.228	0.108142	1987.599	0.120417	1825.085	0.116348
LEAD	208		2816.903	6.794	0.001	0.11352	3.48	PPB
Replicates			2671.054	0.116727	3033.599	0.114719	2746.056	0.109108
BISMUTH	209	Y	2417557.726	7.192	2417557.726	0		PPB
Replicates			2231764.292		2576364.598		2444544.287	
QC Calculated Values				98.523				
KRYPTON	83		44.445	14.197	-1.667	0		MG/L
Replicates			51.667		41.667		40.000	

Sample ID: **6011202-BS1** Client ID: MLCSUC Date/Time: 01/14/16 17:38:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	499112.024	17.673	499112.024	0		PPB
Replicates			400478.391		570442.366		526415.316	
QC Calculated Values				124.741				
BERYLLIUM	9		5.000	0.000	0.000	0.00543	32.39	PPB
Replicates			5.000	0.007428	5.000	0.004107	5.000	0.004761
SCANDIUM	45	Y	2375513.431	13.323	2375513.431	0		PPB
Replicates			2016597.861		2614555.908		2495386.524	
QC Calculated Values				113.725				
VANADIUM	51		10019.240	10.778	0.002	0.30513	7.55	PPB
Replicates			8783.582	0.320508	10491.902	0.278627	10782.237	0.316259

Sample ID: **6011202-BS1** Client ID: MLCSUC Date/Time: 01/14/16 17:38:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CHROMIUM	52		32741.713	10.889	0.009	1.18694	6.80	PPB
Replicates			28654.328	1.240066	34358.926	1.094127	35211.885	1.226612
MANGANESE	55		9575.489	15.544	0.003	0.30483	4.49	PPB
Replicates			7857.252	0.293574	10401.240	0.300846	10467.976	0.320084
COBALT	59		290.004	13.017	0.000	0.00831	11.67	PPB
Replicates			250.003	0.008489	295.004	0.007263	325.005	0.009179
NICKEL	60		927.821	10.411	0.000	0.18376	10.35	PPB
Replicates			838.924	0.195487	913.931	0.161820	1030.609	0.193966
COPPER	63		1733.484	7.512	0.001	0.14980	7.25	PPB
Replicates			1589.015	0.162325	1841.836	0.142988	1769.601	0.144075
COPPER	65		865.778	9.990	0.000	0.15028	5.29	PPB
Replicates			775.030	0.158913	947.267	0.148674	875.038	0.143261
ZINC	66		5100.388	12.651	0.002	1.76404	1.35	PPB
Replicates			4359.283	1.775923	5537.644	1.736677	5404.238	1.779507
ARSENIC	75		-326.619	2.789	-0.000	-0.01783	84.68	PPB
Replicates			-321.279	-0.035269	-337.136	-0.009171	-321.442	-0.009058
SELENIUM	82		56.482	10.332	-0.000	-0.02419	156.95	PPB
Replicates			56.667	0.009828	50.556	-0.065143	62.222	-0.017249
SILVER	107		595.388	18.121	-0.000	-0.01538	18.22	PPB
Replicates			475.011	-0.018494	683.357	-0.013069	627.797	-0.014570
SILVER	109		572.239	9.363	-0.000	-0.01489	10.31	PPB
Replicates			511.124	-0.014164	594.462	-0.016654	611.130	-0.013851
CADMIUM	111		42.782	38.221	0.000	0.01050	34.02	PPB
Replicates			27.808	0.007491	60.229	0.014452	40.308	0.009570
INDIUM	113		197961.283	10.545	-0.001	0		PPB
Replicates			173941.404		211709.233		208233.213	
INDIUM	115	Y	4593717.057	11.102	4593717.057	0		PPB
Replicates			4019488.776		4993922.941		4767739.456	
QC Calculated Values				112.875				
ANTIMONY	121		204.169	26.765	-0.000	-0.00730	59.95	PPB
Replicates			154.168	-0.010479	195.835	-0.009101	262.503	-0.002309
BARIUM	135		611.685	5.914	0.000	0.18248	3.09	PPB
Replicates			570.016	0.187107	630.020	0.176186	635.020	0.184142
BARIUM	137		1092.283	15.872	0.000	0.19202	10.29	PPB
Replicates			900.041	0.173968	1140.065	0.188953	1236.743	0.213142
TERBIUM	159	Y	5601246.374	8.113	5601246.374	0		PPB
Replicates			5089450.966		5957314.264		5756973.891	
QC Calculated Values				117.736				
THALLIUM	205		522.236	25.135	0.000	0.01510	22.60	PPB
Replicates			391.674	0.011841	654.188	0.018647	520.847	0.014809
LEAD	206		1037.554	11.522	0.000	0.11552	7.24	PPB
Replicates			958.379	0.117591	1175.069	0.122661	979.215	0.106312

Sample ID: **6011202-BS1** Client ID: MLCSUC Date/Time: 01/14/16 17:38:53

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	207		1848.698	8.806	0.001	0.11092	3.52	PPB
Replicates			1704.240	0.112619	2025.105	0.113686	1816.750	0.106447
LEAD	208		2814.123	7.934	0.001	0.10524	1.40	PPB
Replicates			2558.525	0.105300	2971.094	0.103731	2912.750	0.106681
BISMUTH	209	Y	2591892.304	8.286	2591892.304	0		PPB
Replicates			2354612.267		2772921.358		2648143.288	
QC Calculated Values				105.628				
KRYPTON	83		42.222	22.446	-3.889	0		MG/L
Replicates			50.000		31.667		45.000	

Sample ID: **6011202-BS2** Client ID: MLCSUC 10X Date/Time: 01/14/16 17:40:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	354842.461	13.242	354842.461	0		PPB
Replicates			301861.613		391463.420		371202.352	
QC Calculated Values				88.684				
BERYLLIUM	9		364410.993	10.858	1.029	919.01884	2.78	PPB
Replicates			318979.188	943.475043	391304.026	892.481022	382949.764	921.100468
SCANDIUM	45	Y	2152846.121	11.190	2152846.121	0		PPB
Replicates			1878088.001		2327916.048		2252534.315	
QC Calculated Values				103.065				
VANADIUM	51		16398329.556	11.052	7.616	930.58722	0.86	PPB
Replicates			14311696.10	930.879307	17578704.48	922.437300	17304588.08	938.445065
CHROMIUM	52		14195609.289	11.364	6.588	900.34445	0.20	PPB
Replicates			12358237.30	898.600609	15379414.25	902.194026	14849176.30	900.238705
MANGANESE	55		105247074.04	11.847	48.861	4337.38211	0.78	PPB
Replicates			90972593.94	4299.864211	114009807.9	4347.454628	110758820.2	4364.827502
COBALT	59		10224970.398	10.922	4.751	522.64610	0.86	PPB
Replicates			8970037.733	525.442430	11109217.96	525.004441	10595655.49	517.491422
NICKEL	60		9216961.878	10.786	4.283	2169.77193	0.97	PPB
Replicates			8101125.370	2185.284984	10008352.36	2178.080513	9541407.893	2145.950289
COPPER	63		4065813.648	10.831	1.889	437.37307	0.41	PPB
Replicates			3562477.430	439.167355	4379944.077	435.607106	4255019.436	437.344749
COPPER	65		2015230.625	10.089	0.937	435.61082	1.18	PPB
Replicates			1783114.305	441.436857	2161706.938	431.752053	2100870.633	433.643549
ZINC	66		3933870.941	10.174	1.829	1642.36447	1.23	PPB
Replicates			3473816.951	1661.117863	4201942.481	1621.030457	4125853.392	1644.945096
ARSENIC	75		2087162.305	7.706	0.972	835.49073	3.72	PPB
Replicates			1903160.285	870.860329	2200913.944	812.509536	2157412.688	823.102333
SELENIUM	82		215382.857	8.869	0.100	857.21262	2.68	PPB
Replicates			193342.844	880.418544	227156.019	834.502603	225649.708	856.716699
SILVER	107		4169752.651	10.216	1.239	360.15875	2.27	PPB
Replicates			3682310.342	353.755415	4470697.478	357.366804	4356250.134	369.354022

Sample ID: **6011202-BS2** Client ID: MLCSUC 10X Date/Time: 01/14/16 17:40:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	109		3932904.836	9.597	1.169	358.29476	2.49	PPB
Replicates			3498241.395	354.302981	4177643.467	352.055838	4122829.645	368.525472
CADMIUM	111		2832205.568	8.996	0.842	1139.98135	1.27	PPB
Replicates			2543772.471	1137.989077	3026623.095	1126.610323	2926221.138	1155.344657
INDIUM	113		2915275.036	9.659	0.823	0		PPB
Replicates			2595953.568		3128012.114		3021859.427	
INDIUM	115	Y	3363583.422	9.231	3363583.422	0		PPB
Replicates			3025802.558		3636511.997		3428435.711	
QC Calculated Values				82.649				
ANTIMONY	121		710903.079	9.932	0.166	88.82416	3.02	PPB
Replicates			630360.670	86.122221	762107.769	88.862154	740240.799	91.488100
BARIUM	135		5760614.971	9.175	1.349	2359.65995	1.62	PPB
Replicates			5175014.165	2317.198597	6202161.537	2370.090967	5904669.210	2391.690284
BARIUM	137		10123505.291	9.136	2.371	2445.44384	1.54	PPB
Replicates			9101868.833	2403.370171	10903617.36	2457.145766	10365029.67	2475.815570
TERBIUM	159	Y	4266986.364	7.928	4266986.364	0		PPB
Replicates			3906072.454		4576886.089		4318000.551	
QC Calculated Values				89.690				
THALLIUM	205		54905612.919	9.063	29.058	2842.23693	1.62	PPB
Replicates			49303533.66	2791.534760	58813070.28	2881.908232	56600234.81	2853.267787
LEAD	206		16693826.318	8.862	8.836	2675.52676	1.45	PPB
Replicates			15039305.21	2636.050242	17889333.03	2713.697078	17152840.69	2676.832959
LEAD	207		29919160.215	9.170	15.833	2589.16510	1.76	PPB
Replicates			26851634.14	2541.692192	32138121.79	2632.776791	30767724.70	2593.026329
LEAD	208		46301545.753	10.326	24.488	2538.36795	2.94	PPB
Replicates			40919110.69	2455.233373	50056547.89	2599.374419	47928978.67	2560.496063
BISMUTH	209	Y	1888001.314	7.507	1888001.314	0		PPB
Replicates			1727553.231		1996136.138		1940314.574	
QC Calculated Values				76.942				
KRYPTON	83		523.347	11.051	477.236	0		MG/L
Replicates			486.679		590.017		493.346	

Sample ID: **6011202-BSD1** Client ID: MLCSDUC Date/Time: 01/14/16 17:42:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	369665.138	14.822	369665.138	0		PPB
Replicates			307286.474		410013.357		391695.584	
QC Calculated Values				92.389				
BERYLLIUM	9		49889.960	12.919	0.135	120.76738	2.82	PPB
Replicates			42777.969	124.291489	55344.394	120.514665	51547.516	117.495974

Sample ID: **6011202-BSD1** Client ID: MLCSDUC Date/Time: 01/14/16 17:42:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
SCANDIUM	45	Y	2086656.552	13.742	2086656.552	0		PPB
Replicates			1778450.994		2345533.025		2135985.638	
QC Calculated Values				99.897				
VANADIUM	51		1937159.165	11.259	0.929	113.50494	3.01	PPB
Replicates			1712513.039	117.442923	2148085.215	111.687496	1950879.243	111.384415
CHROMIUM	52		1725361.577	11.896	0.823	112.53739	3.10	PPB
Replicates			1522453.524	116.293136	1932878.811	111.921431	1720752.396	109.397602
MANGANESE	55		12188114.277	10.402	5.860	520.20831	3.98	PPB
Replicates			10902086.20	544.115818	13436797.59	508.481246	12225459.02	508.027853
COBALT	59		1239783.690	11.910	0.595	65.47401	1.95	PPB
Replicates			1078160.189	66.689724	1367610.780	64.141212	1273580.102	65.591098
NICKEL	60		1202025.728	10.313	0.578	292.78626	3.67	PPB
Replicates			1064087.486	303.106503	1304110.406	281.663754	1237879.292	293.588528
COPPER	63		571807.924	11.010	0.275	63.59332	2.86	PPB
Replicates			503173.507	65.487172	626879.517	61.860736	585370.749	63.432049
COPPER	65		277693.394	11.087	0.133	62.01587	2.80	PPB
Replicates			243908.165	63.749161	304164.850	60.276738	285007.168	62.021710
ZINC	66		618795.717	9.837	0.297	267.18116	4.11	PPB
Replicates			551502.422	278.355587	670027.556	256.403189	634857.175	266.784703
ARSENIC	75		317688.301	10.109	0.153	131.38323	3.80	PPB
Replicates			282806.800	136.744300	346033.781	126.871294	324224.320	130.534081
SELENIUM	82		33147.233	9.794	0.016	136.17504	4.18	PPB
Replicates			29544.691	141.880639	35845.798	130.503109	34051.209	136.141362
SILVER	107		557594.750	10.577	0.145	42.18696	6.74	PPB
Replicates			490144.170	39.682708	599434.975	41.601885	583205.105	45.276279
SILVER	109		526814.723	7.763	0.137	42.04898	3.17	PPB
Replicates			483344.338	41.256815	564521.830	41.303538	532578.001	43.586573
CADMIUM	111		398867.418	8.789	0.104	140.67162	1.57	PPB
Replicates			366366.423	138.286005	436019.041	141.070096	394216.789	142.658759
INDIUM	113		554601.574	8.038	0.101	0		PPB
Replicates			513311.430		601866.357		548626.934	
INDIUM	115	Y	3836819.071	8.085	3836819.071	0		PPB
Replicates			3586184.912		4183751.258		3740521.043	
QC Calculated Values				94.277				
ANTIMONY	121		93416.729	8.069	0.020	10.43503	1.37	PPB
Replicates			86102.426	10.332662	101159.083	10.374048	92988.677	10.598389
BARIUM	135		679594.977	9.165	0.142	249.20611	1.97	PPB
Replicates			618613.385	243.844004	743104.430	250.313975	677067.117	253.460342
BARIUM	137		1169456.243	7.945	0.245	253.04250	0.74	PPB
Replicates			1083985.685	251.973973	1268344.834	251.948370	1156038.211	255.205155
TERBIUM	159	Y	4767010.527	8.107	4767010.527	0		PPB
Replicates			4436957.252		5192101.463		4671972.865	
QC Calculated Values				100.200				

Sample ID: **6011202-BSD1** Client ID: MLCSDUC Date/Time: 01/14/16 17:42:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		5754529.996	7.014	2.518	246.27059	2.05	PPB
Replicates			5319336.222	243.529759	6116515.238	243.193294	5827738.529	252.088720
LEAD	206		1879924.966	6.021	0.823	249.16465	1.89	PPB
Replicates			1760082.398	249.451896	1985038.628	244.329278	1894653.873	253.712780
LEAD	207		3409515.887	6.613	1.492	243.97898	1.87	PPB
Replicates			3168612.002	242.520701	3615507.306	240.326603	3444428.352	249.089641
LEAD	208		5226494.224	6.844	2.287	237.04548	1.78	PPB
Replicates			4846459.201	235.134155	5556570.777	234.126675	5276452.695	241.875607
BISMUTH	209	Y	2285893.909	7.139	2285893.909	0		PPB
Replicates			2136459.302		2460037.217		2261185.208	
QC Calculated Values				93.157				
KRYPTON	83		97.223	7.730	51.111	0		MG/L
Replicates			105.001		90.000		96.667	

Sample ID: **6011202-BSD2** Client ID: MLCSDUC 10X Date/Time: 01/14/16 17:44:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	353161.669	11.481	353161.669	0		PPB
Replicates			306669.633		381187.654		371627.721	
QC Calculated Values				88.264				
BERYLLIUM	9		358770.145	10.830	1.016	907.52089	0.80	PPB
Replicates			314423.257	915.418730	386838.563	906.080577	375048.614	901.063377
SCANDIUM	45	Y	2155618.357	13.072	2155618.357	0		PPB
Replicates			1835118.923		2364423.956		2267312.192	
QC Calculated Values				103.198				
VANADIUM	51		15860604.922	12.394	7.361	899.37030	0.93	PPB
Replicates			13607476.91	905.792805	17224875.44	889.906547	16749462.40	902.411545
CHROMIUM	52		13780889.869	12.328	6.392	873.62253	0.86	PPB
Replicates			11839404.83	881.018462	14995523.22	866.063339	14507741.55	873.785789
MANGANESE	55		104383647.77	12.807	48.436	4299.62538	0.96	PPB
Replicates			89017997.08	4305.996903	113349099.1	4255.521288	110783847.1	4337.357960
COBALT	59		10004429.937	12.157	4.645	511.02241	1.01	PPB
Replicates			8615852.766	516.512444	10880536.63	506.257664	10516900.40	510.297122
NICKEL	60		8990078.438	11.468	4.177	2116.05399	1.83	PPB
Replicates			7807042.696	2155.266433	9696804.961	2077.695115	9466387.657	2115.200438
COPPER	63		3965060.249	11.881	1.841	426.34083	1.33	PPB
Replicates			3426266.494	432.265400	4299159.476	420.970062	4169754.778	425.787035
COPPER	65		1956749.853	10.897	0.910	422.92908	2.57	PPB
Replicates			1711122.955	433.532834	2094348.279	411.839028	2064778.326	423.415377
ZINC	66		3857141.082	10.313	1.794	1611.14490	3.06	PPB
Replicates			3399793.629	1663.787543	4122726.050	1565.906945	4048903.566	1603.740206
ARSENIC	75		2081965.102	9.575	0.969	832.76765	3.78	PPB
Replicates			1853896.916	868.181653	2222993.045	807.989610	2169005.344	822.131677

Sample ID: **6011202-BSD2** Client ID: MLCSDUC 10X Date/Time: 01/14/16 17:44:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		217361.081	9.453	0.101	865.30902	3.97	PPB
Replicates			193721.172	902.802411	230926.472	835.255299	227435.600	857.869348
SILVER	107		4130860.644	9.462	1.222	355.24827	2.12	PPB
Replicates			3680050.274	355.438566	4375052.646	347.618365	4337479.011	362.687889
SILVER	109		3909895.400	9.897	1.156	354.37780	2.09	PPB
Replicates			3463711.518	352.690879	4154026.037	347.961285	4111948.645	362.481248
CADMIUM	111		2818358.346	8.804	0.834	1129.04936	1.19	PPB
Replicates			2539263.015	1142.076778	3013974.281	1115.160106	2901837.744	1129.911198
INDIUM	113		2901707.227	9.036	0.815	0		PPB
Replicates			2602845.398		3093136.678		3009139.606	
INDIUM	115	Y	3381506.965	9.897	3381506.965	0		PPB
Replicates			3009627.904		3658497.134		3476395.857	
QC Calculated Values				83.089				
ANTIMONY	121		687620.974	8.785	0.154	82.42835	2.03	PPB
Replicates			618662.983	81.691676	731202.468	81.251464	712997.471	84.341912
BARIUM	135		5701358.750	8.935	1.280	2239.56268	1.09	PPB
Replicates			5134556.857	2222.078816	6121078.349	2229.231012	5848441.044	2267.378219
BARIUM	137		9987619.229	9.072	2.243	2313.38286	1.02	PPB
Replicates			8984436.433	2292.903141	10746665.91	2308.018405	10231755.34	2339.227040
TERBIUM	159	Y	4451757.260	8.626	4451757.260	0		PPB
Replicates			4041433.588		4802471.608		4511366.584	
QC Calculated Values				93.574				
THALLIUM	205		54623097.237	9.046	28.635	2800.90716	2.35	PPB
Replicates			49060402.97	2727.279413	58504146.36	2853.719785	56304742.36	2821.722295
LEAD	206		16770799.017	9.889	8.788	2661.17206	3.24	PPB
Replicates			14930874.56	2569.476673	18150768.48	2740.820755	17230754.00	2673.218752
LEAD	207		30111879.847	9.049	15.786	2581.39060	2.38	PPB
Replicates			27087819.64	2517.444006	32375725.44	2640.167313	30872094.45	2586.560484
LEAD	208		46893412.193	7.490	24.601	2550.08897	0.79	PPB
Replicates			42970054.31	2531.430917	49744700.08	2571.420718	47965482.18	2547.415267
BISMUTH	209	Y	1905521.060	6.782	1905521.060	0		PPB
Replicates			1759534.926		2005264.968		1951763.287	
QC Calculated Values				77.656				
KRYPTON	83		413.342	18.271	367.231	0		MG/L
Replicates			361.673		500.013		378.340	

Sample ID: **6A14005-IBL2** Client ID: IBL Date/Time: 01/14/16 17:48:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	372206.106	13.118	372206.106	0		PPB
Replicates			319667.313		416189.119		380761.886	
QC Calculated Values				93.024				

Sample ID: **6A14005-IBL2** Client ID: IBL Date/Time: 01/14/16 17:48:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BERYLLIUM	9		27.778	60.100	0.000	0.06637	75.96	PPB
Replicates			45.000	0.121969	26.667	0.053489	11.667	0.023638
SCANDIUM	45	Y	2023352.515	12.747	2023352.515	0		PPB
Replicates			1753061.064		2266802.610		2050193.873	
QC Calculated Values				96.866				
VANADIUM	51		4933.376	15.861	0.001	0.09316	94.10	PPB
Replicates			5823.734	0.194217	4621.389	0.037416	4355.007	0.047858
CHROMIUM	52		12402.149	5.979	0.001	0.14892	106.99	PPB
Replicates			13237.089	0.330080	12149.042	0.030601	11820.315	0.086076
MANGANESE	55		9786.107	49.006	0.004	0.39885	70.44	PPB
Replicates			15315.887	0.723252	7277.647	0.232700	6764.787	0.240605
COBALT	59		811.151	55.980	0.000	0.04152	77.63	PPB
Replicates			1335.089	0.078635	531.681	0.020654	566.683	0.025259
NICKEL	60		886.156	46.971	0.000	0.21774	64.55	PPB
Replicates			1366.760	0.379711	641.687	0.128143	650.021	0.145354
COPPER	63		871.336	25.910	0.000	0.08266	48.38	PPB
Replicates			1127.841	0.128842	783.364	0.059897	702.802	0.059253
COPPER	65		400.008	22.514	0.000	0.07500	45.16	PPB
Replicates			497.235	0.112096	319.450	0.045739	383.341	0.067152
ZINC	66		1349.166	14.735	0.000	0.44776	38.49	PPB
Replicates			1569.568	0.638521	1183.403	0.303264	1294.528	0.401486
ARSENIC	75		-36.663	375.635	0.000	0.09062	67.97	PPB
Replicates			122.188	0.161522	-109.634	0.060071	-122.544	0.050269
SELENIUM	82		83.889	14.794	0.000	0.13270	77.14	PPB
Replicates			97.778	0.246576	73.889	0.048289	80.000	0.103248
SILVER	107		554.646	32.204	-0.000	-0.01084	155.05	PPB
Replicates			755.584	0.008544	494.457	-0.019668	413.897	-0.021408
SILVER	109		492.606	38.753	-0.000	-0.01363	136.02	PPB
Replicates			711.136	0.007781	408.342	-0.024247	358.340	-0.024438
CADMIUM	111		259.679	66.622	0.000	0.09081	75.93	PPB
Replicates			452.210	0.169211	209.552	0.063606	117.275	0.039609
INDIUM	113		168694.109	8.535	-0.000	0		PPB
Replicates			157844.320		185029.437		163208.571	
INDIUM	115	Y	3912233.349	9.821	3912233.349	0		PPB
Replicates			3577914.655		4331952.287		3826833.105	
QC Calculated Values				96.130				
ANTIMONY	121		202.781	89.622	-0.000	-0.00275	828.77	PPB
Replicates			412.509	0.023571	104.167	-0.015934	91.667	-0.015889
BARIUM	135		464.457	51.383	0.000	0.16819	61.04	PPB
Replicates			740.027	0.286401	326.672	0.101324	326.672	0.116857
BARIUM	137		810.595	55.362	0.000	0.17383	64.92	PPB
Replicates			1328.422	0.304046	568.349	0.104537	535.014	0.112913

Sample ID: **6A14005-IBL2** Client ID: IBL Date/Time: 01/14/16 17:48:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4707155.628	9.034	4707155.628	0		PPB
Replicates			4384797.047		5189105.444		4547564.391	
QC Calculated Values				98.942				
THALLIUM	205		4012.125	62.409	0.002	0.15949	69.39	PPB
Replicates			6902.381	0.287207	2633.680	0.092257	2500.313	0.098994
LEAD	206		1257.044	62.321	0.001	0.15311	69.91	PPB
Replicates			2158.566	0.276682	870.871	0.093317	741.694	0.089319
LEAD	207		2269.606	59.399	0.001	0.14912	67.02	PPB
Replicates			3825.372	0.264473	1537.560	0.088629	1445.886	0.094249
LEAD	208		3467.115	62.360	0.001	0.14291	70.91	PPB
Replicates			5963.562	0.259690	2195.972	0.078100	2241.810	0.090937
BISMUTH	209	Y	2448021.937	7.720	2448021.937	0		PPB
Replicates			2315019.225		2664366.523		2364680.062	
QC Calculated Values				99.765				
KRYPTON	83		62.222	5.576	16.111	0		MG/L
Replicates			65.000		58.334		63.334	

Sample ID: **6A14005-CRL9** Client ID: 6A14005-CRL9 Date/Time: 01/14/16 17:50:12

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	375184.782	12.314	375184.782	0		PPB
Replicates			326857.564		418912.712		379784.069	
QC Calculated Values				93.769				
BERYLLIUM	9		440.010	15.289	0.001	1.04080	4.15	PPB
Replicates			365.007	0.993338	495.012	1.051324	460.011	1.077737
QC Calculated Values			104.080					
SCANDIUM	45	Y	2043596.961	12.692	2043596.961	0		PPB
Replicates			1771062.312		2287404.281		2072324.290	
QC Calculated Values				97.835				
VANADIUM	51		92332.565	11.193	0.044	5.31627	2.54	PPB
Replicates			80763.149	5.360125	100649.076	5.164619	95585.472	5.424057
QC Calculated Values			106.325					
CHROMIUM	52		42222.812	9.453	0.016	2.12981	4.56	PPB
Replicates			37843.137	2.218365	45655.651	2.025952	43169.647	2.145115
QC Calculated Values			106.491					
MANGANESE	55		31114.157	13.089	0.015	1.29874	1.55	PPB
Replicates			26647.958	1.283360	34622.332	1.291328	32072.182	1.321541
QC Calculated Values			129.874					
COBALT	59		19570.488	13.878	0.010	1.04739	1.38	PPB
Replicates			16802.438	1.038583	22231.351	1.064087	19677.675	1.039491
QC Calculated Values			104.739					

Sample ID: **6A14005-CRL9** Client ID: 6A14005-CRL9 Date/Time: 01/14/16 17:50:12

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
NICKEL	60		4765.037	13.005	0.002	1.16572	0.47	PPB
Replicates			4123.072	1.164150	5359.769	1.171822	4812.269	1.161180
QC Calculated Values			116.572					
COPPER	63		20250.341	12.955	0.010	2.27364	0.30	PPB
Replicates			17484.717	2.265685	22703.521	2.277958	20562.786	2.277291
QC Calculated Values			113.682					
COPPER	65		9764.060	10.716	0.005	2.20572	2.74	PPB
Replicates			8592.579	2.236086	10605.621	2.136061	10093.981	2.245012
QC Calculated Values			110.286					
ZINC	66		6435.416	9.534	0.003	2.67083	4.12	PPB
Replicates			5740.536	2.745569	6902.381	2.544620	6663.330	2.722302
QC Calculated Values			133.542					
ARSENIC	75		2066.681	12.531	0.001	0.97072	0.60	PPB
Replicates			1788.243	0.969254	2300.348	0.965780	2111.450	0.977141
QC Calculated Values			97.072					
SELENIUM	82		1179.514	9.822	0.001	4.71920	3.16	PPB
Replicates			1053.389	4.857429	1281.193	4.560847	1203.961	4.739323
QC Calculated Values			94.384					
SILVER	107		14651.495	6.405	0.004	1.04167	4.07	PPB
Replicates			13689.920	1.051257	15564.882	0.995355	14699.685	1.078404
QC Calculated Values			104.167					
SILVER	109		13867.081	10.122	0.003	1.03733	6.23	PPB
Replicates			12285.320	0.991437	14963.965	1.009267	14351.958	1.111273
QC Calculated Values			103.733					
CADMIUM	111		2917.138	12.219	0.001	1.00900	2.97	PPB
Replicates			2603.784	0.975879	3304.914	1.034400	2842.717	1.016716
QC Calculated Values			100.900					
INDIUM	113		168105.819	9.781	-0.001	0		PPB
Replicates			154319.102		186302.752		163695.602	
INDIUM	115	Y	3899861.816	9.526	3899861.816	0		PPB
Replicates			3604766.823		4317048.868		3777769.756	
QC Calculated Values				95.826				
ANTIMONY	121		18112.265	6.366	0.004	2.06070	6.46	PPB
Replicates			16818.298	2.046814	19030.591	1.935145	18487.908	2.200141
QC Calculated Values			103.035					
BARIUM	135		26745.324	8.258	0.006	10.07159	3.60	PPB
Replicates			24621.941	9.936786	29030.410	9.796210	26583.621	10.481779
QC Calculated Values			100.716					
BARIUM	137		46105.906	7.712	0.010	10.24281	3.85	PPB
Replicates			42654.108	10.151866	49756.813	9.901825	45906.797	10.674732
QC Calculated Values			102.428					

Sample ID: **6A14005-CRL9** Client ID: 6A14005-CRL9 Date/Time: 01/14/16 17:50:12

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4646842.321	9.968	4646842.321	0		PPB
Replicates			4329984.628		5178447.474		4432094.860	
QC Calculated Values				97.674				
THALLIUM	205		26205.291	8.544	0.011	1.05240	6.92	PPB
Replicates			23632.057	1.003670	27709.170	1.017440	27274.645	1.136093
QC Calculated Values			105.240					
LEAD	206		8720.477	6.059	0.004	1.08354	4.64	PPB
Replicates			8140.812	1.069399	9175.040	1.041812	8845.577	1.139414
QC Calculated Values			108.354					
LEAD	207		15871.650	6.121	0.007	1.06474	4.44	PPB
Replicates			14818.041	1.051031	16732.061	1.025855	16064.849	1.117337
QC Calculated Values			106.474					
LEAD	208		25476.363	7.757	0.010	1.08055	2.14	PPB
Replicates			23687.517	1.063504	27597.916	1.071241	25143.655	1.106897
QC Calculated Values			108.055					
BISMUTH	209	Y	2428129.781	8.052	2428129.781	0		PPB
Replicates			2292953.538		2652316.467		2339119.337	
QC Calculated Values				98.954				
KRYPTON	83		43.333	11.538	-2.778	0		MG/L
Replicates			38.333		43.333		48.333	

Sample ID: **6A14005-CCVA** Client ID: 6A14005-CCVA Date/Time: 01/14/16 17:51:55

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	361324.146	11.068	361324.146	0		PPB
Replicates			317169.642		395114.554		371688.243	
QC Calculated Values				90.304				
BERYLLIUM	9		125264.352	10.618	0.347	309.64742	0.73	PPB
Replicates			110813.937	311.943012	136993.646	309.563571	127985.473	307.435680
QC Calculated Values			103.216					
SCANDIUM	45	Y	2026724.725	13.369	2026724.725	0		PPB
Replicates			1727725.347		2256028.591		2096420.237	
QC Calculated Values				97.027				
VANADIUM	51		4965056.597	12.536	2.450	299.34734	1.15	PPB
Replicates			4265566.722	301.449194	5457774.562	295.377099	5171828.508	301.215716
QC Calculated Values			99.782					
CHROMIUM	52		4449426.202	13.161	2.191	299.47636	2.09	PPB
Replicates			3843037.998	303.292239	5011702.911	302.901028	4493537.695	292.235811
QC Calculated Values			99.825					

Sample ID: **6A14005-CCVA** Client ID: 6A14005-CCVA Date/Time: 01/14/16 17:51:55

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
MANGANESE	55		6862022.927	13.051	3.387	300.65406	1.77	PPB
Replicates			5922681.884	304.252699	7706196.772	303.169820	6957190.125	294.539676
QC Calculated Values			100.218					
COBALT	59		5603951.034	13.033	2.766	304.30771	0.92	PPB
Replicates			4815411.869	306.621429	6257164.013	305.124214	5739277.221	301.177481
QC Calculated Values			101.436					
NICKEL	60		1229156.776	12.935	0.607	307.35718	0.77	PPB
Replicates			1051068.137	308.188443	1356819.507	304.675416	1279582.684	309.207674
QC Calculated Values			102.452					
COPPER	63		2634387.860	13.136	1.300	301.02945	1.09	PPB
Replicates			2263261.161	303.280802	2948221.533	302.552258	2691680.885	297.255293
QC Calculated Values			100.343					
COPPER	65		1337377.242	11.796	0.661	307.31109	2.39	PPB
Replicates			1171302.300	315.204088	1485245.157	306.090805	1355584.270	300.638369
QC Calculated Values			102.437					
ZINC	66		677599.538	11.129	0.335	300.81523	3.08	PPB
Replicates			598822.062	311.132025	749124.070	298.071639	684852.483	293.242033
QC Calculated Values			100.272					
ARSENIC	75		709233.175	10.949	0.351	301.51155	2.77	PPB
Replicates			625396.301	311.143603	778701.961	296.697475	723601.261	296.693584
QC Calculated Values			100.504					
SELENIUM	82		69748.687	10.165	0.034	295.10190	3.80	PPB
Replicates			62259.880	308.034507	76358.198	289.304933	70627.982	287.966268
QC Calculated Values			98.367					
SILVER	107		4043596.898	10.576	1.056	307.01786	4.67	PPB
Replicates			3568019.947	292.349800	4396523.294	307.679740	4166247.453	321.024025
QC Calculated Values			102.339					
SILVER	109		3807312.103	9.385	0.995	304.99734	4.61	PPB
Replicates			3400909.910	293.773885	4072104.060	300.433772	3948922.338	320.784370
QC Calculated Values			101.666					
CADMIUM	111		862370.708	9.959	0.225	304.90647	2.16	PPB
Replicates			779557.975	297.449110	951018.763	309.929942	856535.387	307.340355
QC Calculated Values			101.635					
INDIUM	113		1007682.850	8.185	0.220	0		PPB
Replicates			929053.778		1093541.948		1000452.822	
INDIUM	115	Y	3824548.728	8.010	3824548.728	0		PPB
Replicates			3547595.864		4153594.127		3772456.192	
QC Calculated Values				93.975				
ANTIMONY	121		2642411.998	8.913	0.552	294.67934	2.37	PPB
Replicates			2406415.325	292.765381	2877462.610	288.838784	2643358.060	302.433860
QC Calculated Values			98.226					

Sample ID: **6A14005-CCVA** Client ID: 6A14005-CCVA Date/Time: 01/14/16 17:51:55

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	135		805299.695	7.736	0.168	294.49086	3.16	PPB
Replicates			741281.294	295.496051	865716.853	284.735256	808900.938	303.241284
QC Calculated Values			98.164					
BARIUM	137		1391550.306	8.948	0.291	299.84563	2.39	PPB
Replicates			1266597.804	297.746208	1515638.687	293.968131	1392414.428	307.822559
QC Calculated Values			99.949					
TERBIUM	159	Y	4790143.725	9.967	4790143.725	0		PPB
Replicates			4387449.261		5317590.469		4665391.446	
QC Calculated Values				100.687				
THALLIUM	205		7159833.025	9.443	3.068	300.04382	4.26	PPB
Replicates			6468094.584	286.639734	7819164.536	301.370044	7192239.956	312.121671
QC Calculated Values			100.015					
LEAD	206		2294270.653	8.285	0.983	297.74476	2.77	PPB
Replicates			2112072.322	289.753178	2491344.451	297.257476	2279395.187	306.223618
QC Calculated Values			99.248					
LEAD	207		4235692.893	7.922	1.816	296.89847	2.37	PPB
Replicates			3921460.991	290.531746	4589119.832	295.702240	4196497.856	304.461420
QC Calculated Values			98.966					
LEAD	208		6651108.620	6.946	2.852	295.66021	2.30	PPB
Replicates			6217174.536	291.978652	7136747.519	291.499441	6599403.805	303.502542
QC Calculated Values			98.553					
BISMUTH	209	Y	2332929.121	7.669	2332929.121	0		PPB
Replicates			2207142.532		2537762.687		2253882.144	
QC Calculated Values				95.074				
KRYPTON	83		77.778	6.888	31.667	0		MG/L
Replicates			80.000		81.667		71.667	

Sample ID: **6A14005-CCBA** Client ID: 6A14005-CCBA Date/Time: 01/14/16 17:53:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	371857.754	14.046	371857.754	0		PPB
Replicates			312272.413		409725.234		393575.616	
QC Calculated Values				92.937				
BERYLLIUM	9		18.889	28.364	0.000	0.04197	28.91	PPB
Replicates			16.667	0.043934	15.000	0.028968	25.000	0.052995
SCANDIUM	45	Y	2063173.575	13.848	2063173.575	0		PPB
Replicates			1771590.614		2342621.128		2075308.984	
QC Calculated Values				98.772				
VANADIUM	51		4518.818	7.457	0.000	0.06022	85.60	PPB
Replicates			4804.651	0.119686	4604.550	0.028475	4147.252	0.032486
CHROMIUM	52		11575.587	2.172	0.001	0.07462	144.59	PPB
Replicates			11625.087	0.194930	11798.623	-0.013549	11303.051	0.042477

Sample ID: **6A14005-CCBA** Client ID: 6A14005-CCBA Date/Time: 01/14/16 17:53:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
MANGANESE	55		4118.913	12.686	0.001	0.12766	30.12	PPB
Replicates			4459.327	0.171146	4380.126	0.113679	3517.285	0.098150
COBALT	59		928.933	20.149	0.000	0.04581	37.53	PPB
Replicates			1140.065	0.065648	863.371	0.035396	783.364	0.036377
NICKEL	60		382.415	17.574	0.000	0.08115	37.03	PPB
Replicates			458.344	0.115801	358.340	0.062224	330.561	0.065425
COPPER	63		900.041	18.522	0.000	0.08346	38.74	PPB
Replicates			1077.836	0.120749	875.038	0.066368	747.250	0.063251
COPPER	65		427.787	10.924	0.000	0.07821	26.44	PPB
Replicates			463.900	0.101968	444.454	0.068430	375.007	0.064233
ZINC	66		916.709	7.943	0.000	0.23585	11.92	PPB
Replicates			855.592	0.268140	997.272	0.216726	897.262	0.222693
ARSENIC	75		-136.643	35.178	0.000	0.04412	46.21	PPB
Replicates			-110.633	0.047969	-107.185	0.062314	-192.111	0.022086
SELENIUM	82		72.778	7.970	0.000	0.07565	73.29	PPB
Replicates			76.667	0.139646	75.556	0.045350	66.111	0.041958
SILVER	107		1227.853	8.242	0.000	0.03865	25.77	PPB
Replicates			1291.750	0.050113	1280.638	0.032110	1111.173	0.033727
SILVER	109		1146.363	18.129	0.000	0.03737	56.97	PPB
Replicates			1369.538	0.061949	1111.173	0.024579	958.379	0.025586
CADMIUM	111		140.028	17.553	0.000	0.04694	23.81	PPB
Replicates			166.292	0.059842	136.213	0.040202	117.580	0.040782
INDIUM	113		164816.295	9.556	-0.002	0		PPB
Replicates			152406.775		182534.203		159507.906	
INDIUM	115	Y	3920277.587	10.260	3920277.587	0		PPB
Replicates			3647350.619		4382201.893		3731280.247	
QC Calculated Values				96.327				
ANTIMONY	121		1143.123	22.650	0.000	0.10459	34.84	PPB
Replicates			1429.269	0.146650	1075.058	0.084151	925.043	0.082954
BARIUM	135		214.447	12.826	0.000	0.07173	20.57	PPB
Replicates			245.003	0.088548	206.669	0.061005	191.669	0.065624
BARIUM	137		375.007	18.287	0.000	0.07456	25.21	PPB
Replicates			446.677	0.096212	368.340	0.064917	310.005	0.062537
TERBIUM	159	Y	4695875.533	8.986	4695875.533	0		PPB
Replicates			4402674.933		5179528.005		4505423.661	
QC Calculated Values				98.705				
THALLIUM	205		1940.472	21.494	0.001	0.07469	29.45	PPB
Replicates			2408.623	0.100092	1804.329	0.062381	1608.463	0.061611
LEAD	206		590.296	23.437	0.000	0.06907	33.02	PPB
Replicates			750.028	0.095101	508.346	0.052614	512.513	0.059487
LEAD	207		1058.363	24.910	0.000	0.06662	34.61	PPB
Replicates			1362.547	0.093111	916.688	0.051007	895.854	0.055754

Sample ID: **6A14005-CCBA** Client ID: 6A14005-CCBA Date/Time: 01/14/16 17:53:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	208		1658.418	24.123	0.001	0.06443	34.13	PPB
Replicates			2112.631	0.089820	1504.235	0.051692	1358.388	0.051771
BISMUTH	209	Y	2425991.026	8.139	2425991.026	0		PPB
Replicates			2254038.638		2641622.694		2382311.746	
QC Calculated Values				98.867				
KRYPTON	83		45.556	14.786	-0.556	0		MG/L
Replicates			46.667		38.333		51.667	

Sample ID: **6011202-BLK1** Client ID: PBSUC Date/Time: 01/14/16 17:58:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	446788.984	12.834	446788.984	0		PPB
Replicates			380611.313		481644.649		478110.990	
QC Calculated Values				111.664				
BERYLLIUM	9		11.667	14.286	0.000	0.02015	32.86	PPB
Replicates			13.333	0.027559	10.000	0.014818	11.667	0.018068
SCANDIUM	45	Y	2051316.775	14.532	2051316.775	0		PPB
Replicates			1713380.215		2276921.452		2163648.659	
QC Calculated Values				98.205				
VANADIUM	51		9576.979	8.041	0.003	0.36268	11.16	PPB
Replicates			8696.611	0.408488	10125.467	0.331670	9908.858	0.347884
CHROMIUM	52		30980.447	9.860	0.010	1.37239	7.70	PPB
Replicates			27481.042	1.490146	33113.066	1.285668	32347.233	1.341347
MANGANESE	55		13838.746	4.043	0.006	0.55399	14.24	PPB
Replicates			13459.051	0.645011	14481.311	0.512281	13575.876	0.504690
COBALT	59		528.903	14.688	0.000	0.02409	37.78	PPB
Replicates			618.352	0.034554	478.345	0.017963	490.012	0.019766
NICKEL	60		1254.709	8.508	0.001	0.29756	12.10	PPB
Replicates			1188.960	0.336285	1377.873	0.291308	1197.294	0.265076
COPPER	63		2142.823	8.444	0.001	0.22370	10.20	PPB
Replicates			1955.747	0.244169	2155.788	0.199099	2316.935	0.227820
COPPER	65		1087.097	14.362	0.000	0.22728	8.17	PPB
Replicates			952.823	0.238786	1258.413	0.237194	1050.055	0.205871
ZINC	66		5705.349	12.791	0.003	2.33704	2.24	PPB
Replicates			4867.851	2.386113	6204.702	2.281890	6043.492	2.343104
ARSENIC	75		-215.136	8.544	0.000	0.00936	240.65	PPB
Replicates			-235.835	-0.016645	-208.857	0.022810	-200.717	0.021916
SELENIUM	82		68.148	14.033	0.000	0.06013	126.36	PPB
Replicates			75.000	0.143902	72.222	0.040788	57.222	-0.004313
SILVER	107		852.814	4.732	0.000	0.00790	55.56	PPB
Replicates			811.144	0.010593	855.592	0.002835	891.706	0.010268
SILVER	109		771.326	4.560	0.000	0.00496	142.08	PPB
Replicates			802.810	0.013061	777.808	0.000232	733.360	0.001588

Sample ID: **6011202-BLK1** Client ID: PBSUC Date/Time: 01/14/16 17:58:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
CADMIUM	111		69.623	27.346	0.000	0.02164	39.82	PPB
Replicates			90.916	0.031236	54.238	0.014562	63.716	0.019126
INDIUM	113		177372.910	8.918	-0.000	0		PPB
Replicates			160248.777		191440.091		180429.860	
INDIUM	115	Y	4097013.153	9.154	4097013.153	0		PPB
Replicates			3716988.021		4466852.725		4107198.715	
QC Calculated Values				100.670				
ANTIMONY	121		483.345	3.448	0.000	0.02389	14.57	PPB
Replicates			483.345	0.027879	500.013	0.021509	466.678	0.022268
BARIUM	135		862.818	36.809	0.000	0.28645	38.15	PPB
Replicates			641.687	0.228400	720.026	0.218433	1226.742	0.412525
BARIUM	137		1597.363	40.109	0.000	0.31450	41.73	PPB
Replicates			1211.740	0.255692	1243.411	0.222957	2336.940	0.464864
TERBIUM	159	Y	5122358.063	7.928	5122358.063	0		PPB
Replicates			4731893.251		5542488.377		5092692.560	
QC Calculated Values				107.670				
THALLIUM	205		1283.419	25.403	0.001	0.04994	34.51	PPB
Replicates			1570.957	0.068260	1350.091	0.047531	929.210	0.034039
LEAD	206		1326.477	5.914	0.001	0.16688	9.94	PPB
Replicates			1275.081	0.176989	1287.583	0.147749	1416.767	0.175916
LEAD	207		2341.806	1.849	0.001	0.15887	9.50	PPB
Replicates			2316.802	0.173480	2316.803	0.143328	2391.815	0.159802
LEAD	208		3701.801	2.781	0.002	0.15756	9.59	PPB
Replicates			3717.079	0.174935	3796.269	0.147499	3592.057	0.150258
BISMUTH	209	Y	2339380.161	9.180	2339380.161	0		PPB
Replicates			2113924.133		2541518.549		2362697.802	
QC Calculated Values				95.337				
KRYPTON	83		66.667	23.849	20.556	0		MG/L
Replicates			81.667		50.000		68.334	

Sample ID: **6011202-BS1** Client ID: MLCSUC Date/Time: 01/14/16 18:00:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	350059.703	11.747	350059.703	0		PPB
Replicates			303160.018		379943.283		367075.807	
QC Calculated Values				87.489				
BERYLLIUM	9		361477.586	10.273	1.034	923.12971	1.68	PPB
Replicates			319464.311	940.862971	389918.103	916.284910	375050.343	912.241243
SCANDIUM	45	Y	2115269.559	12.613	2115269.559	0		PPB
Replicates			1812094.261		2314193.733		2219520.683	
QC Calculated Values				101.266				

Sample ID: **6011202-BS1** Client ID: MLCSUC Date/Time: 01/14/16 18:00:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
VANADIUM	51		16135991.192	13.208	7.622	931.35193	1.14	PPB
Replicates			13688349.55	922.757623	17581804.98	928.071968	17137819.03	943.226204
CHROMIUM	52		14026539.369	12.668	6.626	905.51007	0.93	PPB
Replicates			11985100.00	903.209971	15225215.40	898.441468	14869302.69	914.878777
MANGANESE	55		104700654.52	12.859	49.486	4392.82872	0.68	PPB
Replicates			89280778.99	4373.583030	114122428.7	4377.553746	110698755.8	4427.349391
COBALT	59		10209300.188	12.275	4.828	531.14464	1.01	PPB
Replicates			8768858.444	532.364561	11049365.40	525.272215	10809676.71	535.797150
NICKEL	60		9238304.563	11.461	4.372	2214.91258	1.29	PPB
Replicates			8027500.081	2244.286411	9990636.546	2187.117500	9696777.062	2213.333816
COPPER	63		4013843.082	11.125	1.900	439.92243	1.77	PPB
Replicates			3500905.377	447.294766	4315902.250	431.782874	4224721.621	440.689635
COPPER	65		1999174.669	10.805	0.947	440.15085	2.01	PPB
Replicates			1751559.428	449.417297	2148954.712	431.750112	2097009.868	439.285156
ZINC	66		3916311.921	9.985	1.856	1666.69070	2.86	PPB
Replicates			3468164.783	1718.817825	4188342.847	1625.365419	4092428.132	1655.888861
ARSENIC	75		2087633.318	8.994	0.990	850.98141	4.07	PPB
Replicates			1871017.400	887.330030	2203920.794	818.443294	2187961.760	847.170896
SELENIUM	82		212743.008	9.860	0.101	862.29377	3.10	PPB
Replicates			188591.730	890.061688	226420.734	836.734280	223216.562	860.085343
SILVER	107		4195984.091	10.407	1.236	359.44625	3.20	PPB
Replicates			3692574.818	353.372891	4472706.427	352.234212	4422671.028	372.731642
SILVER	109		3954520.078	9.810	1.166	357.27270	2.94	PPB
Replicates			3507424.204	353.862493	4202330.128	348.893520	4153805.901	369.062102
CADMIUM	111		2850503.119	8.832	0.841	1138.15258	2.35	PPB
Replicates			2562086.307	1141.760138	3026215.906	1109.783942	2963207.143	1162.913664
INDIUM	113		2922228.538	9.111	0.818	0		PPB
Replicates			2625833.583		3141101.967		2999750.065	
INDIUM	115	Y	3392615.167	9.741	3392615.167	0		PPB
Replicates			3037521.059		3691151.504		3449172.940	
QC Calculated Values				83.362				
ANTIMONY	121		699254.414	8.653	0.161	86.18139	1.73	PPB
Replicates			630178.900	86.767469	742862.403	84.482668	724721.938	87.294042
BARIUM	135		5760852.220	9.574	1.330	2325.44118	0.75	PPB
Replicates			5142067.681	2320.360510	6200663.118	2311.136442	5939825.862	2344.826579
BARIUM	137		10203935.046	9.430	2.355	2429.21178	0.26	PPB
Replicates			9142283.880	2432.824473	11018533.35	2421.863352	10450987.90	2432.947512
TERBIUM	159	Y	4332980.648	9.622	4332980.648	0		PPB
Replicates			3875915.800		4692502.965		4430523.178	
QC Calculated Values				91.077				
THALLIUM	205		56591437.896	10.227	29.592	2894.47578	2.85	PPB
Replicates			50381934.18	2811.758610	61835152.11	2976.937085	57557227.39	2894.731643

Sample ID: **6011202-BS1** Client ID: MLCSUC Date/Time: 01/14/16 18:00:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LEAD	206		17197919.981	10.466	8.993	2723.11331	3.48	PPB
Replicates			15404520.55	2661.413187	19004365.92	2832.360607	17184873.46	2675.566122
LEAD	207		30830599.096	10.016	16.124	2636.68948	2.80	PPB
Replicates			27625769.48	2577.536538	33786535.45	2719.350231	31079492.35	2613.181667
LEAD	208		47633099.354	9.351	24.919	2582.99890	1.97	PPB
Replicates			42851470.08	2534.373143	51664965.20	2635.918687	48382862.77	2578.704876
BISMUTH	209	Y	1909737.701	7.478	1909737.701	0		PPB
Replicates			1752642.096		2031712.494		1944858.514	
QC Calculated Values				77.828				
KRYPTON	83		505.568	7.983	459.457	0		MG/L
Replicates			488.345		551.682		476.678	

Sample ID: **6011202-BS2** Client ID: MLCSUC 10X Date/Time: 01/14/16 18:01:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
LITHIUM	6	Y	352794.833	14.735	352794.833	0		PPB
Replicates			292799.734		381063.037		384521.727	
QC Calculated Values				88.173				
BERYLLIUM	9		47982.291	13.262	0.136	121.64145	2.52	PPB
Replicates			40682.586	124.051642	52358.379	122.674379	50905.908	118.198322
SCANDIUM	45	Y	2091541.223	12.409	2091541.223	0		PPB
Replicates			1817928.929		2334249.424		2122445.317	
QC Calculated Values				100.130				
VANADIUM	51		1912630.211	10.041	0.915	111.74663	2.54	PPB
Replicates			1702974.782	114.246874	2080048.734	108.667085	1954867.118	112.325925
CHROMIUM	52		1703331.957	12.028	0.810	110.63271	0.84	PPB
Replicates			1481475.316	110.671843	1885407.822	109.686476	1743112.733	111.539807
MANGANESE	55		12235274.245	11.806	5.853	519.55685	2.53	PPB
Replicates			10602076.86	517.649210	13345175.86	507.455154	12758570.00	533.566197
COBALT	59		1242741.872	11.985	0.594	65.39011	2.20	PPB
Replicates			1075420.764	65.075605	1360838.498	64.132108	1291966.355	66.962608
NICKEL	60		1191348.366	11.397	0.570	288.80348	1.53	PPB
Replicates			1042165.870	290.414844	1307713.570	283.807392	1224165.658	292.188209
COPPER	63		567370.621	11.321	0.271	62.84518	1.20	PPB
Replicates			498252.737	63.437909	625233.914	61.996637	578625.211	63.100990
COPPER	65		277640.561	9.925	0.133	61.86252	4.77	PPB
Replicates			245826.513	62.855015	294012.322	58.545879	293082.849	64.186670
ZINC	66		615706.964	9.295	0.295	264.94888	3.54	PPB
Replicates			551587.482	272.349276	661604.669	254.402519	633928.742	268.094849
ARSENIC	75		315612.563	9.223	0.151	130.13293	3.83	PPB
Replicates			282647.662	133.701763	337773.286	124.443225	326416.742	132.253803
SELENIUM	82		32860.089	8.564	0.016	134.62973	4.59	PPB
Replicates			29646.659	139.274387	34885.187	127.614677	34048.422	137.000124

Sample ID: **6011202-BS2** Client ID: MLCSUC 10X Date/Time: 01/14/16 18:01:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	107		546394.370	9.040	0.140	40.65827	4.14	PPB
Replicates			489561.067	39.496735	578951.648	39.889646	570670.395	42.588420
SILVER	109		523279.787	7.817	0.134	41.07778	3.88	PPB
Replicates			476097.711	40.495264	548725.166	39.857656	545016.485	42.880433
CADMIUM	111		396434.235	8.298	0.102	137.52241	0.81	PPB
Replicates			362591.148	136.382696	428290.196	137.574550	398421.362	138.609982
INDIUM	113		554756.950	7.745	0.099	0		PPB
Replicates			509595.072		595130.625		559545.154	
INDIUM	115	Y	3901202.884	7.889	3901202.884	0		PPB
Replicates			3598761.722		4214006.959		3890839.971	
QC Calculated Values				95.859				
ANTIMONY	121		93232.935	7.762	0.019	10.20882	1.74	PPB
Replicates			85409.017	10.071503	99686.068	10.144951	94603.720	10.409997
BARIUM	135		667193.027	7.026	0.137	240.08149	2.34	PPB
Replicates			614754.306	238.131382	705041.160	235.692636	681783.614	246.420448
BARIUM	137		1150283.603	7.982	0.237	243.96464	2.13	PPB
Replicates			1049579.390	239.755926	1229332.250	242.348395	1171939.171	249.789588
TERBIUM	159	Y	4861900.843	7.382	4861900.843	0		PPB
Replicates			4515050.215		5231737.325		4838914.990	
QC Calculated Values				102.195				
THALLIUM	205		5727282.291	7.340	2.467	241.29811	4.97	PPB
Replicates			5242000.308	236.865995	5960584.210	232.154146	5979262.355	254.874200
LEAD	206		1835003.585	7.254	0.790	239.19523	2.26	PPB
Replicates			1691263.279	236.578782	1954012.290	235.599263	1859735.188	245.407637
LEAD	207		3319143.338	7.364	1.429	233.63938	2.30	PPB
Replicates			3054847.447	230.770375	3537066.355	230.311604	3365516.210	239.836148
LEAD	208		5107678.510	7.175	2.199	227.92372	2.19	PPB
Replicates			4713183.270	225.692027	5437570.786	224.434099	5172281.472	233.645026
BISMUTH	209	Y	2323522.079	7.538	2323522.079	0		PPB
Replicates			2164628.265		2511315.161		2294622.810	
QC Calculated Values				94.691				
KRYPTON	83		115.556	15.422	69.445	0		MG/L
Replicates			95.000		125.001		126.667	

Sample ID: **6011202-BSD1** Client ID: MLCSDUC Date/Time: 01/14/16 18:03:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	351470.226	11.091	351470.226	0		PPB
Replicates			308379.356		384282.801		361748.521	
QC Calculated Values				87.842				
BERYLLIUM	9		356148.484	11.361	1.013	904.53190	0.84	PPB
Replicates			310579.222	899.213821	387858.622	901.152682	370007.608	913.229201

Sample ID: **6011202-BSD1** Client ID: MLCSDUC Date/Time: 01/14/16 18:03:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
SCANDIUM	45	Y	2169281.582	14.474	2169281.582	0		PPB
Replicates			1807897.412		2375161.577		2324785.759	
QC Calculated Values				103.852				
VANADIUM	51		15985129.098	13.046	7.378	901.52060	1.61	PPB
Replicates			13580076.77	917.582707	17291546.79	889.312259	17083763.72	897.666825
CHROMIUM	52		13789952.174	12.918	6.362	869.52893	1.82	PPB
Replicates			11733776.22	886.309560	14868899.23	854.858889	14767181.06	867.418329
MANGANESE	55		103495194.66	13.262	47.775	4240.98915	2.18	PPB
Replicates			87671552.64	4304.721124	110636188.7	4134.889781	112177842.6	4283.356553
COBALT	59		10046100.684	12.047	4.643	510.79999	2.70	PPB
Replicates			8650086.988	526.372882	10799930.60	500.235373	10688284.45	505.791712
NICKEL	60		9015922.152	11.204	4.171	2112.98234	3.67	PPB
Replicates			7859241.603	2202.345983	9724815.492	2074.276825	9463709.359	2062.324224
COPPER	63		3982980.474	11.391	1.842	426.49810	3.43	PPB
Replicates			3462336.689	443.393754	4293645.561	418.529349	4192959.172	417.571197
COPPER	65		1973642.482	11.904	0.912	424.21020	3.12	PPB
Replicates			1706550.947	438.884969	2148311.251	420.541077	2066065.247	413.204566
ZINC	66		3876077.281	11.346	1.793	1610.01984	3.46	PPB
Replicates			3368721.049	1673.404920	4148691.595	1568.645820	4110819.198	1588.008792
ARSENIC	75		2097123.143	10.539	0.971	834.31192	4.42	PPB
Replicates			1841929.923	875.564464	2223857.422	804.650028	2225582.085	822.721269
SELENIUM	82		218257.561	9.557	0.101	864.99489	5.49	PPB
Replicates			194174.844	918.546019	229924.329	827.868901	230673.511	848.569737
SILVER	107		4146314.906	10.188	1.230	357.49417	4.38	PPB
Replicates			3659081.863	351.741882	4409801.195	345.535441	4370061.662	375.205194
SILVER	109		3939571.807	9.892	1.168	358.11318	3.75	PPB
Replicates			3492046.144	353.895101	4204059.767	347.284196	4122609.509	373.160257
CADMIUM	111		2817988.449	9.475	0.836	1131.53643	2.54	PPB
Replicates			2517882.259	1127.106260	3029221.533	1105.307886	2906861.554	1162.195136
INDIUM	113		2905685.062	9.076	0.818	0		PPB
Replicates			2619635.561		3139159.303		2958260.322	
INDIUM	115	Y	3373127.761	10.172	3373127.761	0		PPB
Replicates			3023924.650		3709780.054		3385678.580	
QC Calculated Values				82.883				
ANTIMONY	121		688232.922	9.357	0.155	82.99812	2.69	PPB
Replicates			615979.704	80.796037	739577.660	82.937569	709141.403	85.260765
BARIUM	135		5678401.725	9.931	1.283	2243.48729	2.52	PPB
Replicates			5067614.996	2178.520365	6179254.460	2271.089900	5788335.719	2280.851590
BARIUM	137		10050014.723	8.904	2.271	2342.83341	1.74	PPB
Replicates			9073082.644	2300.124239	10830031.47	2347.287804	10246930.04	2381.088181
TERBIUM	159	Y	4421960.784	7.812	4421960.784	0		PPB
Replicates			4068495.992		4758759.195		4438627.165	
QC Calculated Values				92.948				

Sample ID: **6011202-BSD1** Client ID: MLCSDUC Date/Time: 01/14/16 18:03:28

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		54693874.813	7.548	28.619	2799.28866	2.21	PPB
Replicates			50118918.62(	2779.794455	58141496.54(	2749.554581	55821209.27	2868.516942
LEAD	206		16677383.180	8.679	8.720	2640.52929	1.25	PPB
Replicates			15176215.24	2605.765795	18064442.00	2644.609909	16791492.28	2671.212166
LEAD	207		30156572.937	8.824	15.767	2578.32703	1.35	PPB
Replicates			27396046.86(	2540.306595	32705720.48	2585.753538	30367951.46	2608.920965
LEAD	208		46913991.326	8.783	24.531	2542.80207	2.17	PPB
Replicates			42425825.69	2493.692606	50526065.15	2532.172371	47790083.13	2602.541232
BISMUTH	209	Y	1911769.534	7.980	1911769.534	0		PPB
Replicates			1763540.493		2068332.145		1903435.965	
QC Calculated Values				77.911				
KRYPTON	83		470.567	8.836	424.455	0		MG/L
Replicates			423.342		501.679		486.679	

Sample ID: **6011202-BSD2** Client ID: MLCSDUC 10X Date/Time: 01/14/16 18:05:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	354484.395	14.058	354484.395	0		PPB
Replicates			297280.739		388489.067		377683.380	
QC Calculated Values				88.595				
BERYLLIUM	9		47447.983	12.894	0.134	119.69207	3.06	PPB
Replicates			40746.177	122.372707	52733.676	121.191899	48864.094	115.511617
SCANDIUM	45	Y	2086067.952	13.239	2086067.952	0		PPB
Replicates			1788514.775		2334176.626		2135512.454	
QC Calculated Values				99.868				
VANADIUM	51		1879705.990	12.483	0.900	109.96588	2.01	PPB
Replicates			1614784.280	110.104424	2061384.102	107.693462	1962949.587	112.099754
CHROMIUM	52		1647338.586	13.042	0.785	107.24168	0.22	PPB
Replicates			1415236.620	107.441950	1839260.676	106.987975	1687518.463	107.295108
MANGANESE	55		11927574.357	10.940	5.729	508.59054	2.65	PPB
Replicates			10467010.09	519.459594	12978493.43	493.525877	12337219.54	512.786138
COBALT	59		1207557.875	11.821	0.580	63.76304	1.50	PPB
Replicates			1054033.334	64.830352	1336272.998	62.976284	1232367.293	63.482481
NICKEL	60		1167295.715	10.887	0.561	284.12570	2.88	PPB
Replicates			1036362.229	293.547342	1290138.009	280.001572	1175386.907	278.828175
COPPER	63		554309.288	11.047	0.266	61.62691	2.39	PPB
Replicates			486491.577	62.958999	605554.313	60.046497	570881.974	61.875228
COPPER	65		271706.414	10.989	0.130	60.66812	2.65	PPB
Replicates			238220.723	61.911745	295562.587	58.856519	281335.932	61.236111
ZINC	66		600320.008	9.533	0.289	259.19224	3.89	PPB
Replicates			538540.500	270.279148	651524.032	250.531572	610895.492	256.766001
ARSENIC	75		309309.843	10.430	0.149	127.84505	2.97	PPB
Replicates			274661.426	132.062003	338484.505	124.708926	314783.598	126.764225

Sample ID: **6011202-BSD2** Client ID: MLCSDUC 10X Date/Time: 01/14/16 18:05:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		32445.968	8.758	0.016	133.37432	4.72	PPB
Replicates			29285.040	139.839090	34788.741	127.265202	33264.122	133.018671
SILVER	107		548181.897	9.289	0.138	39.98645	5.23	PPB
Replicates			491018.886	38.730308	588696.605	38.828149	564830.199	42.400882
SILVER	109		517433.245	8.310	0.130	39.82220	5.80	PPB
Replicates			468227.767	38.936098	547763.419	38.086933	536308.550	42.443569
CADMIUM	111		386279.414	7.302	0.097	131.43030	2.53	PPB
Replicates			359348.114	132.149999	415606.627	127.801209	383883.501	134.339688
INDIUM	113		544742.876	9.094	0.093	0		PPB
Replicates			498729.826		597180.933		538317.869	
INDIUM	115	Y	3983587.494	9.393	3983587.494	0		PPB
Replicates			3680808.130		4401921.225		3868033.129	
QC Calculated Values				97.883				
ANTIMONY	121		90348.033	7.356	0.018	9.80456	4.07	PPB
Replicates			83883.688	9.681426	97161.402	9.482071	89999.010	10.250195
BARIUM	135		651064.959	8.948	0.133	231.91063	4.14	PPB
Replicates			593709.789	225.115713	710188.610	227.707935	649296.478	242.908256
BARIUM	137		1117908.558	9.001	0.228	234.79046	3.65	PPB
Replicates			1022252.580	228.575142	1222846.253	231.214726	1108626.841	244.581501
TERBIUM	159	Y	4914093.792	9.549	4914093.792	0		PPB
Replicates			4612592.745		5454719.746		4674968.885	
QC Calculated Values				103.292				
THALLIUM	205		5696694.206	6.982	2.385	233.28454	1.07	PPB
Replicates			5311676.084	231.592428	6106021.898	232.105482	5672384.635	236.155715
LEAD	206		1832238.512	8.257	0.767	232.13576	1.46	PPB
Replicates			1691037.828	228.246853	1991928.046	234.401105	1813749.661	233.759317
LEAD	207		3298519.802	8.482	1.380	225.66278	1.65	PPB
Replicates			3037719.953	221.424202	3594034.792	228.399014	3263804.660	227.165122
LEAD	208		5107262.878	7.851	2.137	221.55038	1.37	PPB
Replicates			4721869.860	218.173852	5522138.739	222.449037	5077780.036	224.028261
BISMUTH	209	Y	2388623.681	7.048	2388623.681	0		PPB
Replicates			2243344.865		2573130.384		2349395.792	
QC Calculated Values				97.344				
KRYPTON	83		107.778	12.595	61.667	0		MG/L
Replicates			101.667		123.334		98.334	

Sample ID: **1601024-01** Client ID: BORING10 Date/Time: 01/14/16 18:06:54

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	389113.700	16.037	389113.700	0		PPB
Replicates			317718.320		433228.721		416394.058	
QC Calculated Values				97.250				

Sample ID: **1601024-01** Client ID: BORING10 Date/Time: 01/14/16 18:06:54

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BERYLLIUM	9		1528.451	11.586	0.004	3.52210	4.99	PPB
Replicates			1326.755	3.724711	1658.471	3.414251	1600.128	3.427337
SCANDIUM	45	Y	1984206.433	14.519	1984206.433	0		PPB
Replicates			1657571.239		2202049.301		2092998.758	
QC Calculated Values				94.992				
VANADIUM	51		2753183.731	13.155	1.388	169.56873	1.61	PPB
Replicates			2338783.059	172.187296	3009115.428	166.754593	2911652.706	169.764297
CHROMIUM	52		1964526.130	12.377	0.987	134.91748	2.36	PPB
Replicates			1689041.323	138.560332	2149162.858	132.683277	2055374.209	133.508822
MANGANESE	55		9941328.962	11.790	5.024	445.99160	3.10	PPB
Replicates			8595001.831	460.245771	10734249.907	432.670769	10494735.147	445.058258
COBALT	59		371522.008	11.766	0.188	20.65446	3.06	PPB
Replicates			322244.755	21.382581	405626.443	20.260022	386694.827	20.320782
NICKEL	60		257497.805	11.167	0.130	65.96339	3.66	PPB
Replicates			224656.609	68.648666	278148.605	63.977593	269688.202	65.263907
COPPER	63		583141.851	11.451	0.295	68.24619	3.34	PPB
Replicates			507048.159	70.805566	631962.750	66.427316	610414.643	67.505683
COPPER	65		286411.158	11.415	0.145	67.31941	3.47	PPB
Replicates			249678.536	70.018227	312318.829	65.927350	297236.108	66.012663
ZINC	66		495184.945	9.391	0.251	225.19873	5.59	PPB
Replicates			442381.657	239.539689	530034.157	216.021374	513139.022	220.035141
ARSENIC	75		123559.864	9.596	0.063	53.88954	5.35	PPB
Replicates			109997.773	57.124633	131964.116	51.596885	128717.704	52.947093
SELENIUM	82		772.252	11.108	0.000	3.11086	4.00	PPB
Replicates			675.023	3.253116	837.257	3.021987	804.477	3.057473
SILVER	107		10649.229	10.693	0.003	0.82146	3.08	PPB
Replicates			9396.079	0.795424	11620.637	0.822922	10930.971	0.846023
SILVER	109		8315.507	7.901	0.002	0.66782	2.36	PPB
Replicates			7588.990	0.669161	8867.819	0.651427	8489.713	0.682858
CADMIUM	111		6178.297	7.078	0.002	2.36481	1.94	PPB
Replicates			5739.651	2.410747	6614.184	2.318999	6181.055	2.364678
INDIUM	113		150954.033	9.388	-0.001	0		PPB
Replicates			136377.814		164682.441		151801.844	
INDIUM	115	Y	3537821.100	9.008	3537821.100	0		PPB
Replicates			3220309.097		3857679.037		3535475.165	
QC Calculated Values				86.930				
ANTIMONY	121		1100.061	9.256	0.000	0.09907	2.78	PPB
Replicates			983.382	0.097252	1170.902	0.097706	1145.899	0.102238
BARIUM	135		240858.651	9.056	0.052	90.17935	0.78	PPB
Replicates			217992.075	89.980336	261433.274	90.961297	243150.603	89.596428
BARIUM	137		418623.128	9.430	0.090	92.40612	0.88	PPB
Replicates			376115.932	91.552305	454131.142	93.178982	425622.309	92.487058

Sample ID: **1601024-01** Client ID: BORING10 Date/Time: 01/14/16 18:06:54

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4669779.059	8.571	4669779.059	0		PPB
Replicates			4236862.454		5026387.215		4746087.507	
QC Calculated Values				98.157				
THALLIUM	205		12546.775	6.201	0.006	0.61291	7.58	PPB
Replicates			11769.422	0.620527	12545.364	0.563088	13325.539	0.655119
LEAD	206		689723.214	8.167	0.346	104.75330	0.47	PPB
Replicates			634701.937	104.328307	747278.054	104.644260	687189.652	105.287325
LEAD	207		1240379.126	7.866	0.622	101.75228	0.72	PPB
Replicates			1143118.399	101.472627	1338251.872	101.203670	1239767.106	102.580544
LEAD	208		1901276.472	8.804	0.953	98.81556	1.17	PPB
Replicates			1733365.771	97.533652	2068132.524	99.138865	1902331.120	99.774153
BISMUTH	209	Y	1993501.230	8.065	1993501.230	0		PPB
Replicates			1842054.191		2162228.687		1976220.813	
QC Calculated Values				81.242				
KRYPTON	83		255.003	13.772	208.892	0		MG/L
Replicates			218.336		258.337		288.337	

Sample ID: **6A14005-SRD4** Client ID: BORING10L Date/Time: 01/14/16 18:08:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	375805.733	14.978	375805.733	0		PPB
Replicates			310831.894		409726.970		406858.337	
QC Calculated Values				93.924				
BERYLLIUM	9		363.896	10.306	0.001	0.86553	5.75	PPB
Replicates			321.672	0.920266	393.341	0.853422	376.674	0.822889
SCANDIUM	45	Y	1995594.946	14.125	1995594.946	0		PPB
Replicates			1687769.318		2241068.720		2057946.798	
QC Calculated Values				95.537				
VANADIUM	51		632796.674	13.489	0.316	38.55780	1.90	PPB
Replicates			536020.000	38.593062	697352.873	37.808513	665017.149	39.271816
CHROMIUM	52		447659.573	12.685	0.220	30.00128	1.69	PPB
Replicates			386379.656	30.585301	498499.595	29.698213	458099.468	29.720341
MANGANESE	55		2164377.540	12.280	1.086	96.40344	1.96	PPB
Replicates			1873606.554	98.491816	2394795.661	94.806729	2224730.405	95.911765
COBALT	59		82072.841	11.580	0.041	4.53144	3.54	PPB
Replicates			71175.734	4.634337	88649.536	4.346685	86393.251	4.613305
NICKEL	60		57415.091	12.358	0.029	14.58651	2.37	PPB
Replicates			49382.744	14.807992	62830.096	14.188192	60032.433	14.763336
COPPER	63		135221.092	12.470	0.068	15.69430	2.04	PPB
Replicates			116277.673	15.931217	148587.437	15.331025	140798.166	15.820665
COPPER	65		67410.950	11.816	0.034	15.72296	2.62	PPB
Replicates			58462.059	16.086144	73723.538	15.276140	70047.252	15.806600

Sample ID: **6A14005-SRD4** Client ID: BORING10L Date/Time: 01/14/16 18:08:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
ZINC	66		132837.140	11.703	0.067	59.77176	2.90	PPB
Replicates			116381.650	61.767667	147276.592	58.858736	134853.179	58.688891
ARSENIC	75		31006.274	11.209	0.016	13.49146	3.09	PPB
Replicates			27138.176	13.918382	33866.140	13.086839	32014.505	13.469156
SELENIUM	82		245.744	2.697	0.000	0.83533	15.86	PPB
Replicates			238.336	0.977449	247.781	0.715255	251.114	0.813272
SILVER	107		2508.650	9.771	0.000	0.14216	1.17	PPB
Replicates			2283.594	0.144067	2769.828	0.140980	2472.528	0.141438
SILVER	109		2128.005	8.079	0.000	0.12147	3.97	PPB
Replicates			1980.752	0.126931	2316.935	0.117796	2086.329	0.119697
CADMIUM	111		1331.854	15.751	0.000	0.47834	5.63	PPB
Replicates			1167.679	0.466945	1568.196	0.509085	1259.686	0.459002
INDIUM	113		158536.148	10.365	-0.001	0		PPB
Replicates			142085.629		174950.445		158572.370	
INDIUM	115	Y	3741917.247	10.508	3741917.247	0		PPB
Replicates			3371475.044		4154468.244		3699808.454	
QC Calculated Values				91.945				
ANTIMONY	121		337.506	10.106	0.000	0.01255	51.10	PPB
Replicates			366.673	0.019881	345.839	0.009805	300.005	0.007968
BARIUM	135		50309.831	9.876	0.011	18.97889	1.15	PPB
Replicates			45123.243	18.752257	55027.653	18.995649	50778.597	19.188757
BARIUM	137		87380.544	10.287	0.019	19.43481	1.79	PPB
Replicates			77809.879	19.069426	95645.223	19.470962	88686.529	19.764032
TERBIUM	159	Y	4632402.490	9.258	4632402.490	0		PPB
Replicates			4206656.686		5064304.050		4626246.735	
QC Calculated Values				97.371				
THALLIUM	205		3781.272	5.623	0.002	0.16222	5.94	PPB
Replicates			3746.535	0.173357	4009.137	0.156679	3588.144	0.156629
LEAD	206		143166.112	9.079	0.064	19.47628	2.44	PPB
Replicates			129799.463	19.062254	155762.049	19.371445	143936.822	19.995129
LEAD	207		259397.170	8.400	0.117	19.06427	2.36	PPB
Replicates			236827.498	18.782614	280312.051	18.826211	261051.961	19.583992
LEAD	208		405060.905	8.888	0.182	18.86522	2.89	PPB
Replicates			366963.000	18.446794	438515.027	18.667325	409704.687	19.481556
BISMUTH	209	Y	2224808.992	8.565	2224808.992	0		PPB
Replicates			2061237.740		2434059.174		2179130.064	
QC Calculated Values				90.668				
KRYPTON	83		92.778	27.499	46.667	0		MG/L
Replicates			73.334		83.334		121.667	

Sample ID: **1601024-02** Client ID: BORING11B-1 Date/Time: 01/14/16 18:10:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)

Sample ID: **1601024-02** Client ID: BORING11B-1 Date/Time: 01/14/16 18:10:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	424271.802	15.085	424271.802	0		PPB
Replicates			350758.897		467611.582		454444.926	
QC Calculated Values				106.037				
BERYLLIUM	9		567.239	20.594	0.001	1.18319	7.22	PPB
Replicates			433.343	1.099344	620.019	1.180133	648.354	1.270103
SCANDIUM	45	Y	1920691.719	15.415	1920691.719	0		PPB
Replicates			1592238.670		2167070.138		2002766.350	
QC Calculated Values				91.951				
VANADIUM	51		1063800.661	13.997	0.553	67.57063	2.40	PPB
Replicates			893445.000	68.349231	1169095.180	65.704772	1128861.803	68.657897
CHROMIUM	52		978860.170	12.803	0.506	69.15136	3.06	PPB
Replicates			836339.409	71.084099	1071819.874	66.893042	1028421.226	69.476926
MANGANESE	55		1342219.445	13.153	0.700	62.13675	2.49	PPB
Replicates			1143353.257	63.691457	1480445.746	60.591292	1402859.333	62.127487
COBALT	59		45204.843	13.500	0.024	2.58971	2.68	PPB
Replicates			38226.256	2.636071	49540.744	2.509865	47847.529	2.623183
NICKEL	60		30074.443	13.945	0.016	7.93162	3.20	PPB
Replicates			25242.931	8.016537	32773.060	7.646439	32207.338	8.131889
COPPER	63		59694.427	12.938	0.031	7.19609	3.29	PPB
Replicates			50837.227	7.372317	65021.818	6.926925	63224.235	7.289037
COPPER	65		30248.926	12.406	0.016	7.32754	3.26	PPB
Replicates			26072.834	7.594073	33338.815	7.133440	31335.129	7.255096
ZINC	66		119318.496	11.570	0.062	55.87226	4.49	PPB
Replicates			103482.677	58.207404	128816.036	53.223119	125656.774	56.186249
ARSENIC	75		22234.527	11.191	0.012	10.09595	4.65	PPB
Replicates			19393.558	10.567799	24026.607	9.628668	23283.417	10.091385
SELENIUM	82		192.780	9.501	0.000	0.63708	16.89	PPB
Replicates			183.335	0.754428	213.891	0.613774	181.113	0.543034
SILVER	107		2221.544	7.005	0.000	0.11988	7.41	PPB
Replicates			2041.875	0.124476	2308.600	0.109644	2314.157	0.125513
SILVER	109		1346.388	10.160	0.000	0.05702	10.51	PPB
Replicates			1188.960	0.055718	1413.989	0.051787	1436.214	0.063563
CADMIUM	111		2142.564	19.776	0.001	0.76689	11.54	PPB
Replicates			1656.125	0.667784	2431.300	0.794918	2340.268	0.837962
INDIUM	113		159188.613	11.408	-0.001	0		PPB
Replicates			141595.416		177867.906		158102.518	
INDIUM	115	Y	3750030.465	10.449	3750030.465	0		PPB
Replicates			3347661.044		4130426.333		3772004.019	
QC Calculated Values				92.144				
ANTIMONY	121		872.261	10.750	0.000	0.06834	2.91	PPB
Replicates			779.197	0.070590	966.713	0.067590	870.871	0.066836
BARIUM	135		107721.438	9.985	0.022	38.44552	2.34	PPB
Replicates			96250.994	39.345851	117580.552	37.546132	109332.766	38.444568

Sample ID: **1601024-02** Client ID: BORING11B-1 Date/Time: 01/14/16 18:10:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		189984.608	11.196	0.039	39.94657	1.19	PPB
Replicates			167968.929	40.491833	210420.796	39.624683	191564.099	39.723185
TERBIUM	159	Y	4908838.479	12.258	4908838.479	0		PPB
Replicates			4277627.963		5475986.572		4972900.903	
QC Calculated Values				103.181				
THALLIUM	205		3318.662	39.188	0.001	0.14569	40.22	PPB
Replicates			2416.959	0.116305	2729.539	0.107599	4809.490	0.213160
LEAD	206		134894.282	11.021	0.062	18.82165	1.27	PPB
Replicates			120045.413	18.558236	149780.032	19.024922	134857.402	18.881795
LEAD	207		240215.646	10.933	0.111	18.10141	1.70	PPB
Replicates			212743.914	17.760970	265074.193	18.182552	242828.830	18.360710
LEAD	208		372139.721	9.724	0.172	17.79065	2.55	PPB
Replicates			332015.779	17.568795	402300.355	17.490711	382103.030	18.312439
BISMUTH	209	Y	2167772.801	9.808	2167772.801	0		PPB
Replicates			1958099.828		2383198.547		2162020.028	
QC Calculated Values				88.344				
KRYPTON	83		117.223	4.104	71.112	0		MG/L
Replicates			120.001		120.001		111.667	

Sample ID: **1601024-03** Client ID: BORING11A Date/Time: 01/14/16 18:12:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	422161.638	11.998	422161.638	0		PPB
Replicates			367169.142		466899.438		432416.335	
QC Calculated Values				105.509				
BERYLLIUM	9		472.789	7.925	0.001	0.99962	4.27	PPB
Replicates			431.676	1.045991	505.013	0.962013	481.678	0.990845
SCANDIUM	45	Y	1887800.708	13.762	1887800.708	0		PPB
Replicates			1593355.724		2084736.251		1985310.149	
QC Calculated Values				90.377				
VANADIUM	51		1263904.973	14.957	0.667	81.49852	2.24	PPB
Replicates			1046065.571	80.004706	1384958.540	80.959635	1360690.808	83.531224
CHROMIUM	52		1058247.463	14.137	0.555	75.88123	1.14	PPB
Replicates			886631.707	75.347511	1161139.965	75.418103	1126970.717	76.878070
MANGANESE	55		6640131.239	12.868	3.520	312.46192	1.17	PPB
Replicates			5662363.556	315.412124	7243082.764	308.364278	7014947.399	313.609363
COBALT	59		94764.852	13.237	0.050	5.52028	0.62	PPB
Replicates			80489.295	5.552311	104026.610	5.484497	99778.651	5.524025
NICKEL	60		67046.561	12.119	0.036	18.00707	1.90	PPB
Replicates			57741.223	18.343979	72735.788	17.660515	70662.671	18.016708
COPPER	63		850121.123	12.149	0.451	104.41653	2.26	PPB
Replicates			731105.469	106.218168	916253.934	101.740211	903003.965	105.291203

Sample ID: **1601024-03** Client ID: BORING11A Date/Time: 01/14/16 18:12:02

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	65		417234.887	11.947	0.221	102.93213	2.12	PPB
Replicates			360056.284	105.051116	451556.157	100.693197	440092.219	103.052079
ZINC	66		686008.072	11.606	0.364	326.91951	2.50	PPB
Replicates			594573.930	334.989506	740048.126	318.666152	723402.161	327.102866
ARSENIC	75		36251.847	12.315	0.019	16.62708	2.09	PPB
Replicates			31109.269	16.878675	39132.093	16.231110	38514.180	16.771442
SELENIUM	82		308.523	6.270	0.000	1.17805	9.84	PPB
Replicates			287.226	1.311510	325.005	1.103060	313.338	1.119577
SILVER	107		6594.780	9.823	0.002	0.46904	2.99	PPB
Replicates			5862.829	0.466537	7094.182	0.456425	6827.330	0.484172
SILVER	109		5832.271	11.688	0.001	0.43290	4.64	PPB
Replicates			5051.275	0.418630	6307.544	0.424231	6137.994	0.455854
CADMIUM	111		4481.547	8.188	0.001	1.65371	7.26	PPB
Replicates			4081.832	1.681783	4559.616	1.522153	4803.192	1.757205
INDIUM	113		157876.773	10.135	-0.001	0		PPB
Replicates			141641.900		173631.928		158356.489	
INDIUM	115	Y	3675891.985	10.459	3675891.985	0		PPB
Replicates			3281729.257		4049829.344		3696117.353	
QC Calculated Values				90.322				
ANTIMONY	121		5226.375	10.335	0.001	0.54125	1.97	PPB
Replicates			4676.093	0.529090	5755.823	0.549081	5247.210	0.545565
BARIUM	135		580250.054	10.341	0.118	206.56495	1.98	PPB
Replicates			518432.392	201.861808	638264.116	209.164211	584053.654	208.668842
BARIUM	137		998448.407	9.475	0.203	209.71409	1.43	PPB
Replicates			899296.739	206.492589	1087731.553	210.207279	1008316.930	212.442410
TERBIUM	159	Y	4907938.036	8.613	4907938.036	0		PPB
Replicates			4491720.556		5336892.692		4895200.861	
QC Calculated Values				103.163				
THALLIUM	205		4035.539	7.161	0.002	0.17749	1.42	PPB
Replicates			3775.713	0.180246	4346.778	0.176916	3984.127	0.175303
LEAD	206		4795770.135	8.347	2.209	668.78363	0.65	PPB
Replicates			4385719.378	664.060618	5185545.667	669.715886	4816045.360	672.574383
LEAD	207		8747771.152	8.293	4.029	658.81764	0.36	PPB
Replicates			8027417.125	656.400632	9478208.370	661.071843	8737687.960	658.980444
LEAD	208		13703066.646	7.614	6.313	654.42261	0.39	PPB
Replicates			12682125.01	657.353253	14767570.91	652.897551	13659504.00	653.017026
BISMUTH	209	Y	2170859.104	7.941	2170859.104	0		PPB
Replicates			1999805.210		2344544.471		2168227.632	
QC Calculated Values				88.469				
KRYPTON	83		82.778	5.812	36.667	0		MG/L
Replicates			80.000		88.334		80.000	

Sample ID: **1601024-04** Client ID: BORING21 Date/Time: 01/14/16 18:13:44

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	417340.930	15.733	417340.930	0		PPB
Replicates			343746.591		469926.394		438349.804	
QC Calculated Values				104.304				
BERYLLIUM	9		303.338	13.130	0.001	0.64846	7.46	PPB
Replicates			268.337	0.693260	346.673	0.654950	295.004	0.597157
SCANDIUM	45	Y	1852414.205	15.363	1852414.205	0		PPB
Replicates			1533291.478		2079895.222		1944055.915	
QC Calculated Values				88.682				
VANADIUM	51		1384288.721	14.431	0.746	91.18870	1.24	PPB
Replicates			1157437.658	92.022060	1533945.011	89.900867	1461483.495	91.643171
CHROMIUM	52		695615.385	13.565	0.371	50.72176	1.99	PPB
Replicates			589162.311	51.812166	768963.968	49.825849	728719.875	50.527265
MANGANESE	55		3957591.996	12.589	2.143	190.19765	3.46	PPB
Replicates			3384646.620	195.901638	4288937.041	182.999330	4199192.327	191.691972
COBALT	59		70046.722	13.167	0.038	4.16511	2.39	PPB
Replicates			59672.511	4.276397	77319.430	4.084614	73148.225	4.134333
NICKEL	60		36103.778	13.243	0.020	9.88206	2.32	PPB
Replicates			30699.830	10.128348	39784.539	9.675416	37826.964	9.842403
COPPER	63		58468.834	13.653	0.032	7.30426	3.05	PPB
Replicates			49974.562	7.526253	65815.876	7.306492	59616.065	7.080046
COPPER	65		29642.441	12.064	0.016	7.44810	3.59	PPB
Replicates			25616.101	7.748283	32449.786	7.234508	30861.437	7.361502
ZINC	66		73174.316	12.900	0.039	35.41068	2.70	PPB
Replicates			62489.081	36.438679	80380.088	34.544786	76653.779	35.248585
ARSENIC	75		70281.066	12.783	0.038	32.79851	3.23	PPB
Replicates			59957.754	33.703159	76326.843	31.635280	74558.602	33.057092
SELENIUM	82		313.153	6.213	0.000	1.23446	16.12	PPB
Replicates			303.338	1.461807	335.561	1.149580	300.560	1.092000
SILVER	107		1511.227	14.902	0.000	0.07222	13.57	PPB
Replicates			1272.303	0.060924	1719.592	0.078496	1541.786	0.077233
SILVER	109		1096.357	8.646	0.000	0.04284	5.74	PPB
Replicates			1036.165	0.044547	1205.628	0.043947	1047.277	0.040017
CADMIUM	111		1539.422	11.193	0.000	0.59374	9.48	PPB
Replicates			1347.726	0.559269	1589.123	0.563284	1681.418	0.658655
INDIUM	113		148990.082	10.404	-0.001	0		PPB
Replicates			135465.539		165906.594		145598.113	
INDIUM	115	Y	3501010.334	8.044	3501010.334	0		PPB
Replicates			3251092.092		3806179.066		3445759.845	
QC Calculated Values				86.025				
ANTIMONY	121		826.423	5.667	0.000	0.06752	11.17	PPB
Replicates			775.030	0.068132	837.535	0.059691	866.704	0.074741
BARIUM	135		70894.426	8.632	0.015	26.36834	1.79	PPB
Replicates			65129.739	26.087498	77316.071	26.105387	70237.469	26.912141

Sample ID: **1601024-04** Client ID: BORING21 Date/Time: 01/14/16 18:13:44

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		122411.116	9.285	0.026	26.83823	1.20	PPB
Replicates			112295.325	26.525354	134709.597	26.822963	120228.425	27.166379
TERBIUM	159	Y	4702211.377	9.018	4702211.377	0		PPB
Replicates			4365101.904		5178300.129		4563232.099	
QC Calculated Values				98.838				
THALLIUM	205		6490.999	5.603	0.003	0.30678	3.89	PPB
Replicates			6293.647	0.319551	6910.720	0.295932	6268.631	0.304859
LEAD	206		150953.361	9.897	0.074	22.34072	0.99	PPB
Replicates			138768.703	22.108383	167622.353	22.547787	146469.027	22.365977
LEAD	207		272615.411	9.645	0.133	21.79165	0.71	PPB
Replicates			251407.863	21.630500	302036.345	21.940823	264402.027	21.803627
LEAD	208		425340.355	8.500	0.208	21.56483	0.45	PPB
Replicates			396713.393	21.634519	465966.550	21.454988	413341.121	21.604994
BISMUTH	209	Y	2044361.177	8.961	2044361.177	0		PPB
Replicates			1900123.120		2250491.435		1982468.975	
QC Calculated Values				83.314				
KRYPTON	83		82.223	12.218	36.111	0		MG/L
Replicates			71.667		83.334		91.667	

Sample ID: **6A14005-CCVB** Client ID: 6A14005-CCVB Date/Time: 01/14/16 18:15:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	348255.735	9.139	348255.735	0		PPB
Replicates			312219.120		372514.829		360033.255	
QC Calculated Values				87.038				
BERYLLIUM	9		120352.770	9.772	0.345	308.47082	1.76	PPB
Replicates			107750.734	308.129420	131037.959	314.069729	122269.618	303.213323
QC Calculated Values			102.824					
SCANDIUM	45	Y	1787045.061	9.523	1787045.061	0		PPB
Replicates			1598296.434		1928777.615		1834061.135	
QC Calculated Values				85.553				
VANADIUM	51		4401807.804	9.913	2.461	300.68240	1.44	PPB
Replicates			3902667.663	298.134986	4710958.828	298.219435	4591796.921	305.692784
QC Calculated Values			100.227					
CHROMIUM	52		3927003.978	10.324	2.192	299.50839	1.81	PPB
Replicates			3506724.069	299.151861	4315720.996	305.097367	3958566.869	294.275956
QC Calculated Values			99.836					
MANGANESE	55		6027885.891	9.057	3.374	299.47954	0.83	PPB
Replicates			5436105.204	301.870498	6511907.746	299.650960	6135644.722	296.917154
QC Calculated Values			99.827					

Sample ID: **6A14005-CCVB** Client ID: 6A14005-CCVB Date/Time: 01/14/16 18:15:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COBALT	59		4857726.896	8.139	2.721	299.33761	1.74	PPB
Replicates			4434117.984	305.206410	5216984.206	297.564359	4922078.497	295.242053
QC Calculated Values			99.779					
NICKEL	60		1071622.393	8.935	0.600	303.90544	0.66	PPB
Replicates			966088.226	306.210093	1152931.730	302.817685	1095847.224	302.688551
QC Calculated Values			101.302					
COPPER	63		2329533.444	8.352	1.304	302.03276	1.24	PPB
Replicates			2111743.367	305.892626	2486201.389	298.427357	2390655.577	301.778304
QC Calculated Values			100.678					
COPPER	65		1145528.842	9.638	0.641	298.01067	0.57	PPB
Replicates			1021185.852	297.059430	1232051.728	296.990572	1183348.946	299.981994
QC Calculated Values			99.337					
ZINC	66		602250.793	8.738	0.337	302.68828	1.05	PPB
Replicates			545133.735	306.170689	648772.975	301.943156	612845.668	299.951009
QC Calculated Values			100.896					
ARSENIC	75		618508.863	8.476	0.346	297.71296	1.09	PPB
Replicates			560083.920	301.217862	661442.263	294.779945	634000.407	297.141074
QC Calculated Values			99.238					
SELENIUM	82		61318.595	7.042	0.034	293.78127	2.61	PPB
Replicates			56561.733	302.499895	64991.623	288.017214	62402.431	290.826702
QC Calculated Values			97.927					
SILVER	107		3583453.283	6.383	1.054	306.37963	6.08	PPB
Replicates			3324340.645	290.638924	3757300.661	301.533982	3668718.543	326.965981
QC Calculated Values			102.127					
SILVER	109		3359377.616	6.259	0.988	302.72627	5.23	PPB
Replicates			3130425.869	288.531510	3543872.408	299.833476	3403834.571	319.813826
QC Calculated Values			100.909					
CADMIUM	111		774506.609	6.381	0.228	308.12815	3.45	PPB
Replicates			729456.956	296.986777	827370.823	309.205319	766692.050	318.192347
QC Calculated Values			102.709					
INDIUM	113		901135.690	4.808	0.221	0		PPB
Replicates			865791.231		949473.797		888142.041	
INDIUM	115	Y	3402795.247	5.656	3402795.247	0		PPB
Replicates			3324764.951		3622027.508		3261593.283	
QC Calculated Values				83.612				
ANTIMONY	121		2409589.210	5.716	0.561	299.38231	0.54	PPB
Replicates			2302409.549	301.181601	2564941.734	298.889560	2361416.347	298.075771
QC Calculated Values			99.794					
BARIUM	135		721924.095	5.021	0.168	293.97688	1.12	PPB
Replicates			694482.696	297.663636	763011.249	291.328312	708278.341	292.938707
QC Calculated Values			97.992					

Sample ID: **6A14005-CCVB** Client ID: 6A14005-CCVB Date/Time: 01/14/16 18:15:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		1239759.527	5.657	0.289	297.63430	0.32	PPB
Replicates			1180078.054	298.272959	1317007.348	296.537042	1222193.179	298.092911
QC Calculated Values			99.211					
TERBIUM	159	Y	4296635.495	5.979	4296635.495	0		PPB
Replicates			4080529.185		4580667.949		4228709.353	
QC Calculated Values				90.313				
THALLIUM	205		6598981.508	4.686	3.021	295.50879	3.53	PPB
Replicates			6261060.992	289.714648	6867785.893	289.264063	6668097.638	307.547672
QC Calculated Values			98.503					
LEAD	206		2117994.638	5.187	0.969	293.45946	0.85	PPB
Replicates			2035935.715	291.639239	2242816.172	292.435993	2075232.028	296.303157
QC Calculated Values			97.820					
LEAD	207		3928943.882	4.930	1.798	294.01232	0.98	PPB
Replicates			3782285.386	292.592013	4148511.242	292.116210	3856035.018	297.328724
QC Calculated Values			98.004					
LEAD	208		6229427.566	3.676	2.852	295.62600	1.91	PPB
Replicates			6048536.642	296.599861	6486897.560	289.542708	6152848.497	300.735423
QC Calculated Values			98.542					
BISMUTH	209	Y	2185598.492	5.418	2185598.492	0		PPB
Replicates			2113819.803		2322270.125		2120705.549	
QC Calculated Values				89.070				
KRYPTON	83		102.778	9.775	56.667	0		MG/L
Replicates			93.334		101.667		113.334	

Sample ID: **6A14005-CCBB** Client ID: 6A14005-CCBB Date/Time: 01/14/16 18:17:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	379646.051	13.300	379646.051	0		PPB
Replicates			322786.823		419242.788		396908.543	
QC Calculated Values				94.884				
BERYLLIUM	9		31.111	45.562	0.000	0.07198	56.70	PPB
Replicates			41.667	0.111534	36.667	0.074369	15.000	0.030024
SCANDIUM	45	Y	1852691.673	12.576	1852691.673	0		PPB
Replicates			1608802.346		2072979.467		1876293.208	
QC Calculated Values				88.696				
VANADIUM	51		4390.236	4.015	0.001	0.08160	57.03	PPB
Replicates			4560.479	0.134672	4401.698	0.047758	4208.530	0.062375
CHROMIUM	52		10276.945	1.237	0.000	0.06463	157.08	PPB
Replicates			10350.354	0.177386	10350.354	-0.019496	10130.128	0.035994
MANGANESE	55		6056.003	5.431	0.003	0.24208	21.58	PPB
Replicates			6414.557	0.301641	5985.124	0.203998	5768.330	0.220608

Sample ID: **6A14005-CCBB** Client ID: 6A14005-CCBB Date/Time: 01/14/16 18:17:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
COBALT	59		1055.057	17.255	0.001	0.05882	31.16	PPB
Replicates			1243.411	0.079878	1041.721	0.050135	880.039	0.046450
NICKEL	60		460.196	13.257	0.000	0.11332	29.91	PPB
Replicates			530.570	0.151808	422.231	0.087919	427.787	0.100236
COPPER	63		925.043	7.894	0.000	0.09699	21.14	PPB
Replicates			977.826	0.120609	955.601	0.086616	841.702	0.083749
COPPER	65		461.122	17.219	0.000	0.09705	24.87	PPB
Replicates			486.123	0.120711	525.014	0.097974	372.229	0.072457
ZINC	66		1068.576	7.079	0.000	0.35924	25.26	PPB
Replicates			1127.841	0.464022	1094.504	0.308588	983.382	0.305106
ARSENIC	75		-14.926	149.172	0.000	0.09518	9.60	PPB
Replicates			-7.432	0.097661	-39.972	0.085061	2.626	0.102833
SELENIUM	82		72.222	8.669	0.000	0.10454	24.32	PPB
Replicates			68.334	0.132794	79.445	0.097286	68.889	0.083527
SILVER	107		1151.919	11.315	0.000	0.03970	28.26	PPB
Replicates			1194.516	0.050885	1255.634	0.039779	1005.606	0.028447
SILVER	109		1042.647	11.160	0.000	0.03569	45.00	PPB
Replicates			1172.291	0.054191	1008.384	0.025288	947.267	0.027598
CADMIUM	111		172.254	9.384	0.000	0.06269	12.77	PPB
Replicates			162.805	0.063956	163.038	0.054127	190.918	0.069991
INDIUM	113		154184.731	8.178	-0.001	0		PPB
Replicates			142457.531		167520.670		152575.993	
INDIUM	115	Y	3628243.522	8.210	3628243.522	0		PPB
Replicates			3347715.577		3940899.415		3596115.574	
QC Calculated Values				89.152				
ANTIMONY	121		1195.905	8.627	0.000	0.11716	19.14	PPB
Replicates			1275.081	0.142895	1233.409	0.106744	1079.225	0.101845
BARIUM	135		286.115	16.366	0.000	0.10504	28.89	PPB
Replicates			335.006	0.137163	241.670	0.076851	281.671	0.101095
BARIUM	137		522.792	12.398	0.000	0.11329	21.42	PPB
Replicates			581.684	0.141008	533.348	0.103016	453.344	0.095856
TERBIUM	159	Y	4478099.310	10.287	4478099.310	0		PPB
Replicates			4014714.990		4935966.370		4483616.569	
QC Calculated Values				94.128				
THALLIUM	205		2514.208	11.270	0.001	0.09977	14.96	PPB
Replicates			2696.197	0.116192	2658.687	0.096086	2187.739	0.087040
LEAD	206		976.437	6.463	0.000	0.11954	10.11	PPB
Replicates			1004.217	0.133423	1020.885	0.113826	904.208	0.111377
LEAD	207		1754.246	12.527	0.001	0.11590	16.94	PPB
Replicates			1916.759	0.137621	1841.752	0.110670	1504.226	0.099404
LEAD	208		2762.730	14.659	0.001	0.11400	18.29	PPB
Replicates			3021.097	0.135897	2971.098	0.111704	2295.995	0.094396

Sample ID: **6A14005-CCBB** Client ID: 6A14005-CCBB Date/Time: 01/14/16 18:17:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BISMUTH	209	Y	2371026.773	8.531	2371026.773	0		PPB
Replicates			2186380.964		2587214.865		2339484.491	
QC Calculated Values				96.627				
KRYPTON	83		72.778	18.511	26.667	0		MG/L
Replicates			58.334		85.000		75.000	

Sample ID: **1601024-05** Client ID: BORING24 Date/Time: 01/14/16 18:18:56

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	406776.931	10.906	406776.931	0		PPB
Replicates			357617.171		443828.707		418884.916	
QC Calculated Values				101.664				
BERYLLIUM	9		683.912	4.389	0.002	1.50508	7.09	PPB
Replicates			653.355	1.627485	713.359	1.431342	685.023	1.456400
SCANDIUM	45	Y	1851608.270	12.513	1851608.270	0		PPB
Replicates			1585165.056		2005641.849		1964017.905	
QC Calculated Values				88.644				
VANADIUM	51		1715449.520	13.684	0.924	112.87237	1.47	PPB
Replicates			1447600.816	111.369581	1885362.924	114.645597	1813384.822	112.601923
CHROMIUM	52		1034866.280	13.219	0.554	75.64622	1.99	PPB
Replicates			881591.198	75.305889	1144588.281	77.292110	1078419.361	74.340649
MANGANESE	55		1923044.998	11.841	1.039	92.20791	1.60	PPB
Replicates			1665944.092	93.241186	2099322.432	92.863838	2003868.468	90.518699
COBALT	59		85058.875	11.410	0.046	5.05415	1.74	PPB
Replicates			74069.973	5.135509	92457.116	5.066369	88649.536	4.960569
NICKEL	60		42300.219	11.301	0.023	11.57154	1.49	PPB
Replicates			36839.957	11.758791	45732.111	11.536526	44328.589	11.419308
COPPER	63		62348.139	11.167	0.034	7.78661	2.16	PPB
Replicates			54512.063	7.942062	67823.670	7.809521	64708.686	7.608239
COPPER	65		30746.696	11.654	0.017	7.70772	1.43	PPB
Replicates			26677.203	7.805326	33428.001	7.729859	32134.883	7.587961
ZINC	66		74160.223	10.482	0.040	35.87554	2.48	PPB
Replicates			65334.960	36.853306	79990.875	35.655548	77154.833	35.117775
ARSENIC	75		15413.358	11.887	0.008	7.25876	1.03	PPB
Replicates			13298.060	7.310251	16504.840	7.172882	16437.174	7.293141
SELENIUM	82		193.150	16.277	0.000	0.66145	12.77	PPB
Replicates			162.779	0.647892	191.113	0.584578	225.558	0.751882
SILVER	107		2166.903	10.370	0.000	0.12735	2.30	PPB
Replicates			1930.742	0.130731	2378.061	0.125586	2191.907	0.125734
SILVER	109		1240.819	16.925	0.000	0.05509	13.37	PPB
Replicates			1000.050	0.047109	1386.207	0.056518	1336.200	0.061634
CADMIUM	111		2580.775	16.319	0.001	0.99398	6.93	PPB
Replicates			2241.851	0.990622	3052.256	1.064473	2448.219	0.926851

Sample ID: **1601024-05** Client ID: BORING24 Date/Time: 01/14/16 18:18:56

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	113		147903.706	9.799	-0.001	0		PPB
Replicates			132851.655		161764.558		149094.907	
INDIUM	115	Y	3500160.785	11.792	3500160.785	0		PPB
Replicates			3057588.931		3874569.396		3568324.027	
QC Calculated Values				86.004				
ANTIMONY	121		980.604	6.192	0.000	0.08498	8.60	PPB
Replicates			916.709	0.088655	987.549	0.076565	1037.554	0.089712
BARIUM	135		80006.754	10.713	0.017	29.71185	1.52	PPB
Replicates			70922.276	29.218775	87950.067	30.108165	81147.919	29.808616
BARIUM	137		137360.414	8.608	0.029	30.12213	0.68	PPB
Replicates			124685.845	30.293148	148093.524	29.896934	139301.873	30.176318
TERBIUM	159	Y	4703881.290	9.237	4703881.290	0		PPB
Replicates			4244082.370		5107623.542		4759937.957	
QC Calculated Values				98.873				
THALLIUM	205		5348.725	27.689	0.003	0.24780	23.96	PPB
Replicates			3729.862	0.188447	5680.780	0.247747	6635.534	0.307217
LEAD	206		144258.392	9.301	0.070	21.18938	2.13	PPB
Replicates			129267.641	20.688015	155144.223	21.314623	148363.313	21.565512
LEAD	207		256879.584	9.545	0.125	20.37378	1.97	PPB
Replicates			231411.660	20.000218	280327.053	20.798349	258900.040	20.322775
LEAD	208		399409.313	9.703	0.194	20.07725	2.13	PPB
Replicates			359261.706	19.680579	436603.455	20.531959	402362.778	20.019209
BISMUTH	209	Y	2059194.175	7.638	2059194.175	0		PPB
Replicates			1891518.405		2203438.835		2082625.285	
QC Calculated Values				83.919				
KRYPTON	83		108.334	9.231	62.223	0		MG/L
Replicates			98.334		108.334		118.334	

Sample ID: **1601024-06** Client ID: BORING23 Date/Time: 01/14/16 18:20:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	402129.372	13.392	402129.372	0		PPB
Replicates			345517.755		452720.979		408149.382	
QC Calculated Values				100.503				
BERYLLIUM	9		585.017	9.799	0.001	1.30097	6.61	PPB
Replicates			541.681	1.396033	650.021	1.278241	563.349	1.228637
SCANDIUM	45	Y	1827155.032	13.078	1827155.032	0		PPB
Replicates			1559216.430		2018163.006		1904085.660	
QC Calculated Values				87.473				
VANADIUM	51		1646314.186	13.382	0.899	109.84868	0.33	PPB
Replicates			1399447.819	109.453118	1822956.090	110.154727	1716538.648	109.938203

Sample ID: **1601024-06** Client ID: BORING23 Date/Time: 01/14/16 18:20:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CHROMIUM	52		913998.280	12.934	0.495	67.67167	0.70	PPB
Replicates			779819.886	67.650420	1002812.539	67.207341	959362.416	68.157237
MANGANESE	55		1401446.901	13.807	0.766	67.98837	1.47	PPB
Replicates			1180490.209	67.155763	1540693.624	67.715819	1483156.869	69.093530
COBALT	59		74144.386	12.327	0.041	4.46226	0.82	PPB
Replicates			63853.213	4.500189	81315.942	4.427572	77264.004	4.459031
NICKEL	60		64686.743	12.826	0.035	17.92462	0.89	PPB
Replicates			55243.840	17.934510	70808.139	17.759689	68008.250	18.079655
COPPER	63		75120.129	12.532	0.041	9.50425	1.82	PPB
Replicates			64297.714	9.527674	81418.998	9.320666	79643.676	9.664414
COPPER	65		37044.233	12.803	0.020	9.40947	0.89	PPB
Replicates			31647.220	9.417648	40548.710	9.322337	38936.767	9.488411
ZINC	66		307618.836	10.768	0.169	151.37667	2.69	PPB
Replicates			269696.761	155.188247	330896.638	147.095755	322263.110	151.846022
ARSENIC	75		38136.027	11.365	0.021	18.06567	2.23	PPB
Replicates			33165.443	18.379172	41126.574	17.612378	40116.065	18.205451
SELENIUM	82		253.707	15.023	0.000	0.95507	2.77	PPB
Replicates			210.558	0.924643	282.782	0.968079	267.781	0.972499
SILVER	107		2959.700	10.480	0.001	0.18983	1.99	PPB
Replicates			2658.687	0.190497	3278.315	0.193219	2942.099	0.185765
SILVER	109		2041.876	7.919	0.000	0.12369	4.92	PPB
Replicates			1855.728	0.125930	2147.453	0.116794	2122.447	0.128339
CADMIUM	111		2164.250	12.146	0.001	0.82332	2.38	PPB
Replicates			1885.178	0.801519	2407.150	0.839377	2200.421	0.829051
INDIUM	113		149655.917	8.680	-0.001	0		PPB
Replicates			136859.325		162831.668		149276.756	
INDIUM	115	Y	3544749.019	9.879	3544749.019	0		PPB
Replicates			3176331.319		3873278.079		3584637.660	
QC Calculated Values				87.100				
ANTIMONY	121		831.979	7.159	0.000	0.06860	11.05	PPB
Replicates			766.696	0.069262	845.869	0.060704	883.372	0.075825
BARIUM	135		70627.859	9.687	0.015	26.39670	3.25	PPB
Replicates			63175.596	25.884578	76624.109	25.917162	72083.871	27.388356
BARIUM	137		121772.385	8.825	0.026	26.84893	1.95	PPB
Replicates			110754.955	26.761084	132225.099	26.374395	122337.102	27.411323
TERBIUM	159	Y	4679438.356	9.743	4679438.356	0		PPB
Replicates			4267313.798		5169213.841		4601787.429	
QC Calculated Values				98.360				
THALLIUM	205		5263.897	11.482	0.002	0.23989	6.47	PPB
Replicates			5022.094	0.244781	5951.771	0.252384	4817.827	0.222500
LEAD	206		133200.067	7.820	0.063	19.15001	0.73	PPB
Replicates			124195.635	19.073061	144608.914	19.310758	130795.651	19.066212

Sample ID: **1601024-06** Client ID: BORING23 Date/Time: 01/14/16 18:20:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	207		239718.797	7.289	0.114	18.61623	0.18	PPB
Replicates			224016.370	18.578679	258541.773	18.644678	236598.248	18.625332
LEAD	208		374026.384	8.789	0.177	18.39762	1.70	PPB
Replicates			343781.550	18.071334	409010.604	18.695484	369286.996	18.426046
BISMUTH	209	Y	2104876.118	7.121	2104876.118	0		PPB
Replicates			1971130.850		2266871.165		2076626.340	
QC Calculated Values				85.780				
KRYPTON	83		134.445	11.180	88.334	0		MG/L
Replicates			120.001		150.001		133.334	

Sample ID: **1601024-07** Client ID: BORING26 Date/Time: 01/14/16 18:22:21

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	400940.356	15.195	400940.356	0		PPB
Replicates			330635.430		438245.373		433940.264	
QC Calculated Values				100.206				
BERYLLIUM	9		825.034	10.453	0.002	1.84420	6.27	PPB
Replicates			730.027	1.967646	898.374	1.826560	846.703	1.738403
SCANDIUM	45	Y	1856184.286	14.687	1856184.286	0		PPB
Replicates			1545320.132		2054525.319		1968707.407	
QC Calculated Values				88.863				
VANADIUM	51		1788388.910	13.662	0.963	117.64536	1.89	PPB
Replicates			1506454.632	118.900050	1938553.204	115.076070	1920158.893	118.959964
CHROMIUM	52		998953.492	13.089	0.534	72.97708	1.83	PPB
Replicates			850480.682	74.514291	1096942.561	72.266990	1049437.235	72.149960
MANGANESE	55		1836397.409	11.054	0.993	88.11701	4.12	PPB
Replicates			1602281.741	91.989650	1963551.780	84.786838	1943358.705	87.574547
COBALT	59		238569.197	12.260	0.129	14.17412	3.25	PPB
Replicates			206192.407	14.674148	263082.353	14.082264	246432.832	13.765945
NICKEL	60		63299.745	11.937	0.034	17.31258	3.01	PPB
Replicates			54662.883	17.905462	68690.668	16.922956	66545.682	17.109328
COPPER	63		70381.036	10.562	0.038	8.79839	4.64	PPB
Replicates			62005.529	9.270098	76194.736	8.566602	72942.844	8.558461
COPPER	65		35745.690	10.127	0.019	8.98051	5.55	PPB
Replicates			31794.910	9.546953	38903.304	8.784614	36538.855	8.609970
ZINC	66		171507.662	10.948	0.093	83.16558	4.38	PPB
Replicates			150566.714	87.345498	186846.083	81.516165	177110.189	80.635075
ARSENIC	75		180868.611	11.414	0.098	84.12704	3.59	PPB
Replicates			157356.616	87.601003	196030.832	82.089817	189218.385	82.690315
SELENIUM	82		307.968	9.409	0.000	1.19756	8.17	PPB
Replicates			277.782	1.307162	335.561	1.166622	310.560	1.118893
SILVER	107		1844.615	4.144	0.000	0.10137	8.81	PPB
Replicates			1766.823	0.110873	1919.629	0.093142	1847.393	0.100091

Sample ID: **1601024-07** Client ID: BORING26 Date/Time: 01/14/16 18:22:21

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	109		1090.802	18.210	0.000	0.04211	19.28	PPB
Replicates			891.706	0.033975	1288.972	0.050210	1091.726	0.042147
CADMIUM	111		2245.651	8.514	0.001	0.87093	6.60	PPB
Replicates			2034.351	0.875853	2295.893	0.811111	2406.711	0.925828
INDIUM	113		147418.620	9.668	-0.001	0		PPB
Replicates			131973.474		160062.496		150219.889	
INDIUM	115	Y	3490592.779	9.831	3490592.779	0		PPB
Replicates			3137382.799		3822699.911		3511695.627	
QC Calculated Values				85.769				
ANTIMONY	121		695.858	12.021	0.000	0.05335	13.03	PPB
Replicates			600.018	0.048166	733.360	0.050628	754.195	0.061245
BARIUM	135		135808.803	8.079	0.029	51.17016	1.70	PPB
Replicates			124452.971	50.833738	146353.183	50.519307	136620.256	52.157424
BARIUM	137		234590.049	8.416	0.051	52.11853	2.39	PPB
Replicates			213404.705	51.403515	252472.384	51.393903	237893.060	53.558182
TERBIUM	159	Y	4642602.053	8.530	4642602.053	0		PPB
Replicates			4281262.478		5065973.962		4580569.719	
QC Calculated Values				97.585				
THALLIUM	205		3950.783	7.580	0.002	0.18278	0.29	PPB
Replicates			3704.853	0.183370	4284.251	0.182627	3863.246	0.182346
LEAD	206		129252.721	7.805	0.063	18.95366	1.73	PPB
Replicates			119214.730	18.701783	139389.751	18.834709	129153.682	19.324501
LEAD	207		232878.011	7.890	0.113	18.44065	1.53	PPB
Replicates			214903.703	18.206138	251628.614	18.361542	232101.717	18.754282
LEAD	208		361553.459	7.695	0.175	18.14795	1.16	PPB
Replicates			335070.254	17.992203	390545.954	18.063228	359044.170	18.388417
BISMUTH	209	Y	2064351.271	7.720	2064351.271	0		PPB
Replicates			1929629.191		2240267.145		2023157.476	
QC Calculated Values				84.129				
KRYPTON	83		140.557	10.694	94.445	0		MG/L
Replicates			125.001		155.001		141.668	

Sample ID: **1601024-08** Client ID: BORING25 Date/Time: 01/14/16 18:24:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	364704.670	15.330	364704.670	0		PPB
Replicates			300446.610		402235.167		391432.234	
QC Calculated Values				91.149				
BERYLLIUM	9		1228.966	15.243	0.003	3.00709	3.47	PPB
Replicates			1025.053	3.042467	1393.430	3.089302	1268.414	2.889505

Sample ID: **1601024-08** Client ID: BORING25 Date/Time: 01/14/16 18:24:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
SCANDIUM	45	Y	1767298.091	13.395	1767298.091	0		PPB
Replicates			1496881.609		1937161.002		1867851.661	
QC Calculated Values				84.608				
VANADIUM	51		2063800.765	11.507	1.168	142.73475	2.06	PPB
Replicates			1792671.173	146.117225	2234931.232	140.754648	2163799.890	141.332381
CHROMIUM	52		1541238.616	12.177	0.868	118.62589	1.34	PPB
Replicates			1327092.552	120.463620	1677095.457	117.617881	1619527.839	117.796184
MANGANESE	55		2227440.214	11.793	1.262	112.00414	1.79	PPB
Replicates			1925772.581	114.152126	2405627.594	110.184873	2350920.467	111.675421
COBALT	59		96237.864	11.771	0.054	5.99515	1.77	PPB
Replicates			83292.107	6.116486	104336.480	5.920303	101085.006	5.948666
NICKEL	60		49111.352	12.446	0.028	14.07705	1.44	PPB
Replicates			42227.861	14.276740	53903.221	14.081859	51202.975	13.872563
COPPER	63		58835.045	10.918	0.033	7.70648	2.71	PPB
Replicates			51507.309	7.946890	63492.594	7.568649	61505.231	7.603893
COPPER	65		29390.754	11.869	0.017	7.72487	2.35	PPB
Replicates			25362.678	7.858512	31404.791	7.518194	31404.791	7.797901
ZINC	66		132716.079	10.985	0.075	67.44009	2.63	PPB
Replicates			116033.191	69.456541	143004.139	66.137750	139110.909	66.725970
ARSENIC	75		71411.454	11.491	0.041	34.88720	2.07	PPB
Replicates			62008.523	35.697723	77123.322	34.312050	75102.517	34.651825
SELENIUM	82		240.188	16.925	0.000	0.92808	5.14	PPB
Replicates			193.335	0.874325	266.115	0.944598	261.115	0.965304
SILVER	107		1663.103	13.766	0.000	0.08983	4.86	PPB
Replicates			1411.211	0.085314	1858.506	0.094037	1719.592	0.090127
SILVER	109		663.911	6.248	0.000	0.00727	48.06	PPB
Replicates			616.686	0.010514	680.579	0.003570	694.469	0.007737
CADMIUM	111		2294.906	11.649	0.001	0.91632	2.07	PPB
Replicates			1987.138	0.903966	2469.377	0.906838	2428.203	0.938159
INDIUM	113		143803.637	10.612	-0.001	0		PPB
Replicates			127047.796		156904.706		147458.409	
INDIUM	115	Y	3381489.378	10.890	3381489.378	0		PPB
Replicates			2969462.940		3678429.317		3496575.876	
QC Calculated Values				83.088				
ANTIMONY	121		561.127	6.656	0.000	0.03933	11.76	PPB
Replicates			537.514	0.043643	604.185	0.039900	541.681	0.034448
BARIUM	135		135520.288	9.489	0.030	52.02759	0.47	PPB
Replicates			120791.820	51.746261	144515.072	52.144890	141253.971	52.191607
BARIUM	137		234358.318	9.051	0.051	53.07427	0.62	PPB
Replicates			210400.373	53.153398	250744.721	53.354761	241929.859	52.714653
TERBIUM	159	Y	4553769.262	9.057	4553769.262	0		PPB
Replicates			4082051.752		4846429.596		4732826.438	
QC Calculated Values				95.718				

Sample ID: **1601024-08** Client ID: BORING25 Date/Time: 01/14/16 18:24:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		3065.749	6.214	0.002	0.14717	2.51	PPB
Replicates			2846.238	0.148503	3188.008	0.142999	3163.000	0.150005
LEAD	206		158090.648	8.847	0.080	24.16735	3.70	PPB
Replicates			141954.621	23.606616	165563.477	23.696454	166753.846	25.198989
LEAD	207		280886.149	8.378	0.142	23.19018	2.67	PPB
Replicates			253772.137	22.790256	295991.878	22.878087	292894.432	23.902205
LEAD	208		430682.483	7.517	0.217	22.54537	1.59	PPB
Replicates			393826.170	22.417739	454530.075	22.268098	443691.204	22.950272
BISMUTH	209	Y	1979624.082	7.516	1979624.082	0		PPB
Replicates			1820413.451		2115123.922		2003334.873	
QC Calculated Values				80.676				
KRYPTON	83		119.445	16.173	73.334	0		MG/L
Replicates			110.001		106.667		141.668	

Sample ID: **1601024-09** Client ID: BORING22 Date/Time: 01/14/16 18:25:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	397537.284	14.764	397537.284	0		PPB
Replicates			331353.624		443254.041		418004.188	
QC Calculated Values				99.355				
BERYLLIUM	9		639.465	17.314	0.002	1.42869	2.86	PPB
Replicates			516.680	1.388500	731.693	1.470134	670.022	1.427435
SCANDIUM	45	Y	1820359.474	14.636	1820359.474	0		PPB
Replicates			1527332.873		2048046.349		1885699.200	
QC Calculated Values				87.148				
VANADIUM	51		1582154.004	13.704	0.868	106.08623	1.61	PPB
Replicates			1337134.865	106.757446	1749177.719	104.142798	1660149.429	107.358451
CHROMIUM	52		949232.389	13.186	0.517	70.67035	1.61	PPB
Replicates			809810.300	71.760873	1051935.388	69.494468	985951.479	70.755709
MANGANESE	55		1490852.213	12.545	0.820	72.80651	2.33	PPB
Replicates			1280967.965	74.398601	1639879.051	71.026065	1551709.623	72.994875
COBALT	59		70988.069	12.386	0.039	4.29507	2.46	PPB
Replicates			61141.344	4.398901	78055.112	4.187732	73767.751	4.298582
NICKEL	60		41364.860	11.733	0.023	11.53162	3.14	PPB
Replicates			35922.740	11.900371	45243.786	11.176553	42928.055	11.517947
COPPER	63		67723.326	12.013	0.037	8.61755	3.22	PPB
Replicates			58448.089	8.840223	73650.782	8.306170	71071.105	8.706269
COPPER	65		34175.569	12.485	0.019	8.72953	2.39	PPB
Replicates			29526.861	8.969151	37913.402	8.587728	35086.445	8.631720
ZINC	66		102241.390	10.509	0.056	50.49875	4.59	PPB
Replicates			90006.017	52.762997	110136.514	48.134059	106581.638	50.599179
ARSENIC	75		39881.070	11.122	0.022	18.99664	3.92	PPB
Replicates			34838.332	19.701900	43177.469	18.217359	41627.409	19.070671

Sample ID: **1601024-09** Client ID: BORING22 Date/Time: 01/14/16 18:25:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		243.707	6.269	0.000	0.92500	11.63	PPB
Replicates			228.336	1.048331	258.892	0.850806	243.892	0.875856
SILVER	107		1677.920	11.721	0.000	0.08470	12.23	PPB
Replicates			1591.793	0.090682	1902.959	0.090671	1539.007	0.072738
SILVER	109		767.622	5.994	0.000	0.01330	14.65	PPB
Replicates			719.470	0.015256	811.144	0.011357	772.252	0.013299
CADMIUM	111		2212.471	19.715	0.001	0.83847	12.24	PPB
Replicates			1938.688	0.812058	2715.468	0.951691	1983.257	0.751666
INDIUM	113		148266.218	10.888	-0.002	0		PPB
Replicates			132923.433		165106.006		146769.214	
INDIUM	115	Y	3547198.296	8.896	3547198.296	0		PPB
Replicates			3224194.201		3854744.122		3562656.566	
QC Calculated Values				87.160				
ANTIMONY	121		494.457	20.785	0.000	0.02919	16.61	PPB
Replicates			425.009	0.027375	612.519	0.034691	445.843	0.025517
BARIUM	135		90133.903	9.273	0.019	33.63473	3.66	PPB
Replicates			81650.317	33.996411	98359.697	32.264137	90391.695	34.643654
BARIUM	137		158304.967	9.485	0.034	34.82888	3.14	PPB
Replicates			143613.895	35.262920	173625.993	33.586525	157675.014	35.637206
TERBIUM	159	Y	4697496.330	12.293	4697496.330	0		PPB
Replicates			4199584.116		5330556.848		4562348.028	
QC Calculated Values				98.739				
THALLIUM	205		3099.094	8.809	0.001	0.14008	4.00	PPB
Replicates			2808.728	0.134181	3350.561	0.140702	3137.992	0.145344
LEAD	206		126897.716	9.332	0.060	18.30230	2.57	PPB
Replicates			116617.709	17.810370	139846.056	18.746615	124229.384	18.349907
LEAD	207		228587.920	9.730	0.109	17.80123	2.98	PPB
Replicates			209080.712	17.244165	252809.678	18.301536	223873.369	17.857993
LEAD	208		360659.472	8.760	0.172	17.81027	2.37	PPB
Replicates			331387.726	17.323673	394153.874	18.085662	356436.816	18.021473
BISMUTH	209	Y	2096513.919	6.867	2096513.919	0		PPB
Replicates			1982037.927		2258159.653		2049344.178	
QC Calculated Values				85.440				
KRYPTON	83		140.001	25.198	93.890	0		MG/L
Replicates			113.334		126.667		180.002	

Sample ID: **1601024-10** Client ID: BORING11B-2 Date/Time: 01/14/16 18:27:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	412378.802	12.942	412378.802	0		PPB
Replicates			351069.517		448428.934		437637.954	
QC Calculated Values				103.064				

Sample ID: **1601024-10** Client ID: BORING11B-2 Date/Time: 01/14/16 18:27:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BERYLLIUM	9		478.901	15.445	0.001	1.03144	4.56	PPB
Replicates			400.008	1.013591	546.682	1.084756	490.012	0.995980
SCANDIUM	45	Y	1766931.543	13.858	1766931.543	0		PPB
Replicates			1498133.245		1977267.264		1825394.119	
QC Calculated Values				84.590				
VANADIUM	51		1010599.905	14.047	0.570	69.65989	1.85	PPB
Replicates			849301.039	69.055600	1116536.565	68.784413	1065962.112	71.139646
CHROMIUM	52		825757.968	13.259	0.463	63.21117	2.46	PPB
Replicates			700355.115	63.188151	902323.703	61.666179	874595.087	64.779168
MANGANESE	55		1417024.609	13.495	0.802	71.16512	1.85	PPB
Replicates			1199512.588	71.023173	1558688.702	69.925358	1492872.538	72.546839
COBALT	59		42943.028	12.926	0.024	2.67103	1.49	PPB
Replicates			36687.174	2.688957	47279.839	2.625492	44862.072	2.698645
NICKEL	60		27260.637	12.449	0.015	7.81167	1.73	PPB
Replicates			23446.900	7.913698	29947.554	7.657949	28387.458	7.863374
COPPER	63		53488.177	14.507	0.030	6.98458	0.77	PPB
Replicates			45062.414	6.944188	60339.831	7.045539	55062.288	6.963998
COPPER	65		27383.258	13.396	0.015	7.18966	2.02	PPB
Replicates			23201.885	7.181293	30058.998	7.048822	28888.890	7.338878
ZINC	66		105502.818	12.466	0.060	53.54077	2.66	PPB
Replicates			90437.663	54.053391	114692.861	51.932699	111377.928	54.636227
ARSENIC	75		17207.142	12.408	0.010	8.48231	2.62	PPB
Replicates			14761.987	8.568693	18703.150	8.229707	18156.290	8.648535
SELENIUM	82		184.817	7.141	0.000	0.67242	15.15	PPB
Replicates			178.335	0.787749	200.002	0.634733	176.113	0.594771
SILVER	107		1640.876	8.596	0.000	0.08096	3.01	PPB
Replicates			1483.443	0.081106	1755.710	0.078450	1683.475	0.083315
SILVER	109		1025.979	15.560	0.000	0.03475	22.40	PPB
Replicates			841.702	0.026992	1113.951	0.034688	1122.285	0.042561
CADMIUM	111		1999.589	5.531	0.001	0.75878	3.93	PPB
Replicates			1882.508	0.789621	2102.303	0.730152	2013.956	0.756578
INDIUM	113		151759.094	8.255	-0.001	0		PPB
Replicates			139178.506		164233.481		151865.297	
INDIUM	115	Y	3567127.642	9.386	3567127.642	0		PPB
Replicates			3219509.683		3887497.107		3594376.136	
QC Calculated Values				87.650				
ANTIMONY	121		701.414	7.978	0.000	0.05222	6.17	PPB
Replicates			637.520	0.052301	741.694	0.048966	725.026	0.055406
BARIUM	135		103209.741	8.691	0.022	37.98649	1.98	PPB
Replicates			93671.674	37.998411	111474.552	37.226673	104482.998	38.734371
BARIUM	137		180235.842	9.177	0.038	39.10809	2.05	PPB
Replicates			162497.972	38.873133	195235.759	38.448849	182973.795	40.002301

Sample ID: **1601024-10** Client ID: BORING11B-2 Date/Time: 01/14/16 18:27:29

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4754502.556	9.758	4754502.556	0		PPB
Replicates			4310584.175		5236157.682		4716765.810	
QC Calculated Values				99.937				
THALLIUM	205		1882.122	7.244	0.001	0.08089	2.54	PPB
Replicates			1737.651	0.081471	2008.535	0.078610	1900.181	0.082592
LEAD	206		134864.780	7.238	0.062	18.91942	1.78	PPB
Replicates			125402.220	19.185394	144900.591	18.539725	134291.530	19.033143
LEAD	207		239781.814	7.964	0.111	18.15753	1.07	PPB
Replicates			221465.589	18.297424	259570.975	17.935321	238308.878	18.239835
LEAD	208		371610.157	9.419	0.172	17.82080	1.05	PPB
Replicates			336788.848	17.636471	406788.101	17.815423	371253.524	18.010499
BISMUTH	209	Y	2160114.665	9.016	2160114.665	0		PPB
Replicates			1978630.818		2365879.852		2135833.326	
QC Calculated Values				88.032				
KRYPTON	83		136.668	13.851	90.556	0		MG/L
Replicates			115.001		150.001		145.001	

Sample ID: **1601024-11** Client ID: BORING31 Date/Time: 01/14/16 18:29:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	401837.987	12.980	401837.987	0		PPB
Replicates			342782.669		441615.552		421115.740	
QC Calculated Values				100.430				
BERYLLIUM	9		644.465	13.494	0.002	1.42997	6.17	PPB
Replicates			566.683	1.472323	738.361	1.489082	628.353	1.328513
SCANDIUM	45	Y	1773787.444	14.042	1773787.444	0		PPB
Replicates			1490163.773		1956859.346		1874339.213	
QC Calculated Values				84.918				
VANADIUM	51		1891246.368	11.743	1.067	130.37666	2.67	PPB
Replicates			1641285.079	134.364117	2065882.026	128.780341	1966571.998	127.985537
CHROMIUM	52		1143687.423	13.300	0.640	87.48450	0.82	PPB
Replicates			970574.090	88.312448	1255935.277	87.012919	1204552.900	87.128126
MANGANESE	55		2130025.128	12.929	1.202	106.66682	1.21	PPB
Replicates			1816223.316	108.141066	2331485.556	105.711855	2242366.513	106.147524
COBALT	59		88315.389	13.012	0.050	5.47827	1.21	PPB
Replicates			75299.101	5.553980	97058.745	5.451501	92588.321	5.429344
NICKEL	60		63609.271	12.386	0.036	18.18600	2.47	PPB
Replicates			54889.117	18.645688	70215.090	18.162999	65723.606	17.749307
COPPER	63		85518.783	12.465	0.048	11.16070	1.88	PPB
Replicates			73267.426	11.363774	92674.671	10.945049	90614.251	11.173285
COPPER	65		42129.289	12.486	0.024	11.04132	1.70	PPB
Replicates			36140.188	11.256892	46000.002	10.910286	44247.677	10.956794

Sample ID: **1601024-11** Client ID: BORING31 Date/Time: 01/14/16 18:29:11

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
ZINC	66		194426.570	10.309	0.110	98.65788	4.07	PPB
Replicates			171496.946	103.199763	208620.324	95.586794	203162.440	97.187070
ARSENIC	75		20669.541	11.117	0.012	10.14470	3.22	PPB
Replicates			18027.247	10.496853	22200.561	9.850241	21780.816	10.087005
SELENIUM	82		200.187	7.978	0.000	0.74318	13.65	PPB
Replicates			185.557	0.834656	197.780	0.634042	217.225	0.760853
SILVER	107		1418.620	7.575	0.000	0.06469	4.53	PPB
Replicates			1305.641	0.068019	1519.560	0.062470	1430.658	0.063596
SILVER	109		812.070	13.259	0.000	0.01760	23.26	PPB
Replicates			727.804	0.017894	933.377	0.021539	775.030	0.013367
CADMIUM	111		1808.560	11.490	0.001	0.69399	2.25	PPB
Replicates			1575.903	0.677395	1975.748	0.696259	1874.028	0.708330
INDIUM	113		147621.051	11.178	-0.002	0		PPB
Replicates			129980.965		162679.217		150202.971	
INDIUM	115	Y	3514377.610	9.924	3514377.610	0		PPB
Replicates			3140430.336		3830844.601		3571857.892	
QC Calculated Values				86.354				
ANTIMONY	121		904.208	6.096	0.000	0.07605	5.36	PPB
Replicates			841.702	0.078686	925.043	0.071357	945.878	0.078104
BARIUM	135		117049.965	9.341	0.025	43.45274	1.08	PPB
Replicates			105203.830	43.127291	126754.948	43.991096	119191.118	43.239842
BARIUM	137		201446.584	9.201	0.043	44.10504	1.04	PPB
Replicates			181466.703	43.869311	218078.939	44.633044	204794.109	43.812754
TERBIUM	159	Y	4708137.929	8.463	4708137.929	0		PPB
Replicates			4265643.886		5038567.753		4820202.149	
QC Calculated Values				98.963				
THALLIUM	205		3079.643	7.379	0.001	0.14025	2.75	PPB
Replicates			2896.253	0.141751	3333.889	0.143140	3008.786	0.135867
LEAD	206		252929.320	8.947	0.121	36.74490	2.45	PPB
Replicates			230015.274	35.933724	275262.026	37.712551	253510.661	36.588433
LEAD	207		454864.053	8.959	0.218	35.68567	2.43	PPB
Replicates			412693.742	34.817420	494029.086	36.552362	457869.331	35.687228
LEAD	208		703820.869	7.613	0.338	35.02073	1.07	PPB
Replicates			647760.242	34.639953	754527.948	35.385970	709174.418	35.036275
BISMUTH	209	Y	2081820.638	6.562	2081820.638	0		PPB
Replicates			1937958.083		2209802.934		2097700.897	
QC Calculated Values				84.841				
KRYPTON	83		131.112	3.884	85.001	0		MG/L
Replicates			126.667		130.001		136.668	

Sample ID: **1601024-12** Client ID: BORING29 Date/Time: 01/14/16 18:30:54

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)

Sample ID: **1601024-12** Client ID: BORING29 Date/Time: 01/14/16 18:30:54

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	373753.843	13.895	373753.843	0		PPB
Replicates			314483.440		411280.498		395497.592	
QC Calculated Values				93.411				
BERYLLIUM	9		952.268	11.528	0.003	2.27657	2.58	PPB
Replicates			826.701	2.343363	1030.053	2.232422	1000.050	2.253925
SCANDIUM	45	Y	1752030.914	14.123	1752030.914	0		PPB
Replicates			1470309.134		1934183.740		1851599.867	
QC Calculated Values				83.877				
VANADIUM	51		1821040.101	12.538	1.040	127.01341	2.93	PPB
Replicates			1557523.146	129.220657	1945856.832	122.710455	1959740.325	129.109104
CHROMIUM	52		1351551.374	12.947	0.767	104.85422	1.58	PPB
Replicates			1150297.717	106.220058	1467751.993	103.008010	1436604.413	105.334594
MANGANESE	55		2836975.754	12.415	1.621	143.94006	1.91	PPB
Replicates			2433430.858	146.865948	3082525.634	141.420958	2994970.769	143.533282
COBALT	59		95417.197	12.521	0.055	5.99621	1.75	PPB
Replicates			81779.701	6.113955	104036.715	5.912373	100435.174	5.962314
NICKEL	60		54950.890	11.187	0.031	15.92348	3.39	PPB
Replicates			48059.654	16.544476	59870.355	15.666525	56922.661	15.559431
COPPER	63		66217.563	11.230	0.038	8.75673	3.24	PPB
Replicates			57665.789	9.060668	71166.223	8.498910	69820.676	8.710616
COPPER	65		32985.401	12.159	0.019	8.75211	2.46	PPB
Replicates			28362.387	8.949521	35532.460	8.522072	35061.357	8.784748
ZINC	66		158344.797	10.686	0.091	81.29581	3.77	PPB
Replicates			139110.909	84.812135	170937.489	79.210947	164985.994	79.864351
ARSENIC	75		54893.310	11.867	0.032	27.08674	2.55	PPB
Replicates			47406.759	27.807386	59266.951	26.431775	58006.219	27.021057
SELENIUM	82		220.373	7.788	0.000	0.85255	8.96	PPB
Replicates			200.558	0.936313	230.003	0.786692	230.558	0.834630
SILVER	107		1647.359	8.451	0.000	0.08793	3.66	PPB
Replicates			1497.334	0.091184	1772.379	0.087872	1672.362	0.084740
SILVER	109		737.064	10.984	0.000	0.01316	17.37	PPB
Replicates			644.465	0.012219	772.252	0.011503	794.476	0.015772
CADMIUM	111		2208.148	13.191	0.001	0.87382	3.61	PPB
Replicates			1888.212	0.843827	2457.958	0.906779	2278.273	0.870861
INDIUM	113		144988.946	9.760	-0.001	0		PPB
Replicates			130002.070		158119.449		146845.319	
INDIUM	115	Y	3405865.990	9.933	3405865.990	0		PPB
Replicates			3022283.840		3661657.032		3533657.099	
QC Calculated Values				83.687				
ANTIMONY	121		559.738	13.407	0.000	0.03791	14.03	PPB
Replicates			525.014	0.040229	645.854	0.041674	508.346	0.031828
BARIUM	135		100119.199	8.118	0.022	37.87807	2.63	PPB
Replicates			90926.511	37.940031	106354.236	36.853792	103076.851	38.840388

Sample ID: **1601024-12** Client ID: BORING29 Date/Time: 01/14/16 18:30:54

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		172279.855	8.075	0.037	38.43875	2.76	PPB
Replicates			156493.335	38.507622	182744.662	37.343566	177601.568	39.465071
TERBIUM	159	Y	4625821.071	9.251	4625821.071	0		PPB
Replicates			4190694.288		5046180.589		4640588.335	
QC Calculated Values				97.233				
THALLIUM	205		3400.584	11.957	0.002	0.15534	5.53	PPB
Replicates			3050.465	0.149570	3846.573	0.165204	3304.713	0.151245
LEAD	206		139341.507	7.753	0.067	20.29717	1.23	PPB
Replicates			129326.731	20.205962	150790.887	20.580405	137906.904	20.105154
LEAD	207		251309.654	8.173	0.121	19.76486	1.46	PPB
Replicates			231563.356	19.538060	272561.133	20.089282	249804.474	19.667241
LEAD	208		390177.392	7.921	0.188	19.45257	1.72	PPB
Replicates			356901.053	19.086874	417980.753	19.526859	395650.369	19.743989
BISMUTH	209	Y	2077309.135	6.751	2077309.135	0		PPB
Replicates			1937516.924		2217992.799		2076417.681	
QC Calculated Values				84.657				
KRYPTON	83		142.223	8.638	96.112	0		MG/L
Replicates			128.334		146.668		151.668	

Sample ID: **1601024-13** Client ID: BORING33 Date/Time: 01/14/16 18:32:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	346859.682	13.494	346859.682	0		PPB
Replicates			293892.773		382646.826		364039.448	
QC Calculated Values				86.689				
BERYLLIUM	9		1660.139	9.264	0.005	4.28885	5.50	PPB
Replicates			1500.113	4.553633	1806.830	4.212244	1673.473	4.100665
SCANDIUM	45	Y	1796862.707	13.317	1796862.707	0		PPB
Replicates			1521165.281		1950578.729		1918844.110	
QC Calculated Values				86.023				
VANADIUM	51		4130001.534	12.928	2.298	280.74179	0.95	PPB
Replicates			3519017.316	282.446754	4506820.683	282.096683	4364166.602	277.681941
CHROMIUM	52		2561130.481	12.631	1.421	194.24604	1.66	PPB
Replicates			2194008.853	196.416528	2804426.472	195.790533	2684956.119	190.531064
MANGANESE	55		19920211.231	13.015	11.089	984.35232	0.62	PPB
Replicates			16927182.64	987.758248	21475538.61	977.288354	21357912.42	988.010370
COBALT	59		533338.575	11.555	0.297	32.70776	2.35	PPB
Replicates			463264.433	33.499387	579099.284	32.656687	557652.008	31.967206
NICKEL	60		221907.883	11.210	0.124	62.68234	2.53	PPB
Replicates			193507.086	64.431650	239833.595	62.276149	232382.969	61.339212
COPPER	63		594806.961	11.191	0.332	76.78263	2.37	PPB
Replicates			518315.446	78.871618	639583.424	75.898359	626522.012	75.577900

Sample ID: **1601024-13** Client ID: BORING33 Date/Time: 01/14/16 18:32:36

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COPPER	65		293187.530	11.143	0.163	76.00918	2.43	PPB
Replicates			255671.588	78.130554	315362.138	75.154771	308528.863	74.742214
ZINC	66		714665.991	11.555	0.398	357.67847	2.03	PPB
Replicates			619941.402	365.873064	771514.637	355.083847	752541.934	352.078507
ARSENIC	75		182062.730	10.845	0.102	87.37607	2.70	PPB
Replicates			159295.190	90.085497	194498.296	85.783850	192394.703	86.258877
SELENIUM	82		717.989	9.433	0.000	3.20054	4.55	PPB
Replicates			640.020	3.368665	762.251	3.112362	751.695	3.120587
SILVER	107		6261.222	4.997	0.002	0.54272	5.27	PPB
Replicates			5954.550	0.574679	6579.942	0.519600	6249.174	0.533869
SILVER	109		3765.528	9.338	0.001	0.32347	3.49	PPB
Replicates			3361.676	0.320356	4003.579	0.314066	3931.328	0.335988
CADMIUM	111		7181.734	6.161	0.002	3.17759	4.94	PPB
Replicates			6845.454	3.357059	7683.007	3.110281	7016.739	3.065432
INDIUM	113		132333.647	9.767	-0.000	0		PPB
Replicates			119008.125		144816.046		133176.770	
INDIUM	115	Y	3065657.790	9.549	3065657.790	0		PPB
Replicates			2758684.781		3341729.404		3096559.185	
QC Calculated Values				75.328				
ANTIMONY	121		795.865	10.030	0.000	0.07668	7.60	PPB
Replicates			704.191	0.071898	833.368	0.074979	850.036	0.083176
BARIUM	135		615129.021	7.911	0.150	261.76739	1.35	PPB
Replicates			562277.183	257.800413	658089.256	262.932796	625020.625	264.568966
BARIUM	137		1061052.699	7.393	0.258	266.34425	1.46	PPB
Replicates			973570.417	263.232592	1125124.110	265.093661	1084463.570	270.706489
TERBIUM	159	Y	4107919.022	6.869	4107919.022	0		PPB
Replicates			3814571.077		4377429.787		4131756.203	
QC Calculated Values				86.346				
THALLIUM	205		18240.270	5.931	0.010	0.96522	0.34	PPB
Replicates			17269.065	0.966582	19406.312	0.961440	18045.434	0.967637
LEAD	206		16204886.819	4.948	8.811	2667.86992	1.27	PPB
Replicates			15496542.90	2697.432832	17075345.44	2630.902698	16042772.10	2675.274235
LEAD	207		28645818.705	5.961	15.568	2545.80898	0.31	PPB
Replicates			27115540.32	2548.944528	30487554.20	2536.788129	28334361.57	2551.694268
LEAD	208		44046468.918	6.537	23.933	2480.77736	0.49	PPB
Replicates			41400921.39	2466.984891	47113432.13	2484.967597	43625053.22	2490.379595
BISMUTH	209	Y	1840213.245	6.239	1840213.245	0		PPB
Replicates			1739568.574		1965269.248		1815801.913	
QC Calculated Values				74.995				
KRYPTON	83		282.226	13.210	236.115	0		MG/L
Replicates			256.670		265.004		325.005	

Sample ID: **1601024-14** Client ID: BORING32 Date/Time: 01/14/16 18:34:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	395568.045	12.788	395568.045	0		PPB
Replicates			338255.700		433987.238		414461.196	
QC Calculated Values				98.863				
BERYLLIUM	9		1078.947	5.428	0.003	2.44829	8.06	PPB
Replicates			1015.052	2.675576	1130.064	2.321178	1091.726	2.348120
SCANDIUM	45	Y	1798521.920	12.893	1798521.920	0		PPB
Replicates			1535141.537		1971955.545		1888468.676	
QC Calculated Values				86.102				
VANADIUM	51		2305152.349	13.226	1.280	156.34199	0.46	PPB
Replicates			1957617.783	155.598712	2527615.055	156.402383	2430224.209	157.024868
CHROMIUM	52		1235101.293	12.702	0.682	93.17165	0.62	PPB
Replicates			1058600.030	93.541033	1358684.668	93.462527	1288019.183	92.511396
MANGANESE	55		4722396.841	11.736	2.628	233.28164	1.25	PPB
Replicates			4091889.714	236.561942	5132654.668	231.000007	4942646.142	232.282957
COBALT	59		264902.939	12.093	0.147	16.21216	1.39	PPB
Replicates			229227.491	16.422269	291205.859	16.241135	274275.467	15.973064
NICKEL	60		100889.417	10.098	0.056	28.47765	3.02	PPB
Replicates			89254.885	29.440153	108210.098	27.785214	105203.268	28.207597
COPPER	63		115488.566	10.848	0.064	14.87572	2.23	PPB
Replicates			101293.770	15.257235	125004.228	14.657020	120167.702	14.712902
COPPER	65		59186.994	10.368	0.033	15.31906	3.04	PPB
Replicates			52386.861	15.847357	64311.692	15.144348	60862.428	14.965474
ZINC	66		203121.871	10.555	0.113	101.49161	2.54	PPB
Replicates			178795.337	104.441319	219263.876	99.701539	211306.401	100.331958
ARSENIC	75		245151.559	10.850	0.137	117.45372	2.46	PPB
Replicates			214516.054	120.175849	262373.728	114.432003	258564.895	117.753320
SELENIUM	82		454.455	6.254	0.000	1.94458	8.21	PPB
Replicates			421.676	2.119192	469.455	1.805964	472.233	1.908579
SILVER	107		2319.715	9.943	0.001	0.15282	3.44	PPB
Replicates			2091.885	0.146895	2553.104	0.154649	2314.157	0.156929
SILVER	109		1271.378	10.048	0.000	0.06569	3.41	PPB
Replicates			1155.622	0.063194	1408.433	0.067540	1250.078	0.066330
CADMIUM	111		3580.437	2.919	0.001	1.48368	8.07	PPB
Replicates			3487.191	1.548482	3560.722	1.345541	3693.399	1.557005
INDIUM	113		140248.833	8.030	-0.001	0		PPB
Replicates			130403.074		152529.457		137813.969	
INDIUM	115	Y	3276327.191	8.329	3276327.191	0		PPB
Replicates			3044706.969		3577154.668		3207119.936	
QC Calculated Values				80.504				
ANTIMONY	121		502.790	6.750	0.000	0.03281	3.45	PPB
Replicates			487.512	0.034035	541.681	0.032582	479.178	0.031805
BARIUM	135		177928.316	7.998	0.039	68.88151	1.14	PPB
Replicates			166725.038	67.987611	193940.926	69.472960	173118.983	69.183952

Sample ID: **1601024-14** Client ID: BORING32 Date/Time: 01/14/16 18:34:19

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		310761.078	7.291	0.069	70.97402	1.82	PPB
Replicates			290209.171	69.788197	335059.074	70.779770	307014.991	72.354082
TERBIUM	159	Y	4515492.250	7.095	4515492.250	0		PPB
Replicates			4288531.509		4881939.792		4376005.450	
QC Calculated Values				94.913				
THALLIUM	205		7573.702	3.046	0.004	0.37981	3.87	PPB
Replicates			7323.514	0.379602	7778.024	0.365218	7619.568	0.394603
LEAD	206		171505.671	6.794	0.089	26.88634	1.24	PPB
Replicates			163462.671	26.529807	184868.161	27.192613	166186.179	26.936600
LEAD	207		305238.546	6.915	0.158	25.83998	1.27	PPB
Replicates			291126.573	25.516355	329502.439	26.173930	295086.626	25.829648
LEAD	208		473292.218	7.209	0.245	25.39402	1.79	PPB
Replicates			458841.848	25.491020	512261.461	25.792201	448773.345	24.898848
BISMUTH	209	Y	1930406.193	5.732	1930406.193	0		PPB
Replicates			1865306.523		2058160.020		1867752.036	
QC Calculated Values				78.670				
KRYPTON	83		251.114	11.387	205.003	0		MG/L
Replicates			225.003		246.670		281.671	

Sample ID: **6A14005-CCVC** Client ID: 6A14005-CCVC Date/Time: 01/14/16 18:36:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	341573.102	11.780	341573.102	0		PPB
Replicates			296050.025		372374.754		356294.527	
QC Calculated Values				85.368				
BERYLLIUM	9		115510.296	12.649	0.338	301.76808	1.95	PPB
Replicates			99699.535	300.677081	128513.851	308.135784	118317.502	296.491373
QC Calculated Values			100.589					
SCANDIUM	45	Y	1675376.070	12.367	1675376.070	0		PPB
Replicates			1453678.937		1864131.278		1708317.994	
QC Calculated Values				80.207				
VANADIUM	51		4094269.515	13.588	2.439	298.06261	1.84	PPB
Replicates			3479339.860	292.234063	4562684.172	298.850066	4240784.512	303.103705
QC Calculated Values			99.354					
CHROMIUM	52		3642865.545	11.407	2.171	296.70705	1.00	PPB
Replicates			3197441.878	299.905313	4020109.850	294.029675	3711044.906	296.186160
QC Calculated Values			98.902					
MANGANESE	55		5655989.530	11.898	3.377	299.75071	0.49	PPB
Replicates			4934707.938	301.288780	6267035.676	298.383595	5766224.977	299.579741
QC Calculated Values			99.917					

Sample ID: **6A14005-CCVC** Client ID: 6A14005-CCVC Date/Time: 01/14/16 18:36:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
COBALT	59		4516656.857	11.156	2.699	296.88837	1.34	PPB
Replicates			3966550.584	300.184395	4955804.939	292.469867	4627615.048	298.010844
QC Calculated Values			98.963					
NICKEL	60		983288.933	12.469	0.587	297.29183	0.43	PPB
Replicates			850391.922	296.353425	1091990.961	296.757636	1007483.916	298.764443
QC Calculated Values			99.097					
COPPER	63		2163732.669	11.426	1.292	299.24059	1.04	PPB
Replicates			1895119.943	301.823478	2381752.902	295.804268	2214325.164	300.094011
QC Calculated Values			99.747					
COPPER	65		1083476.401	10.543	0.648	301.15271	1.91	PPB
Replicates			961464.531	307.511695	1187871.533	296.270758	1101093.139	299.675665
QC Calculated Values			100.384					
ZINC	66		555592.492	10.985	0.332	298.05904	1.76	PPB
Replicates			492380.677	304.052621	614176.484	295.751054	560220.314	294.373432
QC Calculated Values			99.353					
ARSENIC	75		567639.924	10.897	0.339	291.60304	1.62	PPB
Replicates			499883.046	295.588579	621085.908	286.396506	581950.817	292.824032
QC Calculated Values			97.201					
SELENIUM	82		56536.370	9.185	0.034	289.22964	3.33	PPB
Replicates			50830.526	298.890402	60985.396	279.628965	57793.188	289.169540
QC Calculated Values			96.410					
SILVER	107		3314839.988	10.248	1.004	291.89932	4.52	PPB
Replicates			2934227.756	281.801258	3587356.086	287.054209	3422936.122	306.842508
QC Calculated Values			97.300					
SILVER	109		3161936.740	9.366	0.958	293.59434	2.49	PPB
Replicates			2850507.435	288.612642	3439936.848	290.190312	3195365.939	301.980075
QC Calculated Values			97.865					
CADMIUM	111		729013.075	9.154	0.221	299.00425	0.17	PPB
Replicates			668958.321	299.185023	800859.758	298.425608	717221.146	299.402107
QC Calculated Values			99.668					
INDIUM	113		863297.464	8.591	0.218	0		PPB
Replicates			795573.662		942554.573		851764.157	
INDIUM	115	Y	3300617.533	9.305	3300617.533	0		PPB
Replicates			3026618.079		3632610.120		3242624.399	
QC Calculated Values				81.101				
ANTIMONY	121		2318507.861	7.366	0.565	301.61537	2.05	PPB
Replicates			2145531.119	302.404843	2487028.956	295.078039	2322963.507	307.363221
QC Calculated Values			100.538					
BARIUM	135		688053.998	9.744	0.167	292.87168	1.60	PPB
Replicates			622867.306	287.651969	756814.203	294.214762	684480.486	296.748316
QC Calculated Values			97.624					

Sample ID: **6A14005-CCVC** Client ID: 6A14005-CCVC Date/Time: 01/14/16 18:36:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	137		1179506.571	8.288	0.287	296.32055	1.36	PPB
Replicates			1083191.110	294.995919	1278644.380	293.132310	1176684.224	300.833407
QC Calculated Values			98.774					
TERBIUM	159	Y	4106723.889	8.800	4106723.889	0		PPB
Replicates			3787115.752		4498891.356		4034164.558	
QC Calculated Values				86.321				
THALLIUM	205		6418723.421	8.261	3.003	293.73046	4.16	PPB
Replicates			5838651.603	283.034470	6878436.632	291.098937	6539082.027	307.057963
QC Calculated Values			97.910					
LEAD	206		2097807.831	7.423	0.982	297.21359	2.41	PPB
Replicates			1941252.297	291.318641	2252692.506	295.129239	2099478.689	305.192900
QC Calculated Values			99.071					
LEAD	207		3893427.313	8.104	1.821	297.78662	2.30	PPB
Replicates			3586674.132	290.672833	4217016.952	298.360972	3876590.854	304.326067
QC Calculated Values			99.262					
LEAD	208		6153832.824	8.257	2.878	298.31614	1.89	PPB
Replicates			5683873.206	291.990852	6692988.626	300.171303	6084636.641	302.786272
QC Calculated Values			99.439					
BISMUTH	209	Y	2137311.327	7.210	2137311.327	0		PPB
Replicates			2017732.342		2311211.199		2082990.439	
QC Calculated Values				87.102				
KRYPTON	83		222.780	20.629	176.669	0		MG/L
Replicates			175.002		226.669		266.670	

Sample ID: **6A14005-CCBC** Client ID: 6A14005-CCBC Date/Time: 01/14/16 18:37:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	338484.174	10.171	338484.174	0		PPB
Replicates			298739.939		357684.517		359028.067	
QC Calculated Values				84.596				
BERYLLIUM	9		17.778	19.516	0.000	0.04416	33.40	PPB
Replicates			21.667	0.061036	15.000	0.033724	16.667	0.037728
SCANDIUM	45	Y	1642349.066	10.353	1642349.066	0		PPB
Replicates			1447304.308		1759283.394		1720459.496	
QC Calculated Values				78.626				
VANADIUM	51		3755.856	5.810	0.001	0.07100	67.19	PPB
Replicates			4000.882	0.126078	3684.260	0.044192	3582.426	0.042734
CHROMIUM	52		8997.381	2.417	0.000	0.05389	189.58	PPB
Replicates			9247.607	0.171367	8853.918	-0.014071	8890.617	0.004366
MANGANESE	55		4534.363	5.393	0.002	0.19549	20.40	PPB
Replicates			4788.646	0.241411	4513.518	0.175444	4300.925	0.169614

Sample ID: **6A14005-CCBC** Client ID: 6A14005-CCBC Date/Time: 01/14/16 18:37:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
COBALT	59		774.476	27.444	0.000	0.04806	42.53	PPB
Replicates			1003.384	0.071121	736.694	0.040918	583.350	0.032153
NICKEL	60		258.337	20.739	0.000	0.06621	39.77	PPB
Replicates			319.450	0.096550	236.114	0.052723	219.447	0.049349
COPPER	63		724.101	14.024	0.000	0.08348	29.09	PPB
Replicates			813.922	0.110091	744.472	0.077861	613.908	0.062501
COPPER	65		363.896	15.037	0.000	0.08475	29.40	PPB
Replicates			408.342	0.111400	380.563	0.080794	302.782	0.062043
ZINC	66		829.664	12.570	0.000	0.28903	15.51	PPB
Replicates			766.696	0.310164	950.045	0.319395	772.252	0.237524
ARSENIC	75		-35.784	137.333	0.000	0.08313	29.17	PPB
Replicates			-19.554	0.090021	3.191	0.103189	-90.989	0.056186
SELENIUM	82		62.963	13.849	0.000	0.10308	81.33	PPB
Replicates			72.778	0.199608	60.000	0.061195	56.111	0.048442
SILVER	107		828.739	14.551	0.000	0.02110	56.97	PPB
Replicates			927.821	0.033269	863.926	0.020783	694.469	0.009237
SILVER	109		737.065	23.865	0.000	0.01639	114.04	PPB
Replicates			922.265	0.037111	716.692	0.011261	572.239	0.000798
CADMIUM	111		112.048	45.781	0.000	0.04490	50.56	PPB
Replicates			162.805	0.068486	113.109	0.043013	60.229	0.023198
INDIUM	113		138860.075	4.417	-0.001	0		PPB
Replicates			133814.364		145686.892		137078.970	
INDIUM	115	Y	3264978.033	4.284	3264978.033	0		PPB
Replicates			3132151.664		3410979.456		3251802.979	
QC Calculated Values				80.226				
ANTIMONY	121		1076.449	21.534	0.000	0.11562	28.84	PPB
Replicates			1316.753	0.151616	1058.389	0.109459	854.203	0.085783
BARIUM	135		184.446	21.005	0.000	0.07114	26.23	PPB
Replicates			228.336	0.092499	170.001	0.062846	155.001	0.058061
BARIUM	137		330.561	26.114	0.000	0.07603	31.24	PPB
Replicates			421.676	0.101868	320.005	0.071080	250.003	0.055147
TERBIUM	159	Y	4049963.239	2.570	4049963.239	0		PPB
Replicates			3943105.217		4151058.426		4055726.074	
QC Calculated Values				85.128				
THALLIUM	205		1430.661	22.384	0.001	0.06068	28.92	PPB
Replicates			1783.492	0.080578	1350.091	0.054020	1158.400	0.047431
LEAD	206		966.714	15.105	0.000	0.13015	19.65	PPB
Replicates			1108.395	0.157891	975.048	0.125021	816.700	0.107531
LEAD	207		1794.527	14.771	0.001	0.13039	19.27	PPB
Replicates			2050.106	0.157623	1812.583	0.125450	1520.891	0.108092
LEAD	208		2847.465	16.353	0.001	0.12956	20.68	PPB
Replicates			3258.646	0.157264	2941.923	0.127639	2341.826	0.103770

Sample ID: **6A14005-CCBC** Client ID: 6A14005-CCBC Date/Time: 01/14/16 18:37:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BISMUTH	209	Y	2165462.901	4.847	2165462.901	0		PPB
Replicates			2052161.074		2259359.442		2184868.186	
QC Calculated Values				88.250				
KRYPTON	83		138.890	13.381	92.779	0		MG/L
Replicates			160.001		131.668		125.001	

Sample ID: **1601024-15** Client ID: BORING11C Date/Time: 01/14/16 18:39:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	428387.843	14.648	428387.843	0		PPB
Replicates			357767.404		477744.062		449652.062	
QC Calculated Values				107.065				
BERYLLIUM	9		227.225	14.001	0.001	0.47178	9.06	PPB
Replicates			203.335	0.503727	263.337	0.488427	215.002	0.423199
SCANDIUM	45	Y	1748017.860	14.556	1748017.860	0		PPB
Replicates			1457673.398		1932089.114		1854291.067	
QC Calculated Values				83.685				
VANADIUM	51		549455.753	13.933	0.313	38.22018	0.69	PPB
Replicates			462037.844	38.517136	604533.101	38.018807	581796.313	38.124599
CHROMIUM	52		422501.128	13.284	0.237	32.37639	1.48	PPB
Replicates			358696.480	32.928529	464232.827	32.135913	444574.078	32.064729
MANGANESE	55		757115.798	13.079	0.433	38.45883	1.82	PPB
Replicates			645245.647	39.242063	833545.828	38.244962	792555.918	37.889454
COBALT	59		17859.399	11.143	0.010	1.12298	3.80	PPB
Replicates			15600.493	1.172264	19353.710	1.096867	18623.993	1.099809
NICKEL	60		12024.868	10.216	0.007	3.48598	4.80	PPB
Replicates			10611.182	3.672681	12833.229	3.349771	12630.193	3.435481
COPPER	63		48718.819	13.143	0.028	6.44273	1.59	PPB
Replicates			41432.879	6.560986	53450.802	6.385204	51272.775	6.381987
COPPER	65		24253.689	11.043	0.014	6.45581	3.86	PPB
Replicates			21189.092	6.739127	26145.245	6.272237	25426.729	6.356053
ZINC	66		89473.660	10.573	0.051	46.00863	4.70	PPB
Replicates			78957.712	48.484849	97290.425	45.061157	92172.843	44.479888
ARSENIC	75		7937.923	10.836	0.005	4.01926	3.99	PPB
Replicates			6958.926	4.203864	8572.523	3.914218	8282.320	3.939697
SELENIUM	82		104.075	13.402	0.000	0.28046	13.78	PPB
Replicates			89.445	0.294358	105.556	0.236802	117.223	0.310233
SILVER	107		1583.459	7.450	0.000	0.07809	5.14	PPB
Replicates			1447.327	0.080808	1655.693	0.073482	1647.358	0.079991
SILVER	109		1218.593	4.399	0.000	0.05330	10.85	PPB
Replicates			1158.400	0.059642	1261.191	0.048314	1236.188	0.051955
CADMIUM	111		928.100	6.985	0.000	0.35830	15.34	PPB
Replicates			960.279	0.411026	853.476	0.301336	970.544	0.362526

Sample ID: **1601024-15** Client ID: BORING11C Date/Time: 01/14/16 18:39:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
INDIUM	113		148585.619	10.496	-0.001	0		PPB
Replicates			131631.511		162319.272		151806.074	
INDIUM	115	Y	3521209.395	9.626	3521209.395	0		PPB
Replicates			3148139.976		3810208.322		3605279.887	
QC Calculated Values				86.522				
ANTIMONY	121		1283.416	5.103	0.000	0.12506	5.86	PPB
Replicates			1254.245	0.132664	1358.426	0.124488	1237.577	0.118029
BARIUM	135		47170.863	7.606	0.010	18.22662	1.31	PPB
Replicates			43193.081	17.966537	50162.164	18.276642	48157.345	18.436667
BARIUM	137		81420.173	8.879	0.018	18.54349	2.94	PPB
Replicates			73195.234	17.954760	86768.143	18.643652	84297.142	19.032046
TERBIUM	159	Y	4522368.360	6.636	4522368.360	0		PPB
Replicates			4202727.480		4798051.252		4566326.348	
QC Calculated Values				95.058				
THALLIUM	205		1148.678	10.263	0.000	0.04800	2.57	PPB
Replicates			1041.721	0.047387	1275.081	0.049426	1129.230	0.047197
LEAD	206		96247.603	10.426	0.045	13.59235	2.28	PPB
Replicates			86299.951	13.283078	106366.870	13.901986	96075.990	13.591996
LEAD	207		171279.154	9.254	0.080	13.07082	1.11	PPB
Replicates			155429.741	12.919351	187129.186	13.207675	171278.535	13.085429
LEAD	208		265363.550	7.758	0.124	12.84630	1.74	PPB
Replicates			242727.804	12.787470	282969.575	12.658329	270393.271	13.093109
BISMUTH	209	Y	2140599.712	8.161	2140599.712	0		PPB
Replicates			1966460.418		2315853.861		2139484.858	
QC Calculated Values				87.236				
KRYPTON	83		111.112	11.457	65.001	0		MG/L
Replicates			125.001		100.001		108.334	

Sample ID: **1601024-16** Client ID: BORING1 Date/Time: 01/14/16 18:41:13

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	372241.434	11.424	372241.434	0		PPB
Replicates			326809.359		411093.021		378821.921	
QC Calculated Values				93.033				
BERYLLIUM	9		1400.099	12.863	0.004	3.35836	8.53	PPB
Replicates			1205.073	3.288558	1435.103	3.113165	1560.122	3.673344
SCANDIUM	45	Y	1665140.170	13.920	1665140.170	0		PPB
Replicates			1402472.833		1840980.824		1751966.854	
QC Calculated Values				79.717				
VANADIUM	51		1809899.456	12.453	1.087	132.79102	1.70	PPB
Replicates			1552027.293	135.002375	1969222.849	130.484394	1908448.225	132.886292

Sample ID: **1601024-16** Client ID: BORING1 Date/Time: 01/14/16 18:41:13

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
CHROMIUM	52		1397321.435	13.603	0.834	114.01967	0.63	PPB
Replicates			1180317.308	114.317107	1534281.679	113.197420	1477365.318	114.544484
MANGANESE	55		2335133.831	12.753	1.403	124.58089	1.33	PPB
Replicates			1995339.279	126.243143	2550744.210	122.941447	2459318.005	124.558071
COBALT	59		114724.983	13.019	0.069	7.58154	0.98	PPB
Replicates			97777.362	7.664842	125966.749	7.522471	120430.839	7.557307
NICKEL	60		72258.985	12.194	0.043	22.00860	1.99	PPB
Replicates			62363.299	22.512402	79254.491	21.794762	75159.165	21.718634
COPPER	63		86421.217	11.223	0.052	12.02920	2.93	PPB
Replicates			75380.265	12.424370	93566.249	11.747370	90317.137	11.915862
COPPER	65		42927.849	10.867	0.026	12.00420	3.31	PPB
Replicates			37620.633	12.452798	46379.526	11.694123	44783.387	11.865670
ZINC	66		212706.160	11.025	0.128	114.90043	3.14	PPB
Replicates			185985.823	118.941608	229873.173	111.982438	222259.484	113.777248
ARSENIC	75		55496.799	10.970	0.034	28.82598	3.29	PPB
Replicates			48504.917	29.820323	59624.858	27.931841	58360.623	28.725769
SELENIUM	82		342.599	12.570	0.000	1.53356	5.53	PPB
Replicates			300.005	1.599333	386.119	1.563611	341.673	1.437750
SILVER	107		1903.885	5.984	0.000	0.11904	6.39	PPB
Replicates			1772.379	0.123094	1966.860	0.110262	1972.417	0.123769
SILVER	109		1217.667	11.298	0.000	0.06235	4.40	PPB
Replicates			1077.836	0.059663	1352.869	0.065143	1222.297	0.062250
CADMIUM	111		2555.060	10.387	0.001	1.06900	2.28	PPB
Replicates			2261.923	1.043599	2779.029	1.071186	2624.229	1.092227
INDIUM	113		136805.924	9.618	-0.001	0		PPB
Replicates			122461.950		148316.797		139639.026	
INDIUM	115	Y	3227011.008	8.956	3227011.008	0		PPB
Replicates			2928642.002		3505664.387		3246726.636	
QC Calculated Values				79.293				
ANTIMONY	121		912.542	5.085	0.000	0.08382	5.94	PPB
Replicates			870.871	0.089570	962.546	0.080915	904.208	0.080982
BARIUM	135		78355.342	9.390	0.018	30.98288	0.90	PPB
Replicates			70254.252	30.709180	84623.212	30.974659	80188.560	31.264805
BARIUM	137		135939.114	9.342	0.031	31.69991	0.48	PPB
Replicates			122342.163	31.536835	147493.081	31.837214	137982.097	31.725677
TERBIUM	159	Y	4420585.562	8.876	4420585.562	0		PPB
Replicates			4000127.814		4776980.886		4484647.986	
QC Calculated Values				92.919				
THALLIUM	205		3784.051	5.481	0.002	0.18496	2.89	PPB
Replicates			3600.648	0.191129	4009.137	0.181951	3742.367	0.181795
LEAD	206		144950.712	8.505	0.074	22.41484	0.76	PPB
Replicates			132315.449	22.241074	156947.029	22.581575	145589.658	22.421863

Sample ID: **1601024-16** Client ID: BORING1 Date/Time: 01/14/16 18:41:13

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LEAD	207		261498.339	8.327	0.134	21.83958	0.73	PPB
Replicates			238581.253	21.657247	281914.693	21.904847	263999.072	21.956646
LEAD	208		411427.067	8.784	0.210	21.77445	1.22	PPB
Replicates			373108.341	21.467590	444896.476	21.911120	416276.382	21.944637
BISMUTH	209	Y	1956874.393	7.753	1956874.393	0		PPB
Replicates			1800954.110		2104012.831		1965656.239	
QC Calculated Values				79.749				
KRYPTON	83		182.224	9.387	136.113	0		MG/L
Replicates			163.335		186.668		196.669	

Sample ID: **1601024-17** Client ID: BORING3 Date/Time: 01/14/16 18:42:55

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	374605.840	15.025	374605.840	0		PPB
Replicates			309877.963		412035.651		401903.906	
QC Calculated Values				93.624				
BERYLLIUM	9		1306.754	17.871	0.003	3.10309	4.62	PPB
Replicates			1051.722	3.026597	1510.114	3.268577	1358.426	3.014087
SCANDIUM	45	Y	1771483.235	14.394	1771483.235	0		PPB
Replicates			1478451.296		1942927.360		1893071.048	
QC Calculated Values				84.808				
VANADIUM	51		3195574.638	13.681	1.804	220.36297	0.80	PPB
Replicates			2692477.141	222.304681	3483083.742	218.828758	3411163.031	219.955464
CHROMIUM	52		1548560.664	13.578	0.870	118.87050	0.91	PPB
Replicates			1306723.603	120.091166	1688033.898	118.036144	1650924.490	118.484194
MANGANESE	55		11500319.130	13.548	6.497	576.75129	1.10	PPB
Replicates			9703495.693	582.569296	12476548.70	569.985015	12320912.99	577.699571
COBALT	59		323462.670	12.337	0.183	20.12693	2.30	PPB
Replicates			277733.984	20.661642	351228.281	19.882524	341425.746	19.836620
NICKEL	60		206374.863	11.724	0.117	59.17206	2.94	PPB
Replicates			178588.920	61.181596	222799.071	58.079697	217736.599	58.254891
COPPER	63		188298.994	11.742	0.107	24.65982	2.93	PPB
Replicates			162907.895	25.492140	203295.663	24.206084	198693.425	24.281230
COPPER	65		94015.624	11.010	0.053	24.74588	3.78	PPB
Replicates			82175.145	25.824126	101347.083	24.233997	98524.643	24.179511
ZINC	66		254847.380	11.946	0.144	129.37897	2.70	PPB
Replicates			219803.303	133.364712	274768.164	126.851594	269970.672	127.920600
ARSENIC	75		103713.018	11.108	0.059	50.58441	3.61	PPB
Replicates			90472.356	52.684862	111448.252	49.391207	109218.445	49.677172
SELENIUM	82		1045.055	10.573	0.001	4.83769	5.11	PPB
Replicates			922.820	5.108950	1137.843	4.779200	1074.502	4.624915
SILVER	107		4548.259	6.766	0.001	0.41219	4.78	PPB
Replicates			4300.925	0.432653	4892.863	0.410514	4450.990	0.393394

Sample ID: **1601024-17** Client ID: BORING3 Date/Time: 01/14/16 18:42:55

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SILVER	109		2415.108	7.483	0.001	0.20735	8.49	PPB
Replicates			2330.827	0.224247	2622.566	0.208698	2291.929	0.189110
CADMIUM	111		7538.481	9.398	0.003	3.58108	3.37	PPB
Replicates			6923.456	3.637003	8313.091	3.663655	7378.898	3.442593
INDIUM	113		121963.281	9.711	-0.001	0		PPB
Replicates			108973.881		132163.459		124752.502	
INDIUM	115	Y	2848402.761	8.819	2848402.761	0		PPB
Replicates			2575471.270		3069920.056		2899816.958	
QC Calculated Values				69.990				
ANTIMONY	121		695.858	10.594	0.000	0.06657	24.42	PPB
Replicates			775.030	0.085298	683.357	0.058394	629.186	0.056031
BARIUM	135		370576.219	8.367	0.092	161.31457	1.44	PPB
Replicates			335934.384	158.971824	395729.848	161.346948	380064.425	163.624948
BARIUM	137		639430.420	8.312	0.159	164.14980	1.38	PPB
Replicates			580108.673	161.888012	682719.329	164.151077	655463.258	166.410305
TERBIUM	159	Y	4015877.380	7.460	4015877.380	0		PPB
Replicates			3695761.721		4289513.810		4062356.608	
QC Calculated Values				84.412				
THALLIUM	205		15342.334	4.859	0.009	0.88043	2.55	PPB
Replicates			14510.520	0.889939	15950.210	0.854763	15566.273	0.896583
LEAD	206		231514.247	5.515	0.136	41.31441	1.32	PPB
Replicates			219742.261	41.922744	245087.877	40.864557	229712.601	41.155916
LEAD	207		414795.107	5.762	0.244	39.96987	1.09	PPB
Replicates			392725.594	40.462125	440180.891	39.635081	411478.838	39.812405
LEAD	208		645804.041	7.033	0.380	39.42246	0.28	PPB
Replicates			602179.462	39.326084	692824.918	39.542951	642407.742	39.398357
BISMUTH	209	Y	1697544.870	6.753	1697544.870	0		PPB
Replicates			1586951.228		1815821.743		1689861.639	
QC Calculated Values				69.180				
KRYPTON	83		292.226	4.983	246.115	0		MG/L
Replicates			280.004		288.337		308.338	

Sample ID: **1601024-18** Client ID: BORING15 Date/Time: 01/14/16 18:44:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	423143.097	12.777	423143.097	0		PPB
Replicates			360848.532		457803.011		450777.747	
QC Calculated Values				105.755				
BERYLLIUM	9		495.568	16.700	0.001	1.03816	4.42	PPB
Replicates			400.008	0.986022	543.348	1.055967	543.348	1.072482

Sample ID: **1601024-18** Client ID: BORING15 Date/Time: 01/14/16 18:44:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1) (QC Std % Recov)	Meas. Int Rsd (Conc 1) (Int Std % Recov)	Net Int Mean (Intensity 2) (Spike % Recov)	Conc Mean (Conc 2) (Dilution % Diff)	Conc Rsd (Intensity 3) (Dup. Rel % Diff)	Units (Conc 3)
SCANDIUM	45	Y	1780599.936	14.737	1780599.936	0		PPB
Replicates			1480984.071		1969536.949		1891278.788	
QC Calculated Values				85.244				
VANADIUM	51		1882548.639	13.517	1.057	129.14448	1.52	PPB
Replicates			1594368.317	131.327523	2076289.969	128.595720	1976987.631	127.510211
CHROMIUM	52		1138335.544	14.050	0.635	86.73988	1.18	PPB
Replicates			957788.394	87.684309	1262256.916	86.886975	1194961.322	85.648355
MANGANESE	55		4020615.335	13.840	2.260	200.58450	0.99	PPB
Replicates			3384099.158	202.789791	4415009.790	198.938466	4262737.059	200.025258
COBALT	59		66018.839	12.328	0.037	4.08455	2.70	PPB
Replicates			56767.337	4.211807	72075.478	4.020857	69213.701	4.020978
NICKEL	60		37841.610	12.152	0.021	10.78193	2.93	PPB
Replicates			32628.143	11.146257	41321.308	10.613710	39575.378	10.585836
COPPER	63		61967.069	11.204	0.035	8.06889	4.06	PPB
Replicates			54154.573	8.446278	67432.146	7.907025	64314.488	7.853369
COPPER	65		31773.102	12.012	0.018	8.30163	3.00	PPB
Replicates			27415.306	8.587525	34520.592	8.129862	33383.408	8.187506
ZINC	66		66948.144	10.531	0.038	33.75988	4.79	PPB
Replicates			59018.089	35.626501	72506.354	32.899081	69319.989	32.754060
ARSENIC	75		50229.082	11.339	0.028	24.43072	3.74	PPB
Replicates			43744.423	25.482745	54420.145	23.844541	52522.677	23.964886
SELENIUM	82		482.234	10.164	0.000	2.09866	6.63	PPB
Replicates			430.009	2.253255	527.236	2.059427	489.456	1.983302
SILVER	107		1917.778	10.961	0.000	0.12080	0.98	PPB
Replicates			1700.145	0.119460	2119.669	0.121204	1933.520	0.121725
SILVER	109		958.379	6.629	0.000	0.03864	10.69	PPB
Replicates			886.150	0.041546	1005.606	0.033916	983.382	0.040467
CADMIUM	111		2394.803	10.514	0.001	1.00843	3.85	PPB
Replicates			2106.197	0.992025	2569.594	0.980550	2508.619	1.052718
INDIUM	113		136468.905	10.359	-0.001	0		PPB
Replicates			121896.774		150126.841		137383.101	
INDIUM	115	Y	3209668.175	10.472	3209668.175	0		PPB
Replicates			2868520.800		3540516.853		3219966.874	
QC Calculated Values				78.867				
ANTIMONY	121		390.286	20.323	0.000	0.02217	26.02	PPB
Replicates			308.338	0.016133	466.678	0.027626	395.841	0.022743
BARIUM	135		108770.748	9.504	0.026	44.85607	0.76	PPB
Replicates			97831.218	44.465770	118378.214	45.099134	110102.813	45.003312
BARIUM	137		188609.584	8.926	0.044	45.88493	0.95	PPB
Replicates			170182.554	45.614945	203188.518	45.649729	192457.680	46.390109
TERBIUM	159	Y	4238515.995	8.798	4238515.995	0		PPB
Replicates			3847330.829		4589999.812		4278217.344	
QC Calculated Values				89.092				

Sample ID: **1601024-18** Client ID: BORING15 Date/Time: 01/14/16 18:44:38

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
THALLIUM	205		8132.482	6.545	0.004	0.41735	1.50	PPB
Replicates			7586.210	0.417370	8649.572	0.411082	8161.663	0.423594
LEAD	206		221641.400	7.661	0.117	35.55944	0.76	PPB
Replicates			205111.346	35.298972	239039.927	35.542715	220772.926	35.836624
LEAD	207		401101.030	7.818	0.213	34.74935	0.69	PPB
Replicates			371039.120	34.483851	433614.655	34.818336	398649.314	34.945873
LEAD	208		625553.798	8.053	0.331	34.34804	0.91	PPB
Replicates			577002.569	33.991244	677572.346	34.486858	622086.481	34.566029
BISMUTH	209	Y	1886826.074	7.406	1886826.074	0		PPB
Replicates			1759204.483		2036146.498		1865127.240	
QC Calculated Values				76.894				
KRYPTON	83		213.336	4.752	167.224	0		MG/L
Replicates			208.336		206.669		225.003	

Sample ID: **1601024-19** Client ID: BORING2 Date/Time: 01/14/16 18:46:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	383310.305	14.100	383310.305	0		PPB
Replicates			321310.399		420486.751		408133.764	
QC Calculated Values				95.799				
BERYLLIUM	9		785.587	15.111	0.002	1.82545	3.72	PPB
Replicates			658.355	1.825699	893.373	1.893241	805.032	1.757399
SCANDIUM	45	Y	1703752.376	13.968	1703752.376	0		PPB
Replicates			1430169.124		1862861.557		1818226.446	
QC Calculated Values				81.565				
VANADIUM	51		1715452.575	14.393	1.005	122.76052	0.60	PPB
Replicates			1432532.282	122.174945	1887362.863	123.580087	1826462.579	122.526519
CHROMIUM	52		1357428.608	13.579	0.792	108.23365	0.96	PPB
Replicates			1147258.139	108.930532	1491582.061	108.726959	1433445.624	107.043454
MANGANESE	55		1926895.332	12.724	1.132	100.47515	1.55	PPB
Replicates			1646876.311	102.168429	2102998.250	100.160620	2030811.435	99.096398
COBALT	59		98489.850	13.194	0.058	6.36009	1.45	PPB
Replicates			83735.789	6.436169	108232.562	6.386727	103501.201	6.257361
NICKEL	60		54131.973	12.831	0.032	16.10008	1.31	PPB
Replicates			46170.228	16.339946	58948.234	16.016146	57277.456	15.944162
COPPER	63		55828.904	11.110	0.033	7.58921	3.22	PPB
Replicates			48737.925	7.870181	60244.816	7.467660	58503.970	7.429795
COPPER	65		28074.026	12.586	0.016	7.65373	2.22	PPB
Replicates			24090.093	7.812271	30828.001	7.674876	29303.984	7.474038
ZINC	66		138340.378	12.323	0.081	72.89323	2.33	PPB
Replicates			119068.560	74.610413	151452.157	72.855350	144500.418	71.213937
ARSENIC	75		48003.704	11.590	0.028	24.37120	2.60	PPB
Replicates			41599.494	25.095819	51646.735	23.924863	50764.882	24.092932

Sample ID: **1601024-19** Client ID: BORING2 Date/Time: 01/14/16 18:46:20

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
SELENIUM	82		197.224	9.270	0.000	0.76457	7.05	PPB
Replicates			176.668	0.826171	211.669	0.741449	203.335	0.726103
SILVER	107		1580.681	8.825	0.000	0.08868	8.34	PPB
Replicates			1425.102	0.088731	1622.354	0.081261	1694.588	0.096056
SILVER	109		882.447	12.080	0.000	0.02999	17.15	PPB
Replicates			761.140	0.026582	925.043	0.027479	961.157	0.035903
CADMIUM	111		1634.737	5.726	0.001	0.68039	3.65	PPB
Replicates			1535.006	0.708174	1720.696	0.660408	1648.509	0.672589
INDIUM	113		136565.785	8.946	-0.002	0		PPB
Replicates			123385.701		147513.377		138798.276	
INDIUM	115	Y	3250593.279	9.215	3250593.279	0		PPB
Replicates			2926331.383		3516922.788		3308525.665	
QC Calculated Values				79.872				
ANTIMONY	121		683.357	7.927	0.000	0.05666	12.00	PPB
Replicates			629.186	0.056670	683.357	0.049863	737.527	0.063457
BARIUM	135		64485.120	9.369	0.015	25.67615	2.90	PPB
Replicates			57763.015	25.053034	69462.081	25.472907	66230.265	26.502506
BARIUM	137		112884.995	9.338	0.026	26.50365	1.80	PPB
Replicates			101716.360	26.016631	122659.347	26.526584	114279.278	26.967726
TERBIUM	159	Y	4389430.236	8.400	4389430.236	0		PPB
Replicates			4031168.539		4767747.253		4369374.915	
QC Calculated Values				92.264				
THALLIUM	205		3062.970	6.734	0.002	0.15034	1.53	PPB
Replicates			2842.070	0.152994	3250.528	0.149094	3096.313	0.148919
LEAD	206		155849.643	9.459	0.080	24.33698	1.85	PPB
Replicates			140610.835	24.105187	170037.619	24.855697	156900.473	24.050044
LEAD	207		280169.767	8.132	0.145	23.64445	1.39	PPB
Replicates			256941.902	23.787574	302479.728	23.878004	281087.671	23.267773
LEAD	208		433354.177	7.495	0.224	23.18792	1.04	PPB
Replicates			399111.049	23.420298	463723.395	23.202915	437228.085	22.940560
BISMUTH	209	Y	1937291.698	8.053	1937291.698	0		PPB
Replicates			1765894.204		2070992.547		1974988.343	
QC Calculated Values				78.951				
KRYPTON	83		156.668	13.287	110.557	0		MG/L
Replicates			150.001		140.001		180.002	

Sample ID: **1601024-20** Client ID: BORING12 Date/Time: 01/14/16 18:48:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	392629.506	15.757	392629.506	0		PPB
Replicates			321220.926		426541.942		430125.650	
QC Calculated Values				98.128				

Sample ID: **1601024-20** Client ID: BORING12 Date/Time: 01/14/16 18:48:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
BERYLLIUM	9		494.457	8.740	0.001	1.13011	8.04	PPB
Replicates			445.010	1.233206	525.014	1.095253	513.347	1.061878
SCANDIUM	45	Y	1722752.282	14.605	1722752.282	0		PPB
Replicates			1433858.128		1893899.881		1840498.837	
QC Calculated Values				82.475				
VANADIUM	51		1275760.685	15.008	0.738	90.23138	0.84	PPB
Replicates			1055012.387	89.690104	1396769.687	89.900753	1375499.982	91.103288
CHROMIUM	52		797776.540	13.629	0.458	62.65304	1.28	PPB
Replicates			672393.724	63.387003	866101.445	61.797683	854834.450	62.774435
MANGANESE	55		3672129.506	14.420	2.131	189.20194	0.51	PPB
Replicates			3062230.424	189.529687	4014423.797	188.109556	3939734.297	189.966588
COBALT	59		149274.275	13.573	0.087	9.53810	1.33	PPB
Replicates			125909.366	9.655424	161981.358	9.404188	159932.101	9.554702
NICKEL	60		96424.114	12.770	0.056	28.39703	2.19	PPB
Replicates			82214.354	29.033193	103942.970	27.789531	103115.020	28.368369
COPPER	63		498268.869	13.185	0.290	67.04795	1.58	PPB
Replicates			422669.844	68.230856	541525.979	66.182635	530610.784	66.730347
COPPER	65		241866.176	13.354	0.141	65.34740	1.39	PPB
Replicates			204727.205	66.368917	263387.450	64.644259	257483.874	65.029015
ZINC	66		559768.936	12.467	0.325	292.34110	2.36	PPB
Replicates			479606.792	300.256488	606990.349	287.691858	592709.666	289.074950
ARSENIC	75		40024.590	12.824	0.023	20.10363	1.95	PPB
Replicates			34129.238	20.554714	43500.847	19.838537	42443.684	19.917627
SELENIUM	82		408.342	13.589	0.000	1.79930	1.33	PPB
Replicates			344.450	1.824444	444.454	1.776971	436.121	1.796484
SILVER	107		5761.850	6.698	0.002	0.46393	3.14	PPB
Replicates			5320.860	0.480189	6037.933	0.452085	5926.756	0.459520
SILVER	109		4773.371	11.440	0.001	0.39690	3.31	PPB
Replicates			4192.545	0.389653	5276.392	0.412050	4851.176	0.388999
CADMIUM	111		5197.626	13.288	0.002	2.16125	5.95	PPB
Replicates			4550.778	2.120773	5925.048	2.305160	5117.053	2.057812
INDIUM	113		139841.253	9.991	-0.001	0		PPB
Replicates			124296.881		151353.457		143873.419	
INDIUM	115	Y	3247166.745	9.368	3247166.745	0		PPB
Replicates			2902078.578		3476474.950		3362946.708	
QC Calculated Values				79.788				
ANTIMONY	121		2585.058	7.722	0.001	0.29903	2.60	PPB
Replicates			2366.947	0.307556	2758.714	0.292324	2629.512	0.297199
BARIUM	135		94356.753	9.375	0.022	38.89887	2.32	PPB
Replicates			84187.895	38.937638	100271.881	37.976989	98610.483	39.781986
BARIUM	137		163014.291	9.289	0.038	39.63330	2.35	PPB
Replicates			145604.032	39.713427	173110.505	38.664178	170328.338	40.522298

Sample ID: **1601024-20** Client ID: BORING12 Date/Time: 01/14/16 18:48:03

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4244033.255	10.023	4244033.255	0		PPB
Replicates			3780730.793		4616914.871		4334454.100	
QC Calculated Values				89.208				
THALLIUM	205		8612.073	11.559	0.004	0.43771	4.39	PPB
Replicates			7486.134	0.422836	8974.859	0.430857	9375.226	0.459432
LEAD	206		509238.291	9.370	0.268	81.01459	1.30	PPB
Replicates			455828.302	80.532653	547654.935	82.221470	524231.635	80.289653
LEAD	207		924271.006	9.427	0.486	79.40230	0.94	PPB
Replicates			825274.896	78.739849	989335.777	80.213437	958202.345	79.253620
LEAD	208		1446777.676	8.883	0.760	78.80959	0.47	PPB
Replicates			1298778.704	78.548316	1530269.390	78.645984	1511284.933	79.234469
BISMUTH	209	Y	1902486.412	8.653	1902486.412	0		PPB
Replicates			1713787.848		2016741.212		1976930.175	
QC Calculated Values				77.532				
KRYPTON	83		148.890	12.877	102.779	0		MG/L
Replicates			130.001		148.334		168.335	

Sample ID: **6A14005-CRLA** Client ID: 6A14005-CRLA Date/Time: 01/14/16 18:49:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	354773.894	15.196	354773.894	0		PPB
Replicates			293458.632		394741.930		376121.122	
QC Calculated Values				88.667				
BERYLLIUM	9		343.339	19.701	0.001	0.85699	6.36	PPB
Replicates			273.337	0.827909	408.342	0.919890	348.339	0.823180
QC Calculated Values			85.699					
SCANDIUM	45	Y	1665268.879	14.387	1665268.879	0		PPB
Replicates			1403088.376		1872809.159		1719909.102	
QC Calculated Values				79.723				
VANADIUM	51		73781.360	13.946	0.043	5.20411	1.07	PPB
Replicates			62277.616	5.211618	82107.866	5.145149	76958.599	5.255561
QC Calculated Values			104.082					
CHROMIUM	52		32920.566	9.951	0.015	2.01213	6.34	PPB
Replicates			29281.140	2.150247	35633.374	1.898456	33847.185	1.987691
QC Calculated Values			100.607					
MANGANESE	55		22369.612	10.274	0.013	1.14515	4.58	PPB
Replicates			19798.747	1.200317	24225.141	1.095956	23084.948	1.139187
QC Calculated Values			114.515					
COBALT	59		15361.918	12.763	0.009	1.01150	2.04	PPB
Replicates			13267.128	1.035113	17153.032	1.002474	15665.594	0.996907
QC Calculated Values			101.150					

Sample ID: **6A14005-CRLA** Client ID: 6A14005-CRLA Date/Time: 01/14/16 18:49:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
NICKEL	60		3395.026	11.323	0.002	1.02081	3.36	PPB
Replicates			2964.328	1.055072	3703.463	0.986564	3517.285	1.020786
QC Calculated Values			102.081					
COPPER	63		15317.426	13.795	0.009	2.11081	0.76	PPB
Replicates			12977.860	2.121451	17086.808	2.092308	15887.611	2.118667
QC Calculated Values			105.540					
COPPER	65		7466.695	10.238	0.004	2.07389	4.46	PPB
Replicates			6627.195	2.176401	8122.742	1.996879	7650.147	2.048397
QC Calculated Values			103.695					
ZINC	66		4363.922	10.542	0.002	2.19731	4.40	PPB
Replicates			3859.078	2.304682	4759.466	2.116908	4473.222	2.170346
QC Calculated Values			109.866					
ARSENIC	75		1699.254	14.309	0.001	0.97874	1.61	PPB
Replicates			1446.791	0.987682	1931.866	0.988014	1719.103	0.960515
QC Calculated Values			97.874					
SELENIUM	82		943.934	10.100	0.001	4.63967	4.78	PPB
Replicates			838.924	4.884243	1025.053	4.451575	967.825	4.583179
QC Calculated Values			92.793					
SILVER	107		11432.528	12.765	0.003	0.97287	7.11	PPB
Replicates			9763.097	0.925250	12466.099	0.941150	12068.389	1.052223
QC Calculated Values			97.287					
SILVER	109		10814.245	13.130	0.003	0.96996	8.39	PPB
Replicates			9176.431	0.916060	11698.505	0.930260	11567.798	1.063559
QC Calculated Values			96.996					
CADMIUM	111		2356.040	7.909	0.001	0.98513	4.63	PPB
Replicates			2152.984	1.002396	2519.217	0.933393	2395.919	1.019600
QC Calculated Values			98.513					
INDIUM	113		140252.405	10.925	-0.000	0		PPB
Replicates			125912.742		156396.843		138447.632	
INDIUM	115	Y	3241033.260	11.615	3241033.260	0		PPB
Replicates			2901960.978		3646123.112		3175015.690	
QC Calculated Values				79.637				
ANTIMONY	121		15015.485	8.417	0.004	1.96864	2.25	PPB
Replicates			13826.218	1.968066	16342.510	1.924590	14877.726	2.013273
QC Calculated Values			98.432					
BARIUM	135		21936.997	10.731	0.005	9.52877	2.92	PPB
Replicates			19614.217	9.262537	24321.207	9.505366	21875.568	9.818408
QC Calculated Values			95.288					
BARIUM	137		38301.846	7.872	0.010	9.82950	3.07	PPB
Replicates			35302.202	9.831921	41331.907	9.526301	38271.429	10.130285
QC Calculated Values			98.295					

Sample ID: **6A14005-CRLA** Client ID: 6A14005-CRLA Date/Time: 01/14/16 18:49:46

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
TERBIUM	159	Y	4021525.613	9.974	4021525.613	0		PPB
Replicates			3700182.077		4471043.111		3893351.650	
QC Calculated Values				84.531				
THALLIUM	205		21610.953	9.024	0.010	0.97915	1.26	PPB
Replicates			19644.276	0.970067	23544.351	0.974214	21644.232	0.993179
QC Calculated Values			97.915					
LEAD	206		7030.256	6.844	0.003	0.98635	3.49	PPB
Replicates			6493.774	0.991591	7423.588	0.949584	7173.405	1.017883
QC Calculated Values			98.635					
LEAD	207		13097.377	6.041	0.006	0.99266	3.39	PPB
Replicates			12245.428	1.009822	13808.959	0.953852	13237.744	1.014306
QC Calculated Values			99.266					
LEAD	208		21018.656	9.255	0.010	1.00637	2.09	PPB
Replicates			18972.888	0.990090	22844.739	0.998963	21238.342	1.030052
QC Calculated Values			100.637					
BISMUTH	209	Y	2149041.458	8.941	2149041.458	0		PPB
Replicates			1971754.394		2353203.819		2122166.162	
QC Calculated Values				87.580				
KRYPTON	83		106.667	5.413	60.556	0		MG/L
Replicates			103.334		113.334		103.334	

Sample ID: **6A14005-CCVD** Client ID: 6A14005-CCVD Date/Time: 01/14/16 18:51:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	345015.029	15.277	345015.029	0		PPB
Replicates			285479.240		385726.831		363839.015	
QC Calculated Values				86.228				
BERYLLIUM	9		116187.547	14.458	0.337	301.08984	3.04	PPB
Replicates			98379.895	307.683524	131752.253	304.965402	118430.494	290.620594
QC Calculated Values			100.363					
SCANDIUM	45	Y	1658173.755	14.066	1658173.755	0		PPB
Replicates			1407694.148		1869111.998		1697715.118	
QC Calculated Values				79.383				
VANADIUM	51		4031675.413	11.591	2.436	297.58784	2.70	PPB
Replicates			3514435.075	304.833501	4423379.577	288.946733	4157211.586	298.983273
QC Calculated Values			99.196					
CHROMIUM	52		3605111.113	11.516	2.175	297.19424	2.79	PPB
Replicates			3165863.469	306.659349	3991060.818	291.120254	3658409.053	293.803108
QC Calculated Values			99.065					

Sample ID: **6A14005-CCVD** Client ID: 6A14005-CCVD Date/Time: 01/14/16 18:51:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
MANGANESE	55		5604488.969	10.476	3.391	301.04161	3.80	PPB
Replicates			4954494.790	312.380381	6096383.853	289.483562	5762588.263	301.260901
QC Calculated Values			100.347					
COBALT	59		4494620.283	12.153	2.716	298.76413	2.02	PPB
Replicates			3908057.567	305.419237	4988761.520	293.630298	4587041.762	297.242851
QC Calculated Values			99.588					
NICKEL	60		988575.337	12.504	0.597	302.48221	1.66	PPB
Replicates			853843.233	307.276929	1096749.694	297.256656	1015133.085	302.913043
QC Calculated Values			100.827					
COPPER	63		2126469.944	10.855	1.286	297.84547	3.58	PPB
Replicates			1867476.411	307.136998	2310531.497	286.193524	2201401.925	300.205873
QC Calculated Values			99.282					
COPPER	65		1069293.756	11.598	0.646	300.54888	2.80	PPB
Replicates			931011.386	307.498891	1170682.897	291.205284	1106186.986	302.942479
QC Calculated Values			100.183					
ZINC	66		552741.939	11.396	0.334	300.02342	2.84	PPB
Replicates			485308.335	309.478040	610066.558	292.987581	562850.925	297.604637
QC Calculated Values			100.008					
ARSENIC	75		564284.054	11.179	0.341	293.34968	3.12	PPB
Replicates			494320.559	301.845712	616825.175	283.674814	581706.429	294.528500
QC Calculated Values			97.783					
SELENIUM	82		56668.621	10.182	0.034	293.24051	4.18	PPB
Replicates			50219.115	304.946225	61342.011	280.515343	58444.736	294.259965
QC Calculated Values			97.747					
SILVER	107		3369657.106	10.234	1.031	299.87842	3.61	PPB
Replicates			2975630.950	294.491131	3616391.685	292.807287	3516948.683	312.336834
QC Calculated Values			99.959					
SILVER	109		3198164.809	9.667	0.979	300.14466	3.10	PPB
Replicates			2847142.501	297.060691	3429967.839	292.778114	3317384.085	310.595165
QC Calculated Values			100.048					
CADMIUM	111		737681.402	10.129	0.226	305.67369	1.29	PPB
Replicates			668181.280	307.946809	816713.031	307.938934	728149.897	301.135325
QC Calculated Values			101.891					
INDIUM	113		873281.392	10.453	0.224	0		PPB
Replicates			783750.917		966224.068		869869.192	
INDIUM	115	Y	3266749.794	9.996	3266749.794	0		PPB
Replicates			2937088.855		3590073.758		3273086.769	
QC Calculated Values				80.269				
ANTIMONY	121		2315684.934	9.898	0.551	293.93560	2.21	PPB
Replicates			2076636.448	286.717450	2533584.359	295.742607	2336833.996	299.346746
QC Calculated Values			97.979					

Sample ID: **6A14005-CCVD** Client ID: 6A14005-CCVD Date/Time: 01/14/16 18:51:30

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
BARIUM	135		689445.492	8.105	0.164	287.03266	1.58	PPB
Replicates			630513.182	285.238207	741663.105	283.663705	696160.190	292.196058
QC Calculated Values			95.678					
BARIUM	137		1186357.613	7.838	0.282	291.30366	1.49	PPB
Replicates			1089023.093	290.529103	1274289.144	287.411435	1195760.601	295.970447
QC Calculated Values			97.101					
TERBIUM	159	Y	4201925.267	8.441	4201925.267	0		PPB
Replicates			3866043.671		4572809.538		4166922.594	
QC Calculated Values				88.322				
THALLIUM	205		6471365.008	7.848	3.049	298.20327	3.57	PPB
Replicates			5901926.441	293.064066	6877439.765	291.115885	6634728.818	310.429853
QC Calculated Values			99.401					
LEAD	206		2090402.311	6.603	0.985	298.29479	1.52	PPB
Replicates			1963766.649	301.868811	2237538.343	293.203388	2069901.943	299.812157
QC Calculated Values			99.432					
LEAD	207		3864488.571	7.061	1.821	297.73428	1.18	PPB
Replicates			3606685.097	299.407569	4150288.619	293.699401	3836491.996	300.095873
QC Calculated Values			99.245					
LEAD	208		6145120.082	7.107	2.895	300.11523	1.77	PPB
Replicates			5700731.361	299.983596	6573753.716	294.883553	6160875.169	305.478528
QC Calculated Values			100.038					
BISMUTH	209	Y	2123680.757	8.140	2123680.757	0		PPB
Replicates			1969798.393		2310741.716		2090502.162	
QC Calculated Values				86.547				
KRYPTON	83		199.447	28.710	153.335	0		MG/L
Replicates			133.334		233.336		231.669	

Sample ID: **6A14005-CCBD** Client ID: 6A14005-CCBD Date/Time: 01/14/16 18:53:12

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)		(Dup. Rel % Diff)
LITHIUM	6	Y	363405.814	13.393	363405.814	0		PPB
Replicates			307238.363		389854.009		393125.070	
QC Calculated Values				90.825				
BERYLLIUM	9		17.222	11.175	0.000	0.03937	24.24	PPB
Replicates			18.333	0.049558	15.000	0.030634	18.333	0.037919
SCANDIUM	45	Y	1657650.260	11.375	1657650.260	0		PPB
Replicates			1446968.907		1810602.634		1715379.239	
QC Calculated Values				79.358				
VANADIUM	51		3341.973	3.894	0.000	0.03749	102.08	PPB
Replicates			3473.609	0.081633	3338.930	0.013635	3213.379	0.017200
CHROMIUM	52		8428.552	2.311	-0.000	-0.00008	123294.	PPB
Replicates			8561.997	0.106813	8518.627	-0.058874	8205.031	-0.048165

Sample ID: **6A14005-CCBD** Client ID: 6A14005-CCBD Date/Time: 01/14/16 18:53:12

ElemName	Mass	Internal	Meas. Int Mean (Intensity 1)	Meas. Int Rsd (Conc 1)	Net Int Mean (Intensity 2)	Conc Mean (Conc 2)	Conc Rsd (Intensity 3)	Units (Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
MANGANESE	55		3192.177	4.145	0.001	0.12049	20.99	PPB
Replicates			3292.209	0.149674	3242.192	0.106659	3042.129	0.105129
COBALT	59		662.245	18.019	0.000	0.03984	34.34	PPB
Replicates			793.365	0.055171	560.016	0.028878	633.353	0.035470
NICKEL	60		252.781	17.166	0.000	0.06372	36.75	PPB
Replicates			302.782	0.090741	230.558	0.049241	225.003	0.051181
COPPER	63		740.768	9.250	0.000	0.08506	26.72	PPB
Replicates			819.478	0.111011	694.469	0.068690	708.358	0.075494
COPPER	65		343.524	6.176	0.000	0.07717	11.61	PPB
Replicates			325.005	0.084651	338.895	0.067243	366.673	0.079604
ZINC	66		762.992	9.649	0.000	0.24869	8.63	PPB
Replicates			680.579	0.256820	786.142	0.224343	822.256	0.264900
ARSENIC	75		-71.436	51.825	0.000	0.06365	31.88	PPB
Replicates			-79.714	0.054292	-30.976	0.086930	-103.617	0.049725
SELENIUM	82		59.445	8.915	0.000	0.07763	35.59	PPB
Replicates			56.667	0.104459	65.556	0.079173	56.111	0.049268
SILVER	107		783.364	8.518	0.000	0.01533	48.51	PPB
Replicates			805.588	0.023620	836.146	0.013149	708.358	0.009232
SILVER	109		747.251	13.905	0.000	0.01545	70.58	PPB
Replicates			797.254	0.026648	816.700	0.014824	627.797	0.004870
CADMIUM	111		77.879	29.011	0.000	0.02993	36.63	PPB
Replicates			98.713	0.041755	81.063	0.027918	53.863	0.020106
INDIUM	113		142233.394	9.052	-0.001	0		PPB
Replicates			130078.048		155723.963		140898.171	
INDIUM	115	Y	3354311.973	9.299	3354311.973	0		PPB
Replicates			3062667.852		3683162.169		3317105.898	
QC Calculated Values				82.421				
ANTIMONY	121		1013.941	10.002	0.000	0.10480	17.22	PPB
Replicates			1104.228	0.125601	1033.387	0.095560	904.208	0.093254
BARIUM	135		136.112	10.269	0.000	0.04891	13.17	PPB
Replicates			143.334	0.055968	145.001	0.047401	120.001	0.043354
BARIUM	137		236.670	20.459	0.000	0.05095	28.22	PPB
Replicates			283.337	0.067049	240.003	0.046408	186.668	0.039395
TERBIUM	159	Y	4137109.746	8.105	4137109.746	0		PPB
Replicates			3871691.904		4513969.683		4025667.651	
QC Calculated Values				86.960				
THALLIUM	205		1280.639	18.637	0.001	0.05254	29.29	PPB
Replicates			1545.953	0.069086	1083.392	0.038646	1212.574	0.049897
LEAD	206		351.395	17.761	0.000	0.04254	28.01	PPB
Replicates			420.842	0.056297	333.339	0.035372	300.005	0.035954
LEAD	207		663.900	14.830	0.000	0.04341	25.00	PPB
Replicates			775.015	0.055875	629.177	0.036083	587.509	0.038267

Sample ID: **6A14005-CCBD** Client ID: 6A14005-CCBD Date/Time: 01/14/16 18:53:12

ElemName	Mass	Internal	Meas. Int Mean	Meas. Int Rsd	Net Int Mean	Conc Mean	Conc Rsd	Units
			(Intensity 1)	(Conc 1)	(Intensity 2)	(Conc 2)	(Intensity 3)	(Conc 3)
			(QC Std % Recov)	(Int Std % Recov)	(Spike % Recov)	(Dilution % Diff)	(Dup. Rel % Diff)	
LEAD	208		1077.812	12.374	0.000	0.04310	21.44	PPB
Replicates			1212.543	0.053772	1075.035	0.037962	945.859	0.037575
BISMUTH	209	Y	2233416.175	9.235	2233416.175	0		PPB
Replicates			2056908.066		2460141.546		2183198.914	
QC Calculated Values				91.019				
KRYPTON	83		138.890	17.027	92.779	0		MG/L
Replicates			160.001		143.334		113.334	

T. Digestion and Distillation Logs

The following logs shall be submitted, as appropriate, for each preparation procedure. The logs shall include: (1) date; (2) sample weights and volumes, with initial sample weight/volume and final volume clearly indicated; (3) sufficient information to unequivocally identify which QC samples (i.e., LCS, PB) correspond to each batch digested; (4) comments describing any significant sample changes or reactions which occur during preparation shall be entered in the log and noted in the SDG Narrative; (5) indication of pH less than 2 or greater than 12, as applicable; (6) identification of the sample preparer(s) [signature (s)].

METALS/MERCURY PREPARATION LOG

Metals Method: 3050B / 6020A
Mercury Method: 7471B
Prepared By: BFP 2713

CompuChem
A Division Of
Liberty Analytical Corp.

Preparation Date: 1-11-16
Preparation Time: 1105
Batch Number: 6011103
Purple Soil

COMPUCHEM SAMPLE ID	CLIENT SAMPLE ID	SAMPLE TYPE	ICP Initial (g)	ICP Final (mL)	HG Initial (g)	HG Final (mL)	*Description Before	*Description After ICP	
6011103-BLK1	PBSUB	MB	1.00	100			NA/NA	CS / CL	
6011103-BS1	MLCSUB	LCS	1.00	100			BR / F	Y / CL	
1601025-04 QC	WS-4	QC	1.05	100			BR / M	Y / CL	
6011103-DUP1	WS-4D	DUP	1.04	100			BR / M	Y / CL	
6011103-MS1	WS-4S	MS	1.01	100			BR / M	Y / CL	
6011103-MSD1	WS-4SD	MSD	1.01	100			BR / M	Y / CL	
1601025-01	WS-1	Sample	1.04	100			BR / M	Y / CL	
1601025-02	WS-2	Sample	1.02	100			BR / M	Y / CL	
1601025-03	WS-3	Sample	1.00	100			BR / M	Y / CL	
1601025-05	WS-5	Sample	1.00	100			BR / M	Y / CL	BP 1-12-16
1601025-06	WS-6	Sample	1.03	100			BR / M	Y / CL	
1601025-07	WS-7	Sample	1.01	100			BR / M	Y / CL	
1601025-08	WS-DUP	Sample	1.02	100			BR / M	Y / CL	
1601025-09	WS-BG	Sample	1.02	100			BR / M	Y / CL	
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Mercury Standards and QC S0 S0.2 S0.5S1 S5 S10 ICV ICB CRI CCV CCB

NOTE: All standards and QC for mercury were prepared at the same day as the associated samples. Refer to the attached. Standard/QC Preparation Log, with date matching the above preparation date, for preparation method and instruction.

Record of Tempature/Time	
Hot Block Temp In:	93° C
Hot Block Temp Out:	95°C
Hot Block Identifier	Hot Block #1
Time Hg in water bath:	
Time Hg out water bath:	
Water Bath Temp In:	C
Water Bath Temp Out:	C
Water Bath Identifier	

MS Reference
ICAP: 1.0mL ICCV-6
Ref #: 5G01015
ICAP: 1.0mL ICCV-4
Ref#: 5G01014
HG: 1.0mL 100ppb Hg
Ref#

LCS Reference
ICAP: 1.0g ERA PPT (540)
Ref #: 4F19055
HG: 0.2g ERA PPT (540)
Ref#

* R=red, BL=blue, Y=yellow, G=green, O=orange, V=violet, W=white, CS=colorless, BR=brown, BK=black GY= grey, F=fine, M=medium, C=coarse, CL=clear, CY=cloudy, OP=opaque

Shading has been applied to unused portions of this worksheet as a substitute for 'Z-out'.

"The presence of the Chemist's/analyst's employee ID number, or signature, on this log attests that strict compliance with the method's SOP has occurred. Any SOP deviations requires documentation by the chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation."

Sample Verification Signature: BP
This signature corroborates that the sample idenification numbers appearing on the digestion cups are the same as those appearing on the field sample containers.

Thermometer - L57923

Reviewed By: CHWhy
Date: 1-12-16

JCF 060611

U. Standard Preparation Information / Internal CoC Documents

Standard Logs

Analytical Standard Parent/Mix Relationships

SDG: 1601025 **Client:** DRAPER ADEN ASSOCIATES

Received: 01/08/2016 **Project:** WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Work Order: 1601025 **PM:** JANET FRAZIER

Standard	Std Mix	Std Mix	Pdf	Description	Amount	Units	Prepared	Expires	Solvent	LotNum	Vendor
4F19055			X	ERA PPT (540)	47.5	mL	6/19/14	1/31/17	n/a	D082-540	ERA
5D30002				ICPMS Internal Standard Solution	500	mL	4/30/15	3/19/16	2% Distilled HN03	n/a	n/a
	4I22018	STOCK	X	High Purity Bismuth-209 (1000ppm) (10006-1)	5	mL	9/22/14	3/19/16	HN03	1331221	High-Purity
	4I22019	STOCK	X	High Purity Lithium-6 (1000ppm) (100029-6I)	10	mL	9/22/14	3/19/16	HNO3	1320701	High-Purity
	4K11014	STOCK	X	High Purity Indium-115 (1000ppm) (100024-1)	5	mL	11/11/14	5/10/16	NA	1410136	High-Purity
	4K11015	STOCK	X	High Purity Scandium-21 (1000ppm) (100048-	5	mL	11/11/14	5/10/16	NA	1414317	High-Purity
	4K11016	STOCK	X	High Purity Terbium-159 (1000ppm) (100057-1	5	mL	11/11/14	5/10/16	2% HNO3	1419913	High-Purity
5G01014			X	Inorganic Ventures Custom 2nd Source (ICCV	250	mL	7/1/15	8/1/16	5% HNO3/Tr. HF	H2-MEB532	Inorganic Ventu
5G01015			X	Inorganic Ventures ICCV-6 2nd Source (ICCV-	250	mL	7/1/15	8/1/16	5% NHO3	H2-MEB532	Inorganic Ventu
5H05007				ICPMS ICV	100	mL	8/5/15	8/1/16	2% Distilled HNO3	n/a	n/a
	5G01014	STOCK	X	Inorganic Ventures Custom 2nd Source (ICCV	0.2	mL	7/1/15	8/1/16	5% HNO3/Tr. HF	H2-MEB532	Inorganic Ventu
	5G01015	STOCK	X	Inorganic Ventures ICCV-6 2nd Source (ICCV-	0.2	mL	7/1/15	8/1/16	5% NHO3	H2-MEB532	Inorganic Ventu
5I08007			X	High Purity CRI-MS (SM-770-032)	100	mL	8/31/15	9/3/16	NA	1524329	High-Purity
5I10001				ICPMS CAL1 S0/ICB/CCB	100	mL	9/9/15	9/4/16	2% Distilled HNO3	NA	n/a
5I10002				ICPMS CAL2/LLICV/LLCCV (S 6020-MS1)	100	mL	9/9/15	9/3/16	2% Distilled HNO3	n/a	n/a
	5I08007	STOCK	X	High Purity CRI-MS (SM-770-032)	0.1	mL	8/31/15	9/3/16	NA	1524329	High-Purity
5I10003				ICPMS CAL3 (S 6020-MS2)	100	mL	9/9/15	9/3/16	2% Distilled HNO3	n/a	n/a
	5I08007	STOCK	X	High Purity CRI-MS (SM-770-032)	0.1	mL	8/31/15	9/3/16	NA	1524329	High-Purity
5I10004				ICPMS CAL4 (S 6020-MS3)	100	mL	9/9/15	9/30/17	2% Distilled HNO3	n/a	n/a
	5I08009	STOCK	X	NSI Custom 28 Element Blend (Q-6042-M)	0.125	mL	9/2/15	9/30/17	5% HNO3 in Water	081913	NSI
5I10005				ICPMS CAL5 (S 6020-MS4)	100	mL	9/9/15	9/30/17	2% Distilled HN03	n/a	n/a
	5I08009	STOCK	X	NSI Custom 28 Element Blend (Q-6042-M)	0.125	mL	9/2/15	9/30/17	5% HNO3 in Water	081913	NSI

Standard	Std Mix	Std Mix	Pdf	Description	Amount	Units	Prepared	Expires	Solvent	LotNum	Vendor
5I10006				ICPMS CAL6 (S 6020-MS5)	100	mL	9/9/15	9/30/17	2% Distilled HNO3	n/a	n/a
	5I08009	STOCK	X	NSI Custom 28 Element Blend (Q-6042-M)	0.125	mL	9/2/15	9/30/17	5% HNO3 in Water	081913	NSI
5I10008				ICPMS CCV	100	mL	9/9/15	9/30/17	2% Distilled HNO3	n/a	n/a
	5I08009	STOCK	X	NSI Custom 28 Element Blend (Q-6042-M)	0.125	mL	9/2/15	9/30/17	5% HNO3 in Water	081913	NSI
5K11003				ICPMS Tune Solution	500	mL	11/11/15	10/2/16	2% Distilled HNO3	n/a	n/a
	5J05004	STOCK	X	High Purity ICP-MSTune Soultion 3 (ICP-MS-T	0.5	mL	6/25/15	10/2/16	NA	1517630	High-Purity
5K16010			X	High Purity LRS 6010C (SM-770-045 Sol. B)	100	mL	11/10/15	11/13/16	5% HNO3	1531418	High-Purity
5K16011			X	High Purity LRS 6010C (SM-770-045 Sol. A)	100	mL	11/10/15	11/13/16	2% HNO3/Tr. HF	1531416	High-Purity
6A15001				ICPMS ICSA	100	mL	1/14/16	4/3/18	Acid Water	n/a	n/a
	5L22008	STOCK	X	Inorganic Ventures ICS Part A (6020ICS-9A)	0.25	mL	4/3/15	4/3/18	2% HNO3	J2-MEB564	Inorganic Ventu
6A15002				ICPMS ICSAB	100	mL	1/14/16	2/1/16	Acid Water	n/a	n/a
	5A12021	STOCK	X	Inorganic Ventures ICS Part B (6020-ICS-9B)	0.25	mL	1/9/15	2/1/16	NHO3	F2-MEB429	Inorganic Ventu
	5L22008	STOCK	X	Inorganic Ventures ICS Part A (6020ICS-9A)	0.25	mL	4/3/15	4/3/18	2% HNO3	J2-MEB564	Inorganic Ventu

ERA
A Waters Company

Reference Materials

4F19053 55 SAB 6-19-14

Certificate of Analysis

Product: Metals in Soil
Catalog Number: 540
Lot No. D082-540
Certificate Issue Date: September 03, 2013
Expiration Date: January 31, 2017
Revision Number: Original

CERTIFICATION

Parameter	Total Concentration	Certified Value[1]	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	48500	8740	4.17	4680 - 12800	3640 - 13800
Antimony	249	108	18.8	D.L. - 232	24.8 - 275
Arsenic	175	151	5.32	122 - 181	107 - 196
Barium	738	262	5.99	217 - 307	193 - 331
Beryllium	149	133	5.26	109 - 157	99.9 - 166
Boron	149	122	5.46	89.3 - 155	73.2 - 171
Cadmium	174	152	6.19	124 - 179	111 - 192
Calcium	11800	6400	5.81	5260 - 7540	4730 - 8060
Chromium	149	117	6.36	92.9 - 141	81.5 - 152
Cobalt	87.9	68.7	5.71	57.0 - 80.4	51.1 - 86.4
Copper	80.7	68.6	11.9	55.5 - 81.8	50.2 - 88.6
Iron	29800	12300	17.5	4950 - 19700	3750 - 20900
Lead	293	254	5.44	207 - 301	192 - 317
Magnesium	5820	3600	3.84	2760 - 4440	2460 - 4740
Manganese	852	563	6.38	458 - 667	436 - 690
Mercury	5.90	5.76	14.7	4.10 - 7.41	2.94 - 8.57
Molybdenum	98.0	78.5	6.86	59.8 - 97.2	54.1 - 110
Nickel	370	315	5.44	259 - 371	234 - 399
Potassium	19500	3040	6.32	2140 - 3940	1900 - 4170
Selenium	185	162	4.36	125 - 198	109 - 214
Silver	50.1	44.3	18.6	33.0 - 55.6	29.4 - 59.3
Sodium	10100	746	10.8	535 - 957	424 - 1070
Strontium	259	112	10.9	89.2 - 135	78.8 - 145
Thallium	298	259	8.17	204 - 315	180 - 338

ISO/IEC GUIDE 34:2009 ACCREDITED REFERENCE MATERIAL PRODUCER CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005 ACCREDITED CHEMICAL TESTING LABORATORY CERTIFICATE NO. 1539.02

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▪ Certificate of Analysis ▪

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number	Recovery
	mg/kg	mg/kg	%			%
Sodium	746	746	100	148	-	-
Strontium	112	112	100	97	-	-
Thallium	259	259	100	184	-	-
Tin	113	113	100	122	-	-
Titanium	256	256	100	120	-	-
Vanadium	116	116	100	171	-	-
Zinc	306	306	100	197	-	-

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HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

1331221

Product Description:

Name:	Bismuth	Source Material:	Bismuth Metal
Part Number:	**10006-1**	Material Purity:	99.9998%
Lot Number:	**1331221**	Matrix:	2% (v/v) HNO_3

Certified Value: 1000 µg/mL ± 3 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3106 (lot number 991212) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.011 g/mL ± 0.002 g/mL @ 20.9°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.1	Cu	<	0.5	Li	<	0.02	Rb	<	0.02	Th	<	0.02
Al	<	0.1	Dy	<	0.02	Lu	<	0.02	Re	<	0.02	Ti	<	0.02
As	<	0.05	Er	<	0.02	Mg	<	1	Rh	<	0.02	Tl	<	0.02
Au	<	0.02	Eu	<	0.02	Mn	<	0.1	Ru	<	0.02	Tm	<	0.02
B	<	1	Fe	<	1	Mo	<	0.02	Sb	<	0.02	U	<	0.1
Ba	<	0.02	Ga	<	0.02	Na	<	3	Sc	<	0.02	V	<	0.05
Be	<	0.02	Gd	<	0.02	Nb	<	0.02	Se	<	0.1	W	<	0.02
Bi		M	Ge	<	0.02	Nd	<	0.02	Si	<	5	Y	<	0.02
Ca	<	1	Hf	<	0.02	Ni	<	0.02	Sm	<	0.02	Yb	<	0.02
Cd	<	0.02	Ho	<	0.02	Os	<	0.02	Sn	<	1	Zn	<	1
Ce	<	0.1	In	<	0.02	Pb	<	2	Sr	<	0.02	Zr	<	0.02
Co	<	0.05	Ir	<	0.02	Pd	<	0.02	Ta	<	0.02			
Cr	<	0.1	K	<	1	Pr	<	0.02	Tb	<	0.02			
Cs	<	0.02	La	<	0.02	Pt	<	0.02	Te	<	0.02			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

4 I 22019

Product Description:

Name:	^{6}Lithium	Source Material:	Lithium (^{6}Li) Carbonate
Part number:	**100029-6I**	Material Purity:	94.38%
Lot number:	**1320701**	Matrix:	1% HNO3

Certified Value: 1000 µg/mL ± 5 µg/mL

The Certified value is based on gravimetric and volumetric preparation and verified using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.006 µg/mL ± 0.002 µg/mL @ 23.0 °C

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the NBS 602 method.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

4K11014

Product Description:

Name:	Indium	Source Material:	Indium Metal
Part Number:	**100024-1**	Material Purity:	99.999%
Lot Number:	**1410136**	Matrix:	2% (v/v) HNO_3

Certified Value: 1000 µg/mL ± 3 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3124a (lot number 110516) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.010 g/mL ± 0.002 g/mL @ 21.1°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.02	Cu	<	0.1	Li	<	0.02	Rb	<	0.02	Th	<	0.02
Al	<	0.1	Dy	<	0.02	Lu	<	0.02	Re	<	0.02	Ti	<	0.02
As	<	0.05	Er	<	0.02	Mg	<	0.5	Rh	<	0.02	Tl	<	0.02
Au	<	0.02	Eu	<	0.02	Mn	<	0.1	Ru	<	0.02	Tm	<	0.02
B	<	1	Fe	<	1	Mo	<	0.02	Sb	<	0.02	U	<	0.1
Ba	<	0.02	Ga	<	0.02	Na	<	3	Sc	<	0.02	V	<	0.05
Be	<	0.02	Gd	<	0.02	Nb	<	0.02	Se	<	0.1	W	<	0.02
Bi	<	0.02	Ge	<	0.02	Nd	<	0.02	Si	<	5	Y	<	0.02
Ca	<	5	Hf	<	0.02	Ni	<	0.02	Sm	<	0.02	Yb	<	0.02
Cd	<	1	Ho	<	0.02	Os	<	0.02	Sn	<	1	Zn	<	1
Ce	<	0.02	In		M	Pb	<	1	Sr	<	0.02	Zr	<	0.02
Co	<	0.05	Ir	<	0.02	Pd	<	0.02	Ta	<	0.02			
Cr	<	0.1	K	<	1	Pr	<	0.02	Tb	<	0.02			
Cs	<	0.02	La	<	0.02	Pt	<	0.02	Te	<	0.02			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

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Certificate of Analysis

4K11015

Product Description:

Name:	Scandium	Source Material:	Scandium Oxide
Part Number:	**100048-1**	Material Purity:	99.995%
Lot Number:	**1414317**	Matrix:	2% (v/v) HNO_3

Certified Value: 1000 µg/mL ± 4 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3148a (lot number 100701) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.011 g/mL ± 0.002 g/mL @ 21.9°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.02	Cu	<	0.5	Nb	<	0.02	Sn	<	1	REE	<	10
Al	<	5	Fe	<	1	Ni	<	0.02	Sr	<	0.02			
As	<	0.05	Ga	<	0.02	Os	<	0.02	Ta	<	0.02	REE = Rare Earth		
Au	<	0.02	Ge	<	0.02	Pb	<	0.5	Te	<	0.02	Element		
B	<	1	Hf	<	2	Pd	<	0.02	Th		35			
Ba	<	0.02	In	<	0.02	Pt	<	0.1	Ti	<	1			
Be	<	0.02	Ir	<	0.02	Rb	<	1	Tl	<	0.02			
Bi	<	0.02	K	<	1	Re	<	0.02	U	<	0.1			
Ca		20	Li	<	0.02	Rh	<	0.02	V	<	0.05			
Cd	<	0.02	Mg	<	0.5	Ru	<	0.02	W	<	0.02			
Co	<	0.05	Mn	<	0.1	Sb	<	0.02	Zn	<	5			
Cr	<	0.1	Mo	<	0.02	Se	<	0.1	Zr	<	1			
Cs	<	0.02	Na	<	3	Si	<	5	Sc		M			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

HIGH-PURITY STANDARDS
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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

4K11016

Product Description:

Name:	Terbium	Source Material:	Terbium Oxide
Part Number:	**100057-1**	Material Purity:	99.99%
Lot Number:	**1419913**	Matrix:	2% (v/v) HNO3

Certified Value: 1000 µg/mL ± 3 µg/mL

The Certified value is based on gravimetric and volumetric preparation, and confirmed against SRM 3157 (lot number 100518) by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Density: 1.012 g/mL ± 0.002 g/mL @ 22.3°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot at 1000 µg/mL via ICP analysis. The values are reported in µg/L.

Ag	<	0.02	Cu	<	0.1	Nb	<	0.02	Sn	<	1	REE	<	100
Al	<	0.1	Fe	<	5	Ni	<	0.02	Sr	<	0.02			
As	<	0.05	Ga	<	0.02	Os	<	0.02	Ta	<	0.02	REE = Rare Earth Element		
Au	<	0.02	Ge	<	0.02	Pb	<	0.05	Te	<	0.02			
B	<	1	Hf	<	0.02	Pd	<	0.02	Th	<	0.02			
Ba	<	0.02	In	<	0.02	Pt	<	1	Ti	<	1			
Be	<	0.02	Ir	<	0.02	Rb	<	0.02	Tl	<	0.02			
Bi	<	0.02	K	<	1	Re	<	0.02	U	<	0.1			
Ca	<	5	Li	<	1	Rh	<	0.02	V	<	0.05			
Cd	<	0.02	Mg	<	0.5	Ru	<	0.02	W	<	0.02			
Co	<	0.05	Mn	<	1	Sb	<	0.02	Zn	<	5			
Cr	<	0.1	Mo	<	0.02	Se	<	0.1	Zr	<	0.02			
Cs	<	0.02	Na	<	3	Si	<	25	Tb		M			

Preparation Information:

The standard solution is prepared using high purity materials and assayed by analytical methods for conformity prior to use. This standard was prepared using the methods developed at NIST for SRM Spectrometric Standard Solutions under appropriate laboratory conditions.

Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

INORGANIC VENTURES™
300 Technology Drive
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CERTIFICATE OF ANALYSIS

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICCV-4
Lot Number:	H2-MEB532078
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	110 000 µg/L ea: Mo, Sb, Sn, Ti

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**110 000.00 ± 900.00 µg/L**	**Molybdenum, Mo**	**110 000.00 ± 700.00 µg/L**
Tin, Sn	**110 000.00 ± 700.00 µg/L**	**Titanium, Ti**	**110 000.00 ± 900.00 µg/L**

Certified Density: 1.026 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

5G01014

11.1 Certification Issue Date

June 13, 2014

11.2 Expiration Date

EXPIRES
1 AUG 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician

Zachary Saunders

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Brian Alexander

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 • USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICCV-6
Lot Number:	H2-MEB532079
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 100 000 µg/L ea:
	Ca, K, Na,
	600 000 µg/L ea:
	Mg,
	510 000 µg/L ea:
	Fe,
	260 000 µg/L ea:
	Al,
	110 000 µg/L ea:
	As, B, Pb,
	Se, Tl, Zn,
	55 000 µg/L ea:
	Ag, Ba, Be,
	Cd, Co, Cr3,
	Cu, Mn, Ni,
	V

3.0 CERTIFIED VALUES AND UNCERTAINTIES

5G01015

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	070514
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

11.1 Certification Issue Date

June 13, 2014

11.2 Expiration Date

EXPIRES
1 AUG 2016

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Zach Saunders
Product Documentation Technician

Zachary Saunders

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Brian Alexander

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

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Charleston, SC 29423
Phone (843) 767-7900
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Certificate of Analysis

Product Description:

Part Number: **SM-770-032**
Lot Number: **1524329**
Matrix: Tr HF + 2% HNO_3
Purity: 99.95% - 99.9999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Al	30.00 ± 0.15	3101a	140903	Mn	1.00 ± 0.01	3132	050429
Sb	2.00 ± 0.02	3102a	061229	Mo	1.00 ± 0.01	3134	891307
As	1.00 ± 0.01	3103a	100818	Ni	1.00 ± 0.01	3136	120619
Ba	10.00 ± 0.06	*		Se	5.00 ± 0.05	3149	100901
Be	1.00 ± 0.01	3105a	090514	Ag	1.00 ± 0.01	3151	992212
Cd	1.00 ± 0.01	3108	130116	Tl	1.00 ± 0.01	3158	993012
Cr	2.00 ± 0.01	3112a	030730	Sn	1.00 ± 0.01	*	
Co	1.00 ± 0.01	3113	000630	V	5.00 ± 0.03	3165	992706
Cu	2.00 ± 0.01	3114	121207	Zn	2.00 ± 0.01	3168a	120629
Pb	1.00 ± 0.01	3128	101026				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2
* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

5I08007

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**August 31, 2015**
Shipped Date:	**September 3, 2015**
Expiration Date:	**September 3, 2016**
Certificate Issue Date:	**September 2, 2015**

Quality Information:

ACLASS ACCREDITED TESTING

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

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Certificate of Analysis

Custom 28 Element Blend

Catalog Number: Q-6042-M
Lot Number: 090215
Manufacture Date: 09/02/15

Expiration: 09/30/2017
Matrix: 5% HNO3 in Water
Hazards: Irritant, Corrosive

Analyte	Gravimetric Concentration (mg/L)
Aluminum (Al)	1000 ± 0.339
Iron (Fe)	1000 ± 0.380
Magnesium (Mg)	1000 ± 0.339
Sodium (Na)	1000 ± 0.339
Potassium (K)	1000 ± 8.05
Calcium (Ca)	1000 ± 0.339
Antimony (Sb)	100 ± 0.805
Arsenic (As)	100 ± 0.805
Barium (Ba)	100 ± 0.034
Beryllium (Be)	100 ± 0.805
Boron (B)	100 ± 0.805
Cadmium (Cd)	100 ± 0.034
Copper (Cu)	100 ± 0.805
Cobalt (Co)	100 ± 0.805
Chromium (Cr)	100 ± 0.805
Nickel (Ni)	100 ± 0.805
Lead (Pb)	100 ± 0.805
Manganese (Mn)	100 ± 0.034
Molybdenum (Mo)	100 ± 0.805
Selenium (Se)	100 ± 0.805
Silicon (Si)	100 ± 0.034
Silver (Ag)	100 ± 0.805
Strontium (Sr)	100 ± 0.805
Thallium (Tl)	100 ± 0.034
Tin (Sn)	100 ± 0.034
Titanium (Ti)	100 ± 0.034
Vanadium (V)	100 ± 0.805
Zinc (Zn)	100 ± 0.034

Packaging, Storage, Instructions For Use

Store tightly capped at room temperature (15-30°C).

This product is packaged in HDPE as a whole volume ready to use sample. No secondary preparative steps are necessary. Small aliquots should be poured out of the bottle rather than directly pipetted out of bottle in order to prevent contamination or premature degradation.

5I08009

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34:2009
Certificate AR-1571

ISO 9001:2008 UL Registered Firm - Certificate # 10002343 QM08

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO/IEC 17025:2005
Certificate AT-1690

Catalog Number: Q-6042-M
Lot Number: 090215

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this standard.

Method: This standard was verified gravimetrically.

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.
All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our standards is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Intended Uses

- Calibration of analytical instruments
- Validation of analytical methods
- Preparation of working level reference materials, i.e. "check standards"
- Detection limit studies

Uncertainty

The ± uncertainty associated with the concentration is the expanded manufacturing uncertainty at 95% confidence interval (CI) with K=2.

Homogeneity

This product was thoroughly mixed in production and is guaranteed homogeneous.

Ewart Morris

Ewart Morris, Inorganics Technical Manager

Cynthia K. Loftus

Cynthia K. Loftus, Quality Manager

Mark Hammersla

Mark Hammersla, President

HIGH-PURITY STANDARDS
www.highpuritystandards.com

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Certificate of Analysis

Product Description:

Name:	ICP-MS Tuning Solution 3
Part Number:	**ICP-MS-TS-3**
Lot Number:	**1517630**
Matrix:	2% HNO_3
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Be	10.0 ± 0.1	3105a	090514	Pb	10.00 ± 0.06	3128	101026
Co	10.00 ± 0.05	3113	000630	Mg	10.00 ± 0.05	3131a	140110
In	10.00 ± 0.05	3124a	110516				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via inductively coupled plasma optical emission spectrometry (ICP-OES) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2
* Refer to Traceability Information, Section d

Density: 1.009 g/mL ± 0.002 g/mL @ 22.3°C

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

5705004

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**June 25, 2015**
Shipped Date:	**10/2/2015**
Expire Date:	**10/2/2016**
Certificate Issue Date:	**July 7, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-770-045**
	Solution B
Lot Number:	**1531418**
Matrix:	5% HNO_3
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Ca	5000 ± 25	3109a	130213	K	5000 ± 25	3141a	140813
Mg	5000 ± 25	3131a	140110	Na	5000 ± 25	3152a	120715

The Certified values are based on gravimetric and volumetric preparation, and verified against *SRM 3100 series* developed by National Institute of Standards and Technology (NIST) via either inductively coupled plasma optical emission spectrometry (ICP-OES) or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

5K1601

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**November 10, 2015**
Shipped Date:	**November 13, 2015**
Expiration Date:	**November 13, 2016**
Certificate Issue Date:	**November 12, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Part Number:	**SM-770-045**
	Solution A
Lot Number:	**1531416**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.95% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	200 ± 2	3101a	140903	Pb	10.00 ± 0.06	3128	101026
Sb	30.00 ± 0.18	*		Mn	10.0 ± 0.1	3132	050429
As	10.0 ± 0.1	3103a	100818	Mo	50.0 ± 0.3	3134	891307
Ba	200.0 ± 1.2	*		Ni	10.00 ± 0.05	3136	120619
Be	5.00 ± 0.05	3105a	090514	Se	10.0 ± 0.1	3149	100901
Bi	20.0 ± 0.1	3106	991212	Ag	5.00 ± 0.03	3151	992212
B	50.00 ± 0.25	3107	110830	Tl	30.00 ± 0.15	3158	993012
Cd	5.00 ± 0.03	3108	130116	Sn	50.0 ± 0.3	*	
Cr	10.00 ± 0.05	3112a	030730	Ti	50.0 ± 0.3	3162a	130925
Co	20.0 ± 0.1	3113	000630	V	20.00 ± 0.12	3165	992706
Cu	5.00 ± 0.03	3114	121207	Zn	30.00 ± 0.15	3168a	120629
Fe	200 ± 1	3126a	140812				

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via either inductively coupled plasma optical emission spectrometry (ICP-OES) or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2

* Refer to Traceability Information, Section d

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by ICP-OES for conformity prior to use. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived

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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions or second sources.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date:	**November 10, 2015**
Shipped Date:	**November 13, 2015**
Expiration Date:	**November 13, 2016**
Certificate Issue Date:	**November 12, 2015**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9A
Lot Number:	J2-MEB564101
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	21 215 µg/mL ea: Cl-,
	3 000 µg/mL ea: Ca,
	2 500 µg/mL ea: Fe, Na,
	2 000 µg/mL ea: C,
	1 000 µg/mL ea: Al, K, Mg, P, S,
	20 µg/mL ea: Mo, Ti

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 003 ± 5 µg/mL	Calcium, Ca	3 010 ± 14 µg/mL
Carbon, C	2 006 ± 10 µg/mL	Chloride, Chloride	21 280.0 ± 100.0 µg/mL
Iron, Fe	2 508 ± 11 µg/mL	Magnesium, Mg	1 003 ± 5 µg/mL
Molybdenum, Mo	20.06 ± 0.12 µg/mL	Phosphorus, P	1 003 ± 5 µg/mL
Potassium, K	1 003 ± 4 µg/mL	Sodium, Na	2 508 ± 11 µg/mL
Sulfur, S	1 003 ± 8 µg/mL	Titanium, Ti	20.06 ± 0.13 µg/mL

Certified Density: 1.059 g/mL (measured at 20 ± 1 °C)

Assay Information:

5L22068

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	ICP Assay	3154	892205
S	Acidimetric	84L	84L
Ti	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-FIlter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000625	M	Eu	<	0.000104	s	Na	<		M	Se	<	0.006254	O	Zn	<	0.004236
s	Al	<		s	Fe	<		O	Nb	<	0.005295	O	Si		0.052950	M	Zr	<	0.000416
M	As	<	0.005212	M	Ga	<	0.000833	M	Nd	<	0.000104	M	Sm	<	0.000104				
M	Au	<	0.001461	M	Gd	<	0.000104	O	Ni	<	0.006354	M	Sn	<	0.000833				
M	B	<	0.008756	M	Ge	<	0.013447	M	Os	<	0.000104	O	Sr		0.016944				
M	Ba	<	0.000833	M	Hf	<	0.000104	s	P	<		M	Ta	<	0.000416				
M	Be	<	0.000104	M	Hg	<	0.000417	M	Pb	<	0.004169	M	Tb	<	0.000104				
M	Bi	<	0.000104	M	Ho	<	0.000104	M	Pd	<	0.000104	M	Te	<	0.001355				
s	Ca	<		M	In	<	0.000416	M	Pr	<	0.000104	M	Th	<	0.000104				
O	Cd	<	0.003177	M	Ir	<	0.000104	M	Pt	<	0.000104	s	Ti	<					
M	Ce	<	0.000416	s	K	<		M	Rb		0.013135	M	Tl	<	0.001250				
M	Co	<	0.002293	M	La	<	0.000104	M	Re	<	0.000416	M	Tm	<	0.000104				
M	Cr		0.020641	O	Li		0.001037	M	Rh	<	0.000104	M	U	<	0.000104				
M	Cs	<	0.000416	M	Lu	<	0.000104	M	Ru	<	0.000104	O	V	<	0.002118				
O	Cu	<	0.009531	s	Mg	<		s	S	<		M	W		0.003440				
M	Dy	<	0.000104	O	Mn	<	0.004236	M	Sb	<	0.001667	M	Y	<	0.000104				
M	Er	<	0.000104	s	Mo	<		O	Sc	<	0.000741	M	Yb	<	0.000104				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). *It is* the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- *For more information*, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 03, 2015

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 03, 2018**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
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CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 883 01
ACCREDITED Reference Material Producer Certificate 883 02

2.0 PRODUCT DESCRIPTION

5A12021

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-9B
Lot Number:	F2-MEB429070
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea: Co, Cr3, Cu, Mn, Ni, V, 10 µg/mL ea: As, Cd, Se, Zn, 5 µg/mL ea: Ag

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic	10.00 ± 0.06 µg/mL	Cadmium	10.00 ± 0.06 µg/mL
Chromium+3	20.00 ± 0.14 µg/mL	Cobalt	20.01 ± 0.13 µg/mL
Copper	20.00 ± 0.13 µg/mL	Manganese	20.01 ± 0.13 µg/mL
Nickel	20.01 ± 0.15 µg/mL	Selenium	10.00 ± 0.07 µg/mL
Silver	5.002 ± 0.032 µg/mL	Vanadium	20.00 ± 0.14 µg/mL
Zinc	10.00 ± 0.06 µg/mL		

Certified Density: 1.015 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	010713
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3181	000630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	992106
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

- N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at 20 ± 4°C. Do not pipette from the container. Do not return removed aliquots to container.

- **Low Silver Note:** This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 17, 2012

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date

EXPIRES
01 FEB 2016

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Stephan Blaakman
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Internal Chain of Custody

12/30/2015

Metals Internal Chain of Custody Sheet

Dept: PM

Batch: 6011103 **Status:** Batched **Analysis:** 6020A ICP MS (UPDATE IV)

Lab Id	Client_Id	Received	Container	Preparation	Preservative	Matrix		
1601025-01 E	WS-1	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-02 E	WS-2	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-03 E	WS-3	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-04 K	WS-4	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-05 E	WS-5	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-06 E	WS-6	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-07 E	WS-7	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-08 E	WS-DUP	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		
1601025-09 E	WS-BG	01/08/16	4b_4OZ WM Glass, cool	EPA 3050B MOD	Store cool at 4°C	Soil		

Relinquished By	Date/Time	Received By	Date/Time
Cooler #1	1-11-16 0837	[signature]	1-11-16 0837
[signature]	1-11-16 1608	Cooler #1	1-11-16 1608

EXTRACT CHAIN OF CUSTODY

6011103

Liberty Analytical

Prepared using: METALS - EPA 3050B MOD

Matrix: Soil

Lab Number	Client ID	Analysis
1601025-01	WS-1	6020A ICP MS (UPDATE IV)
1601025-02	WS-2	6020A ICP MS (UPDATE IV)
1601025-03	WS-3	6020A ICP MS (UPDATE IV)
1601025-04	WS-4	6020A ICP MS (UPDATE IV)
1601025-05	WS-5	6020A ICP MS (UPDATE IV)
1601025-06	WS-6	6020A ICP MS (UPDATE IV)
1601025-07	WS-7	6020A ICP MS (UPDATE IV)
1601025-08	WS-DUP	6020A ICP MS (UPDATE IV)
1601025-09	WS-BG	6020A ICP MS (UPDATE IV)
6011103-BLK1	PBSUB	QC
6011103-BS1	MLCSUB	QC
6011103-DUP1	WS-4D	QC
6011103-MS1	WS-4S	QC
6011103-MSD1	WS-4SD	QC

[signature]	1-12-16 1053	ICP MS Storage	1-12-16 1053
Relinquished By	Date	Received By	Date
[signature]	1/14/16	[signature]	1/14/16
Relinquished By	Date	Received By	Date
[signature]	1/14/16	[signature]	1/14/16
Relinquished By	Date	Received By	Date
Relinquished By	Date	Received By	Date

1/21/2016

JANET FRAZIER

DRAPER ADEN ASSOCIATES

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

WorkOrder: 1601025

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER ADEN ASSOCIATES **Work:** 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39 **Sdg:** 1601025

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1601025-01	WS-1	Soil	01/07/2016 12:00	01/08/2016 09:06
1601025-02	WS-2	Soil	01/07/2016 12:20	01/08/2016 09:06
1601025-03	WS-3	Soil	01/07/2016 12:55	01/08/2016 09:06
1601025-04	WS-4	Soil	01/07/2016 13:20	01/08/2016 09:06
1601025-05	WS-5	Soil	01/07/2016 13:50	01/08/2016 09:06
1601025-06	WS-6	Soil	01/07/2016 14:10	01/08/2016 09:06
1601025-07	WS-7	Soil	01/07/2016 14:35	01/08/2016 09:06
1601025-08	WS-DUP	Soil	01/07/2016 12:30	01/08/2016 09:06
1601025-09	WS-BG	Soil	01/07/2016 11:30	01/08/2016 09:06

ANALYSES DATA PACKAGE COVER PAGE

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Laboratory: Liberty Analytical

SDG: 1601025

Client Sample Id:	Analysis:	Lab Sample Id:
WS-1	SW 8260B	1601025-01
WS-2	SW 8260B	1601025-02
WS-3	SW 8260B	1601025-03
WS-4	SW 8260B	1601025-04
WS-5	SW 8260B	1601025-05
WS-6	SW 8260B	1601025-06
WS-7	SW 8260B	1601025-07
WS-DUP	SW 8260B	1601025-08

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Ken Grzybowski

Date: 01/20/2016 Title: President

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

Liberty Analytical

I. SAMPLE DATA PACKAGE

GC/MS by SW-846

The Sample Data Package shall contain data for all samples in one Work Order/Sample Delivery Group (SDG), as follows:

A. SDG Narrative

B. Chain of Custody Records

C. Sample Preparation and Analysis Holding Time Data
(HOLDING TIME SUMMARY)

D. Surrogate Recovery Results
(SURROGATE STANDARD RECOVERY)

E. Laboratory Control Sample Results
(LCS/LCS DUPLICATE RECOVERY)

F. Matrix Spike Results
(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

G. Batch Summary
(PREPARATION BATCH SUMMARY)

H. Analysis Sequence Summary
(ANALYSIS SEQUENCE SUMMARY)

I. Instrument Performance Check
(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

J. Internal Standard Results
(INTERNAL STANDARD AREA AND RT SUMMARY)

K. Target Compound Results – Forms and Raw Data
(ANALYSIS DATA SHEET)

L. Initial Calibration Data – Forms and Raw Data
(INITIAL CALIBRATION DATA)

M. Continuing Calibration Data – Forms and Raw Data
(CONTINUING CALIBRATION CHECK)

N. BFB / DFTPP or FC43 - Raw Data

O. Blank Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

P. Laboratory Control Sample Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

Q. Matrix Spike Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

R. GPC Data (if applicable)

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Info / Manual Integration Summary

A. SDG Narrative

Liberty Analytical

501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE

SDG # 1601025
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: WS-1, WS-2, WS-3, WS-4, WS-5, WS-6, WS-7, WS-DUP and WS-BG.

The 9 soil samples listed above were received intact, properly refrigerated at 0.3°C, with proper documentation, in sealed shipping containers, on January 8, 2016. The samples were scheduled for the requested analyses of the volatile fraction. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1601025 are included in the sample data sections

Analysis holding time requirements were met for the analysis of all of the samples.

The % moisture values of the samples are range from 14 to 34 %..

There were no volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in any of the samples.

All of the system monitoring compounds met recovery criteria in the analyses of the samples.

All of the internal standards met response and retention time criteria in the analyses of the samples.

Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

Manual quantitations were performed on one or more of the process files associated with this SDG.

The associated method blanks met all quality control criteria.

The associated Laboratory Control Samples (LCS) met most accuracy criteria.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Kenneth Grzybowski
President
January 20, 2016

GC and GC/MS Column and Trap Specifications Table

Columns Utilized	Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
	COLUMNS				
	GC Laboratory				
DRO/ORO	Restek	RTX-5	0.53	1.0	30
	Restek	RTX-SMS	0.53	1.0	30
√	Restek	clpest	0.32	0.5	30
√	Restek	clpest2	0.32	0.42	30
	J&W	DB-210	0.53	1.0	30
RSK	J&W	GS-GASPRO	0.32	N/A	30
	GC Volatiles Laboratory				
GRO	Restek	RTX-Volatiles	0.53	2.0	30
	GC/MS Volatiles Laboratory				
	Restek	RTX-VMS	0.18	1.0	20
√	Supelco	SPB-624	0.32	1.8	60
	Supelco	SPB-624	0.53	3.0	75
	Phenomonex	ZB-624	0.32	1.8	60
	GC/MS Semivolatiles Laboratory				
√	Restek	RTX-5Sil MS	0.32	0.25	30
	HPLC Laboratory				
PAH	Supelco	Supelcosil LC-PAH	4.6	5.0	15 cm
PAH	Supelco	Discovery RP Amide C16	4.6	5.0	25 cm
EXP	Restek	Pinnacle Cyano	4.6	5.0	25 cm
EXP	Restek	Allure C18	4.6	5.0	25 cm
	TRAPS				
	GC and GC/MS Volatiles Laboratory				
	Supelco J (BETXTRAP™)	* 7.7 cm Carbopack C			
		* 1.2 cm Carbopack B			
√	Supelco K (Vocarb3000)	* 10 cm of Carbopack B (Graphitized Carbons)			
		* 6 cm of Carboxen 1000 (Carbon molecular sieves)			
		* 1 cm of Carboxen 1001 (Carbon molecular sieves)			

Rev. 30

This table contains the GC columns (and volatile organic trap) used for the analysis of volatiles, semivolatiles, pesticides, and Aroclors by the requested analytical methods. Please see the SDG Narrative(s) for the specific fraction(s) relative to this SDG.
Note: This table also contains HPLC columns.

Liberty Analytical

Liberty Analytical's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is Liberty Analytical's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.). This policy is also applicable to non-CLP data packages.

Revision 7 (01/12/2011)

Liberty Analytical

Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC/HPLC chemists. An Extracted Ion Current Profile (EICP) or a GC/HPLC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC/HPLC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak. The most common reasons for performing manual integrations/editing are: the compound was not found by the automatic integration routine, the compound was incorrectly integrated by the automatic integration routine, and the co-eluting compounds were incorrectly integrated by the automatic integration routine.

H - Denotes that the data reviewer, GC/MS operator, or GC/HPLC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate GC/MS library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

These codes will appear in the GC/MS and GC/HPLC raw data.

Revision 8 (01/29/2011)

Liberty Analytical

ORGANIC DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on the appropriate reporting form for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 µg/L, but a concentration of 3 µg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥ 85%), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the lower of the two values is reported and flagged with a P on the reporting form. When the RPD is equal to or less than 40%, our policy is to also report the lower of the two values, although the choice could be a project specific issue. These SW-846 policies are consistent with Method 8000C. If Method 8000B is required, the higher of the two values is reported. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a concentration greater than the upper level of the calibration range, the sample or extract will be diluted and reanalyzed. All such compounds with a concentration greater than the upper level of the calibration range will have the result flagged with an E on the appropriate reporting form for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration of an analyte exceeds the upper calibration range, the DL suffix is appended to the sample number on the appropriate reporting form for the more diluted sample, and **all** reported concentrations on that form are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate reporting forms are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses <u>are not combined</u> on a single reporting form.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.2 SOW document, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an “S” flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor. The “S” flag is not utilized for non CLP analyses.

* This flag is applied to a target analyte when any QC acceptance criterion has not been met for that analyte. The flag appears on the reporting form of the associated QC analysis.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Chain of Custody Records

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the Work Order/SDG.

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp., Liberty Analytical 501 Madison Ave. Cary, NC 27513 (800) 833 5097 Fax (919) 379-4050 Attn: Cathy Dover

TKC 1/7/16

Client: Watauga County, NC **Attn:** Mr. J.V. Potter **Address:** 336 Landfill Road, Boone, NC 28607 **Phone:** (828) 264-5305 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** Watauga County Landfill **Location:** Watauga County, NC **Event:** 2016 Soil Sampling **DAA JN:** 6520-39 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** ~~BATCH~~ ~~Sample Collection for Project Complete?~~ YES **Carrier:** UPS **Tracking Number:** 1Z2373010197512129

Box 1: Matrix
SW Surface Water, GW Groundwater, L Leachate, S Soil, T Trip Blank, E Equipment Blank, P Product, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (Specify), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, AG Amber Glass, V VOA, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

GENERAL NOTES:
1. See attached Target Analyte Lists for 8260 and Inorganic Parameters.
2. Report soil results based on dry weight.
3. Report LOQ/MDL + estimated results.
4. Report results in mg/kg.
5. Reporting limits to meet NC P5RG limits as specified in e-mail dated 11/27/2015 (attached).

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Inorganics (Total) Methods 6010/6020	VOAs 5035A/8260C (MeOH Preserved)	VOAs 5035A/8260C w/ Ultra Pure Blank Water (DI Water)	% Moisture	8260C - 5 mL purge (See attached TA list)	COD SM5220D	BOD SM 5210B	Total Phosphorous - Method 365.4	Sample Depth	reg. SOIL	TKP	BOD COD SUB
Box 4 - Sample Type					G	G	G	G	G	G	G	G				
Box 3 - Filtered/Unfiltered					-	-	-	-	U	-	-	-				
Required pH of Sample					-	-	-	-	<2	-	-	-				
Box 2 - Preservative					H	G	G	H	A	H	H	H				
Box 5 - Sample Container Type					1-4oz CG	1-40ml V	2-40ml V	1-4oz CG	3-40ml V	1-8 oz CG						
WS-1	1/7	1200	S	5	X	X	X	X					Sample Depth: 1-3"	1601025-01	—	—
WS-2	1/7	1220	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-02	1601030-01	1601031-01
WS-3	1/7	1255	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-03	↓ -02	↓ -02
WS-4	1/7	1320	S	5	X	X	X	X					Sample Depth: 6-9"	-04	—	—
WS-5	1/7	1350	S	6	X	X	X	X		*			Sample Depth: 2-5"	-05	1601030-03	1601031-03
WS-6	1/7	1410	S	5	X	X	X	X					Sample Depth: 3-6"	-06	—	—
WS-7	1/7	1435	S	5	X	X	X	X					Sample Depth: 2-5"	-07	—	—
~~WS-8~~			~~S~~		~~X~~	~~X~~	~~X~~	~~X~~					~~Sample Depth:~~	—	—	—
WS-DUP	1/7	1230	S	5	X	X	X	X					Sample Depth: 3-6"	-08	—	—
WS-BG	1/7	1130	S	2	X			X					Sample Depth: 2-4"	-09	—	—
Trip Blank	1/7		T	3					X							
WS-4MS	1/7	1320	S	4	X	X	X							1601025-04		
WS-4MSD	1/7	1320	S	4	X	X	X							↓ -04		

Laboratory Provided 1601026-01

Clients Special Instructions:

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.3°C Received on Ice ✓ Yes ____ No
Describe problems, if any:

* received 8oz jar for WS-5, but not noted on COC for BOD, COD & Total P — per Karen this sample needs these parameters (DB) 1/8/16

Sampler Name (Print): Tyler Emery	Date: 1/7/16	#1 Relinquished by (Signature): Tyler Emery	Date: 1/7/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date: 1/8/16	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name: CompuChem / LIBERTY	Time: 0906	Company Name:	Time:	

TKC 1/5/2016 page 1 of 4 KW 1-5-16

Watauga '2016 Soil Sampling Event
JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Analyte List

Common name	CAS RN	
Antimony	(Total)	Inorganics Soil only
Arsenic	(Total)	
Barium	(Total)	
Beryllium	(Total)	
Cadmium	(Total)	
Chromium	(Total)	
Cobalt	(Total)	
Copper	(Total)	
Lead	(Total)	
Nickel	(Total)	
Selenium	(Total)	
Silver	(Total)	
Thallium	(Total)	
Vanadium	(Total)	
Zinc	(Total)	
Acetone	67-64-1	8260 Soil and trip blank
Acrylonitrile	107-13-1	
Benzene	71-43-2	
Bromochloromethane	74-97-5	
Bromodichloromethane	75-27-4	
Bromoform; Tribromomethane	75-25-2	
Carbon disulfide	75-15-0	
Carbon tetrachloride	56-23-5	
Chlorobenzene	108-90-7	
Chloroethane; Ethyl chloride	75-00-3	
Chloroform; Trichloromethane	67-66-3	
Dibromochloromethane; Chlorodibromomethane	124-48-1	
1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	
trans-1,4-Dichloro-2-butene	110-57-6	
1,1-Dichloroethane; Ethylidene chloride	75-34-3	
1,2-Dichloroethane; Ethlyene dichloride	107-06-2	
1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	
1,2-Dichlorpropane; Propylene dichloride	78-87-5	
cis-1,3-Dichlorpropene	10061-01-5	
trans-1,3-Dichlorpropene	10061-02-6	
Ethylbenzene	100-41-4	
2-hexanone; Methyl butyl ketone	591-78-6	
Methyl bromide; Bromomethane	74-83-9	
Methyl chloride; Chloromethane	74-87-3	
Methylene bromide Dibromomethane	74-95-3	
Methylene chloride; Dichloromethane	75-09-2	
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	
Methyl iodide; Iodomethane	74-88-4	
4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	
Styrene	100-42-5	
1,1,1,2-Tetrachloroethane	630-20-6	
1,1,2,2-Tetrachloroethane	79-34-5	
Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	
Toluene	108-88-3	
1,1,1-Trochlorethane; Methylchloroform	71-55-6	
1,1,2-Trichloroethane	79-00-5	
Trichloroethylene; Trichlorethene	79-01-6	
Trichlorofluoromethane; CFC-11	75-69-4	
1,2,3-Trichloropropane	96-18-4	
Vinyl acetate	108-05-4	
Vinyl chloride	75-01-4	
Xylenes	1330-20-7	

See page 4 of 4 for reporting limits.

Watauga 2016 Soil Sampling Event
JN 6520-39
1-5-16 KWS

Karen Weber

From: Cathy Dover <cdover@compuchemlabs.com>
Sent: Friday, November 27, 2015 2:27 PM
To: Karen Weber
Cc: Janet Frazier; Kathy Olsen
Subject: RE: Watauga Upcoming Soil Sampling - Special Project
Attachments: APP.I LIST AGAINST PSRG LIMITS.pdf

Hi Karen,

I went through all of our reporting limits for the APP. I VOA compounds and metals elements and there are few we would need to use the MDL to meet the lowest PSRG. We can meet all of the metals by using 6020A for the prep/analysis. There are two VOA compounds (1,2,3-trichloropropane & vinyl chloride) that have extremely low PSRG limits and our MDL is higher...

Chromium (7440-47-3) does not appear on the PSRG limit table.

I have attached the APP.I compound/element list with the RL/MDL info. Let me know if you need anything else.

Have a great weekend!

Cathy

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Karen Weber [mailto:KWeber@daa.com]
Sent: Tuesday, November 24, 2015 1:51 PM
To: Cathy Dover
Cc: Janet Frazier; Kathy Olsen
Subject: Watauga Upcoming Soil Sampling - Special Project

Watauga 2016 Soil Sampling Event JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Labreporting limits + PSRG review

	Common name	CAS RN	RL mg/kg 6020A	RL mg/kg 6010C (Metals)	mg/kg PSRG/Low	6020A MDL mg/kg
*	Antimony	(Total)	1	3	0.9	0.115
*	Arsenic	(Total)	1	1	0.68	0.269
	Barium	(Total)	5	20		
	Beryllium	(Total)	0.5	0.5		
	Cadmium	(Total)	0.5	0.5		
7440-47-3 ←	Chromium	(Total)	6	1		
	Cobalt	(Total)	0.5	2		
	Copper	(Total)	1	0.5		
	Lead	(Total)	0.5	1		
	Nickel	(Total)	0.5	1		
	Selenium	(Total)	2.5	1		
	Silver	(Total)	0.5	0.5		
7440-28-0 *	Thallium	(Total)	0.5	3	0.28	0.0164
	Vanadium	(Total)	2.5	2		
	Zinc	(Total)	2.5	3		

FOR VOA: RL/PSRG/MDL (in mg/kg) ✓ if RL does not meet

	Common name	CAS RN	RL/PSRG/MDL (mg/kg)
	Acetone	67-64-1	0.0125
	Acrylonitrile	107-13-1	0.050
	Benzene	71-43-2	0.005
	Bromochloromethane	74-97-5	0.005
	Bromodichloromethane	75-27-4	0.005
	Bromoform; Tribromomethane	75-25-2	0.005
	Carbon disulfide	75-15-0	0.005
	Carbon tetrachloride	56-23-5	0.005
	Chlorobenzene	108-90-7	0.005
	Chloroethane; Ethyl chloride	75-00-3	0.005
	Chloroform; Trichloromethane	67-66-3	0.005
	Dibromochloromethane; Chlorodibromomethane	124-48-1	0.005
	1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	0.005
	1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	0.005
	o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	0.005
	p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	0.005
*	trans-1,4-Dichloro-2-butene	110-57-6	0.020/0.0084/MDL→0.0018
	1,1-Dichloroethane; Ethylidene chloride	75-34-3	0.005
*	1,2-Dichloroethane; Ethlyene dichloride	107-06-2	0.005/0.002/MDL→0.00027
	1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	0.005
	cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	0.005
	trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	0.005
*	1,2-Dichlorpropane; Propylene dichloride	78-87-5	0.005/0.0032/MDL→0.00063
*	cis-1,3-Dichlorpropene	10061-01-5	0.005/0.0023/MDL→0.00039
*	trans-1,3-Dichlorpropene	10061-02-6	0.005/0.0023/MDL→0.00041
	Ethylbenzene	100-41-4	0.005
	2-hexanone; Methyl butyl ketone	591-78-6	0.0125
	Methyl bromide; Bromomethane	74-83-9	0.005
	Methyl chloride; Chloromethane	74-87-3	0.005
	Methylene bromide Dibromomethane	74-95-3	0.005
	Methylene chloride; Dichloromethane	75-09-2	0.005
	Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	0.0125
	Methyl iodide; Iodomethane	74-88-4	0.005
	4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	0.0125
	Styrene	100-42-5	0.005
	1,1,1,2-Tetrachloroethane	630-20-6	0.005
*	1,1,2,2-Tetrachloroethane	79-34-5	0.005/0.0012/MDL→0.00037
	Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	0.005
	Toluene	108-88-3	0.005
	1,1,1-Trichlorethane; Methylchloroform	71-55-6	0.005
*	1,1,2-Trichloroethane	79-00-5	0.005/0.0032/MDL→0.00072
	Trichloroethylene; Trichlorethene	79-01-6	0.005
	Trichlorofluoromethane; CFC-11	75-69-4	0.005
**	1,2,3-Trichloropropane	96-18-4	0.005/0.000032/MDL→0.00091
	Vinyl acetate	108-05-4	0.005
**	Vinyl chloride	75-01-4	0.005/0.00019/MDL→0.00042
	Xylenes	1330-20-7	0.005

* meets using MDL
** MDL ↑ than PSRG (lowest)

page 4 of 4

WORK ORDER

Printed: 1/13/2016 6:29:33PM

1601025

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601025** **CASE:**	**Status:**	**Reviewed**

Report To:

DRAPER ADEN ASSOCIATES
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540) 552-0444
Fax: -

Invoice To:

WATAUGA COUNTY, NC
MR. J.V. POLTER
842 WESTKING STREET/COURTHOUSE, SUITE 1
BOONE, NC 28607
Phone :-
Fax: -

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/08/2016 19:04

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?: **NO** Spike Level: **FULL Spike**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**

USE 1601025-04 (WS-4) FOR QC*VOA 5PPB SOIL=WATAUGASOIL.SUB*6020A
MTLS=Sb,As,Ba,Be,Cd,Cr,Co,Cu,Pb,Ni,Se,Ag,Tl,V & Zn*NEED LEVEL 2 & LEVEL 4*RPT. IN mg/kg

Analysis	Due	TAT	Expires	Received	Comments
1601025-01 WS-1 [Soil] Sampled 01/07/2016 12:00 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:00	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:00	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:00	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:00	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
1601025-02 WS-2 [Soil] Sampled 01/07/2016 12:20 Eastern					
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:20	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:20	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:20	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:20	01/08/2016 09:06	
1601025-03 WS-3 [Soil] Sampled 01/07/2016 12:55 Eastern					
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:55	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:55	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:55	01/08/2016 09:06	
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:55	01/08/2016 09:06	

WORK ORDER

Printed: 1/13/2016 6:29:33PM

1601025

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601025** **CASE:**	**Status:**	**Batched**

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/08/2016 19:04

J & B Flags?: **YES**	TICS?: **NO**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**
Metals ND to? **MDL**	Spike Level: **FULL Spike**		

USE 1601025-04 (WS-4) FOR QC*VOA 5PPB SOIL=WATAUGASOIL.SUB*6020A
MTLS=Sb,As,Ba,Be,Cd,Cr,Co,Cu,Pb,Ni,Se,Ag,Tl,V & Zn*NEED LEVEL 2 & LEVEL 4*RPT. IN mg/kg

Analysis	Due	TAT	Expires	Received	Comments
1601025-04 WS-4 [Soil] Sampled 01/07/2016 13:20 Eastern					**USE FOR QC**
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 13:20	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 13:20	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 13:20	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 13:20	01/08/2016 09:06	
1601025-05 WS-5 [Soil] Sampled 01/07/2016 13:50 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 13:50	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 13:50	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 13:50	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 13:50	01/08/2016 09:06	
1601025-06 WS-6 [Soil] Sampled 01/07/2016 14:10 Eastern					
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 14:10	01/08/2016 09:06	
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 14:10	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 14:10	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 14:10	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
1601025-07 WS-7 [Soil] Sampled 01/07/2016 14:35 Eastern					
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 14:35	01/08/2016 09:06	
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 14:35	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 14:35	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 14:35	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)
1601025-08 WS-DUP [Soil] Sampled 01/07/2016 12:30 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 12:30	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 12:30	01/08/2016 09:06	
VOA-Terracore Invoice	01/28/2016 16:00	20	01/21/2016 12:30	01/08/2016 09:06	
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 12:30	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)

WORK ORDER

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1601025

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601025** **CASE:**	**Status:**	**Reviewed**

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/08/2016 19:04

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?: **NO** Spike Level: **FULL Spike**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**

USE 1601025-04 (WS-4) FOR QC*VOA 5PPB SOIL=WATAUGASOIL.SUB*6020A
MTLS=Sb,As,Ba,Be,Cd,Cr,Co,Cu,Pb,Ni,Se,Ag,Tl,V & Zn*NEED LEVEL 2 & LEVEL 4*RPT. IN mg/kg

Analysis	Due	TAT	Expires	Received	Comments
1601025-09 WS-BG [Soil] Sampled 01/07/2016 11:30 Eastern					
Solids, Dry Weight	01/28/2016 16:00	20	07/05/2016 11:30	01/08/2016 09:06	
6020A ICP MS (UPDATE IV)	01/28/2016 16:00	20	07/05/2016 11:30	01/08/2016 09:06	

C. Sample Preparation and Analysis Holding Time Data

(HOLDING TIME SUMMARY)

Sample collection, receipt, preparation and analysis dates with method holding time requirements.

HOLDING TIME SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
WS-1	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.3	14	
WS-2	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.3	14	
WS-3	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.3	14	
WS-4	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.2	14	
WS-5	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.3	14	
WS-6	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.3	14	
WS-7	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.3	14	
WS-DUP	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	5.4	14	

Liberty Analytical

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D. Surrogate Recovery Results

(SURROGATE STANDARD RECOVERY)

SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

SDG: 1601025 Instrument: 5972hp59

Sequence: 6A12005 Calibration: 5123005

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
Blank (6011205-BLK1) mg/kg wet				
Lab File ID: 6011205-BLK1R59.d	Analyzed: 01/12/16 15:22			
Dibromofluoromethane	0.05000	89	71 - 141	
1,2-Dichloroethane-d4	0.05000	96	70 - 139	
Toluene-d8	0.05000	87	72 - 123	
Bromofluorobenzene	0.05000	92	65 - 131	
LCS (6011205-BS1) mg/kg wet				
Lab File ID: 6011205-BS159.d	Analyzed: 01/12/16 15:54			
Dibromofluoromethane	0.05000	100	71 - 141	
1,2-Dichloroethane-d4	0.05000	100	70 - 139	
Toluene-d8	0.05000	104	72 - 123	
Bromofluorobenzene	0.05000	103	65 - 131	
Matrix Spike (6011205-MS1) mg/kg dry				
Lab File ID: 6011205-MS159.d	Analyzed: 01/12/16 16:32			
Dibromofluoromethane	0.07518	96	71 - 141	
1,2-Dichloroethane-d4	0.07518	94	70 - 139	
Toluene-d8	0.07518	102	72 - 123	
Bromofluorobenzene	0.07518	100	65 - 131	
Matrix Spike Dup (6011205-MSD1) mg/kg dry				
Lab File ID: 6011205-MSD159.d	Analyzed: 01/12/16 17:04			
Dibromofluoromethane	0.07324	94	71 - 141	
1,2-Dichloroethane-d4	0.07324	94	70 - 139	
Toluene-d8	0.07324	93	72 - 123	
Bromofluorobenzene	0.07324	96	65 - 131	
WS-4 (1601025-04) mg/kg dry				
Lab File ID: 1601025-0459.d	Analyzed: 01/12/16 18:14			
Dibromofluoromethane	0.08168	93	71 - 141	
1,2-Dichloroethane-d4	0.08168	100	70 - 139	
Toluene-d8	0.08168	96	72 - 123	
Bromofluorobenzene	0.08168	96	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

SDG: 1601025 Instrument: 5972hp59

Sequence: 6A12005 Calibration: 5123005

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
WS-1 (1601025-01) mg/kg dry				
Lab File ID: 1601025-0159.d	Analyzed: 01/12/16 18:46			
Dibromofluoromethane	0.04997	96	71 - 141	
1,2-Dichloroethane-d4	0.04997	109	70 - 139	
Toluene-d8	0.04997	100	72 - 123	
Bromofluorobenzene	0.04997	102	65 - 131	
WS-2 (1601025-02) mg/kg dry				
Lab File ID: 1601025-0259.d	Analyzed: 01/12/16 19:17			
Dibromofluoromethane	0.05120	96	71 - 141	
1,2-Dichloroethane-d4	0.05120	104	70 - 139	
Toluene-d8	0.05120	99	72 - 123	
Bromofluorobenzene	0.05120	105	65 - 131	
WS-3 (1601025-03) mg/kg dry				
Lab File ID: 1601025-0359.d	Analyzed: 01/12/16 19:49			
Dibromofluoromethane	0.07440	94	71 - 141	
1,2-Dichloroethane-d4	0.07440	101	70 - 139	
Toluene-d8	0.07440	97	72 - 123	
Bromofluorobenzene	0.07440	98	65 - 131	
WS-5 (1601025-05) mg/kg dry				
Lab File ID: 1601025-0559.d	Analyzed: 01/12/16 20:21			
Dibromofluoromethane	0.06605	97	71 - 141	
1,2-Dichloroethane-d4	0.06605	107	70 - 139	
Toluene-d8	0.06605	97	72 - 123	
Bromofluorobenzene	0.06605	106	65 - 131	
WS-6 (1601025-06) mg/kg dry				
Lab File ID: 1601025-0659.d	Analyzed: 01/12/16 20:53			
Dibromofluoromethane	0.07973	95	71 - 141	
1,2-Dichloroethane-d4	0.07973	104	70 - 139	
Toluene-d8	0.07973	95	72 - 123	
Bromofluorobenzene	0.07973	99	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

SDG: 1601025 Instrument: 5972hp59

Sequence: 6A12005 Calibration: 5123005

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
WS-7 (1601025-07) mg/kg dry				
Lab File ID: 1601025-0759.d	Analyzed: 01/12/16 21:24			
Dibromofluoromethane	0.06612	96	71 - 141	
1,2-Dichloroethane-d4	0.06612	102	70 - 139	
Toluene-d8	0.06612	97	72 - 123	
Bromofluorobenzene	0.06612	103	65 - 131	
WS-DUP (1601025-08) mg/kg dry				
Lab File ID: 1601025-0859.d	Analyzed: 01/12/16 21:56			
Dibromofluoromethane	0.06259	96	71 - 141	
1,2-Dichloroethane-d4	0.06259	103	70 - 139	
Toluene-d8	0.06259	90	72 - 123	
Bromofluorobenzene	0.06259	97	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

E. Laboratory Control Sample Results

(LCS/LCS DUPLICATE RECOVERY)

LCS recovery or LCS/LCSD recovery with relative percent difference, and quality control acceptance criteria.

LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011205-BS1 Matrix: Soil Client ID: VLCSBD Batch: 6011205

ANALYTE	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC.	Q	QC LIMITS REC.
Chloromethane	0.05000	0.05058	101		52 - 150
Vinyl chloride	0.05000	0.05405	108		58 - 148
Bromomethane	0.05000	0.05250	105		50 - 150
Chloroethane	0.05000	0.05213	104		52 - 150
Trichlorofluoromethane	0.05000	0.05459	109		54 - 144
1,1-Dichloroethene	0.05000	0.04940	99		51 - 146
Acetone	0.1250	0.1154	92		50 - 147
Iodomethane	0.05000	0.04360	87		50 - 150
Carbon disulfide	0.05000	0.04529	91		56 - 140
Methylene chloride	0.05000	0.04705	94		50 - 137
Acrylonitrile	0.5000	0.4785	96		50 - 136
trans-1,2-Dichloroethene	0.05000	0.04773	95		65 - 122
1,1-Dichloroethane	0.05000	0.04845	97		66 - 123
Vinyl acetate	0.05000	0.05114	102		50 - 150
cis-1,2-Dichloroethene	0.05000	0.05188	104		69 - 127
2-Butanone	0.1250	0.1183	95		66 - 132
Bromochloromethane	0.05000	0.05199	104		73 - 126
Chloroform	0.05000	0.05180	104		75 - 128
1,1,1-Trichloroethane	0.05000	0.05208	104		71 - 127
Carbon tetrachloride	0.05000	0.05288	106		67 - 132
1,2-Dichloroethane	0.05000	0.05223	104		56 - 141
Benzene	0.05000	0.05004	100		67 - 126
Trichloroethene	0.05000	0.05082	102		69 - 130
1,2-Dichloropropane	0.05000	0.05177	104		73 - 121
Dibromomethane	0.05000	0.05073	101		64 - 131
Bromodichloromethane	0.05000	0.05248	105		75 - 133
cis-1,3-Dichloropropene	0.05000	0.05123	102		87 - 127

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LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011205-BS1 Matrix: Soil Client ID: VLCSBD Batch: 6011205

ANALYTE	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC.	Q	QC LIMITS REC.
4-Methyl-2-pentanone	0.1250	0.1245	100		67 - 125
Toluene	0.05000	0.05187	104		73 - 121
trans-1,3-Dichloropropene	0.05000	0.05209	104		64 - 131
1,1,2-Trichloroethane	0.05000	0.05476	110		67 - 123
Tetrachloroethene	0.05000	0.05269	105		72 - 130
2-Hexanone	0.1250	0.1302	104		51 - 128
Dibromochloromethane	0.05000	0.05407	108		68 - 127
1,2-Dibromoethane	0.05000	0.05298	106		69 - 127
Chlorobenzene	0.05000	0.05208	104		71 - 120
1,1,1,2-Tetrachloroethane	0.05000	0.05289	106		82 - 120
Ethylbenzene	0.05000	0.05342	107		76 - 121
Styrene	0.05000	0.05294	106		68 - 126
Bromoform	0.05000	0.05042	101		64 - 134
1,1,2,2-Tetrachloroethane	0.05000	0.05070	101		66 - 128
1,2,3-Trichloropropane	0.05000	0.05321	106		58 - 137
trans-1,4-Dichloro-2-butene	0.2000	0.2024	101		50 - 150
1,4-Dichlorobenzene	0.05000	0.04801	96		72 - 115
1,2-Dichlorobenzene	0.05000	0.05114	102		67 - 126
1,2-Dibromo-3-chloropropane	0.05000	0.04907	98		72 - 127

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F. Matrix Spike Results

(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

MS/MSD recovery, relative percent difference and quality control acceptance criteria

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

WS-4MS

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011205-MS1 % Solid: 68 Matrix: Soil Lab Source ID: 1601025-04 Source Sample: WS-4

ANALYTE	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	MS CONCENTRATION (mg/kg dry)	MS % REC.	Q	QC LIMITS REC.
Chloromethane	0.07518	0.0082 U	0.06073	81		52 - 150
Vinyl chloride	0.07518	0.0082 U	0.06321	84		58 - 148
Bromomethane	0.07518	0.0082 U	0.06031	80		50 - 150
Chloroethane	0.07518	0.0082 U	0.06060	81		52 - 150
Trichlorofluoromethane	0.07518	0.0082 U	0.05526	73		54 - 144
1,1-Dichloroethene	0.07518	0.0082 U	0.05985	80		51 - 146
Acetone	0.1880	0.020 U	0.1969	105		50 - 147
Iodomethane	0.07518	0.0082 U	0.05518	73		50 - 150
Carbon disulfide	0.07518	0.0082 U	0.05419	72		56 - 140
Methylene chloride	0.07518	0.0082 U	0.06161	82		50 - 137
Acrylonitrile	0.7518	0.082 U	0.6281	84		50 - 136
trans-1,2-Dichloroethene	0.07518	0.0082 U	0.05668	75		65 - 122
1,1-Dichloroethane	0.07518	0.0082 U	0.05912	79		66 - 123
Vinyl acetate	0.07518	0.0082 U	0.06014	80		50 - 150
cis-1,2-Dichloroethene	0.07518	0.0082 U	0.06124	81		69 - 127
2-Butanone	0.1880	0.020 U	0.1569	83		66 - 132
Bromochloromethane	0.07518	0.0082 U	0.06384	85		73 - 126
Chloroform	0.07518	0.0082 U	0.06489	86		75 - 128
1,1,1-Trichloroethane	0.07518	0.0082 U	0.06072	81		71 - 127
Carbon tetrachloride	0.07518	0.0082 U	0.05672	75		67 - 132
1,2-Dichloroethane	0.07518	0.0082 U	0.06363	85		56 - 141
Benzene	0.07518	0.0082 U	0.05909	79		67 - 126
Trichloroethene	0.07518	0.0082 U	0.05488	73		69 - 130
1,2-Dichloropropane	0.07518	0.0082 U	0.06154	82		73 - 121
Dibromomethane	0.07518	0.0082 U	0.06487	86		64 - 131
Bromodichloromethane	0.07518	0.0082 U	0.06336	84		75 - 133
cis-1,3-Dichloropropene	0.07518	0.0082 U	0.06104	81	*	87 - 127
4-Methyl-2-pentanone	0.1880	0.020 U	0.1788	95		67 - 125
Toluene	0.07518	0.0082 U	0.06139	82		73 - 121
trans-1,3-Dichloropropene	0.07518	0.0082 U	0.06480	86		64 - 131

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

WS-4MS

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011205-MS1 % Solid: 68 Matrix: Soil Lab Source ID: 1601025-04 Source Sample: WS-4

ANALYTE	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	MS CONCENTRATION (mg/kg dry)	MS % REC.	Q	QC LIMITS REC.
1,1,2-Trichloroethane	0.07518	0.0082 U	0.07136	95		67 - 123
Tetrachloroethene	0.07518	0.0082 U	0.05059	67	*	72 - 130
2-Hexanone	0.1880	0.020 U	0.1876	100		51 - 128
Dibromochloromethane	0.07518	0.0082 U	0.06818	91		68 - 127
1,2-Dibromoethane	0.07518	0.0082 U	0.06635	88		69 - 127
Chlorobenzene	0.07518	0.0082 U	0.05980	80		71 - 120
1,1,1,2-Tetrachloroethane	0.07518	0.0082 U	0.06560	87		82 - 120
Ethylbenzene	0.07518	0.0082 U	0.05571	74	*	76 - 121
Styrene	0.07518	0.0082 U	0.05820	77		68 - 126
Bromoform	0.07518	0.0082 U	0.06702	89		64 - 134
1,1,2,2-Tetrachloroethane	0.07518	0.0082 U	0.06713	89		66 - 128
1,2,3-Trichloropropane	0.07518	0.0082 U	0.06787	90		58 - 137
trans-1,4-Dichloro-2-butene	0.3007	0.033 U	0.2516	84		50 - 150
1,4-Dichlorobenzene	0.07518	0.0082 U	0.05027	67	*	72 - 115
1,2-Dichlorobenzene	0.07518	0.0082 U	0.05206	69		67 - 126
1,2-Dibromo-3-chloropropane	0.07518	0.0082 U	0.06314	84		72 - 127
Xylenes (total)		0.0082 U	0.1703	0		76 - 130

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

WS-4MSD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011205-MSD1 % Solid: 68 Matrix: Soil Lab Source ID: 1601025-04 Source Sample: WS-4

ANALYTE	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Chloromethane	0.07324	0.05954	81	2		25	52 - 150
Vinyl chloride	0.07324	0.05832	80	8		25	58 - 148
Bromomethane	0.07324	0.05953	81	1		25	50 - 150
Chloroethane	0.07324	0.06316	86	4		25	52 - 150
Trichlorofluoromethane	0.07324	0.05548	76	0.4		25	54 - 144
1,1-Dichloroethene	0.07324	0.05700	78	5		14	51 - 146
Acetone	0.1831	0.2026	111	3		25	50 - 147
Iodomethane	0.07324	0.05536	76	0.3		25	50 - 150
Carbon disulfide	0.07324	0.05081	69	6		25	56 - 140
Methylene chloride	0.07324	0.05938	81	4		25	50 - 137
Acrylonitrile	0.7324	0.6598	90	5		25	50 - 136
trans-1,2-Dichloroethene	0.07324	0.05528	75	2		25	65 - 122
1,1-Dichloroethane	0.07324	0.05668	77	4		25	66 - 123
Vinyl acetate	0.07324	0.05347	73	12		25	50 - 150
cis-1,2-Dichloroethene	0.07324	0.05819	79	5		25	69 - 127
2-Butanone	0.1831	0.1760	96	12		25	66 - 132
Bromochloromethane	0.07324	0.06444	88	0.9		25	73 - 126
Chloroform	0.07324	0.06298	86	3		25	75 - 128
1,1,1-Trichloroethane	0.07324	0.05797	79	5		25	71 - 127
Carbon tetrachloride	0.07324	0.05267	72	7		25	67 - 132
1,2-Dichloroethane	0.07324	0.06585	90	3		25	56 - 141
Benzene	0.07324	0.05809	79	2		11	67 - 126
Trichloroethene	0.07324	0.05218	71	5		14	69 - 130
1,2-Dichloropropane	0.07324	0.05691	78	8		25	73 - 121
Dibromomethane	0.07324	0.06291	86	3		25	64 - 131
Bromodichloromethane	0.07324	0.06198	85	2		25	75 - 133
cis-1,3-Dichloropropene	0.07324	0.05854	80	4	*	25	87 - 127
4-Methyl-2-pentanone	0.1831	0.1789	98	0.03		25	67 - 125
Toluene	0.07324	0.05790	79	6		13	73 - 121
trans-1,3-Dichloropropene	0.07324	0.06274	86	3		25	64 - 131
1,1,2-Trichloroethane	0.07324	0.06716	92	6		25	67 - 123

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW 8260B

WS-4MSD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011205-MSD1 % Solid: 68 Matrix: Soil Lab Source ID: 1601025-04 Source Sample: WS-4

ANALYTE	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Tetrachloroethene	0.07324	0.04613	63	9	*	25	72 - 130
2-Hexanone	0.1831	0.1748	95	7		25	51 - 128
Dibromochloromethane	0.07324	0.06477	88	5		25	68 - 127
1,2-Dibromoethane	0.07324	0.06518	89	2		25	69 - 127
Chlorobenzene	0.07324	0.05502	75	8		13	71 - 120
1,1,1,2-Tetrachloroethane	0.07324	0.06006	82	9		25	82 - 120
Ethylbenzene	0.07324	0.05022	69	10	*	25	76 - 121
Styrene	0.07324	0.05422	74	7		25	68 - 126
Bromoform	0.07324	0.06436	88	4		25	64 - 134
1,1,2,2-Tetrachloroethane	0.07324	0.06561	90	2		25	66 - 128
1,2,3-Trichloropropane	0.07324	0.06714	92	1		25	58 - 137
trans-1,4-Dichloro-2-butene	0.2930	0.2572	88	2		25	50 - 150
1,4-Dichlorobenzene	0.07324	0.04535	62	10	*	25	72 - 115
1,2-Dichlorobenzene	0.07324	0.04960	68	5		25	67 - 126
1,2-Dibromo-3-chloropropane	0.07324	0.05936	81	6		25	72 - 127
Xylenes (total)		0.1549	0	9		25	76 - 130

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G. Batch Summary

(PREPARATION BATCH SUMMARY)

Client Sample IDs, cross-referenced with Lab Sample IDs, with sample preparation details.

PREPARATION BATCH SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Batch: 6011205 Matrix: Soil Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (g)	FINAL VOL/WT (mL)
WS-1	1601025-01	01/12/16 15:22	6.13	5.00
WS-2	1601025-02	01/12/16 15:22	5.71	5.00
WS-3	1601025-03	01/12/16 15:22	5.04	5.00
WS-4	1601025-04	01/12/16 15:22	4.51	5.00
WS-5	1601025-05	01/12/16 15:22	5.44	5.00
WS-6	1601025-06	01/12/16 15:22	4.74	5.00
WS-7	1601025-07	01/12/16 15:22	5.34	5.00
WS-DUP	1601025-08	01/12/16 15:22	5.25	5.00
VBLKBD	6011205-BLK1	01/12/16 15:22	5.00	5.00
VLCSBD	6011205-BS1	01/12/16 15:22	5.00	5.00
WS-4MS	6011205-MS1	01/12/16 15:22	4.90	5.00
WS-4MSD	6011205-MSD1	01/12/16 15:22	5.03	5.00

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H. Analysis Sequence Summary

(ANALYSIS SEQUENCE SUMMARY)

ANALYSIS SEQUENCE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 5L30001 Calibration: 5123005 Instrument: 5972hp59

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
BFBAB	5L30001-TUN1	5L30001-TUN159.d	12/29/15 17:04:00
VSTD010AB	5L30001-CAL2	5L30001-CAL259.d	12/29/15 17:28:00
VSTD005AB	5L30001-CAL1	5L30001-CAL159.d	12/29/15 18:00:00
VSTD020AB	5L30001-CAL3	5L30001-CAL359.d	12/29/15 18:32:00
VSTD200AB	5L30001-CAL6	5L30001-CAL659.d	12/29/15 19:04:00
VSTD100AB	5L30001-CAL5	5L30001-CAL559.d	12/29/15 19:36:00
VSTD050AB	5L30001-CAL4	5L30001-CAL459.d	12/29/15 20:07:00
VSTD050AB	5L30001-SCV1	5L30001-SCV159.d	12/29/15 21:11:00

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ANALYSIS SEQUENCE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
BFBBD	6A12005-TUN1	6A12005-TUN159.d	01/12/16 13:48:00
VSTD050BD	6A12005-ICV1	6A12005-ICV159.d	01/12/16 14:13:00
VBLKBD	6011205-BLK1	6011205-BLK1R59.d	01/12/16 15:22:00
VLCSBD	6011205-BS1	6011205-BS159.d	01/12/16 15:54:00
WS-4MS	6011205-MS1	6011205-MS159.d	01/12/16 16:32:00
WS-4MSD	6011205-MSD1	6011205-MSD159.d	01/12/16 17:04:00
WS-4	1601025-04	1601025-0459.d	01/12/16 18:14:00
WS-1	1601025-01	1601025-0159.d	01/12/16 18:46:00
WS-2	1601025-02	1601025-0259.d	01/12/16 19:17:00
WS-3	1601025-03	1601025-0359.d	01/12/16 19:49:00
WS-5	1601025-05	1601025-0559.d	01/12/16 20:21:00
WS-6	1601025-06	1601025-0659.d	01/12/16 20:53:00
WS-7	1601025-07	1601025-0759.d	01/12/16 21:24:00
WS-DUP	1601025-08	1601025-0859.d	01/12/16 21:56:00

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I. Instrument Performance Check

(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601025
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Lab File ID:	5L30001-TUN159.d	Injection Date:	12/29/15
Instrument ID:	5972hp59	Injection Time:	17:04
Sequence:	5L30001	Lab Sample ID:	5L30001-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	22.8	PASS
75	30 - 60% of 95	48.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.08	PASS
173	Less than 2% of 174	0	PASS
174	(Greater than 50% of 95)	92.1	PASS
175	5 - 9% of 174	7.35	PASS
176	(Greater than 95% but less then 101%)	96.3	PASS
177	5 - 9% of 176	6.5	PASS

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MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601025
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Lab File ID:	6A12005-TUN159.d	Injection Date:	01/12/16
Instrument ID:	5972hp59	Injection Time:	13:48
Sequence:	6A12005	Lab Sample ID:	6A12005-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	24.1	PASS
75	30 - 60% of 95	48.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.96	PASS
173	Less than 2% of 174	0	PASS
174	(Greater than 50% of 95)	89.6	PASS
175	5 - 9% of 174	7.29	PASS
176	(Greater than 95% but less then 101%)	96.7	PASS
177	5 - 9% of 176	6.42	PASS

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J. Internal Standard Results

(INTERNAL STANDARD AREA AND RT SUMMARY)

INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601025
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Sequence:	5L30001	Instrument:	5972hp59
		Calibration:	5123005

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (5L30001-SCV1)			Lab File ID: 5L30001-SCV159.d			Analyzed: 12/29/15 21:11			
Fluorobenzene	374232	12.423	376208	12.418	99	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5	279223	14.898	289175	14.894	97	50 - 200	0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	141207	16.604	138667	16.6	102	50 - 200	0.0040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601025
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Sequence:	6A12005	Instrument:	5972hp59
		Calibration:	5123005

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (6A12005-ICV1)			Lab File ID: 6A12005-ICV159.d			Analyzed: 01/12/16 14:13			
Fluorobenzene	391920	12.438	376208	12.418	104	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	286476	14.913	289175	14.894	99	50 - 200	0.0190	+/-0.50	
1,4-Dichlorobenzene-d4	133856	16.619	138667	16.6	97	50 - 200	0.0190	+/-0.50	
Blank (6011205-BLK1)			Lab File ID: 6011205-BLK1R59.d			Analyzed: 01/12/16 15:22			
Fluorobenzene	369342	12.443	391920	12.438	94	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5	275993	14.908	286476	14.913	96	50 - 200	-0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	121110	16.624	133856	16.619	90	50 - 200	0.0050	+/-0.50	
LCS (6011205-BS1)			Lab File ID: 6011205-BS159.d			Analyzed: 01/12/16 15:54			
Fluorobenzene	369004	12.44	391920	12.438	94	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	270729	14.915	286476	14.913	95	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	133267	16.621	133856	16.619	100	50 - 200	0.0020	+/-0.50	
Matrix Spike (6011205-MS1)			Lab File ID: 6011205-MS159.d			Analyzed: 01/12/16 16:32			
Fluorobenzene	376393	12.441	391920	12.438	96	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5	262692	14.916	286476	14.913	92	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	122515	16.622	133856	16.619	92	50 - 200	0.0030	+/-0.50	
Matrix Spike Dup (6011205-MSD1)			Lab File ID: 6011205-MSD159.d			Analyzed: 01/12/16 17:04			
Fluorobenzene	360816	12.442	391920	12.438	92	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5	258011	14.917	286476	14.913	90	50 - 200	0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	119534	16.623	133856	16.619	89	50 - 200	0.0040	+/-0.50	
WS-4 (1601025-04)			Lab File ID: 1601025-0459.d			Analyzed: 01/12/16 18:14			
Fluorobenzene	348588	12.442	391920	12.438	89	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5	240692	14.908	286476	14.913	84	50 - 200	-0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	98275	16.623	133856	16.619	73	50 - 200	0.0040	+/-0.50	
WS-1 (1601025-01)			Lab File ID: 1601025-0159.d			Analyzed: 01/12/16 18:46			
Fluorobenzene	352432	12.439	391920	12.438	90	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	245949	14.914	286476	14.913	86	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	104763	16.62	133856	16.619	78	50 - 200	0.0010	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601025
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Sequence:	6A12005	Instrument:	5972hp59
		Calibration:	5123005

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
WS-2 (1601025-02)			Lab File ID: 1601025-0259.d			Analyzed: 01/12/16 19:17			
Fluorobenzene	347030	12.437	391920	12.438	89	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	247757	14.912	286476	14.913	86	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	100576	16.618	133856	16.619	75	50 - 200	-0.0010	+/-0.50	
WS-3 (1601025-03)			Lab File ID: 1601025-0359.d			Analyzed: 01/12/16 19:49			
Fluorobenzene	326282	12.433	391920	12.438	83	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	227396	14.908	286476	14.913	79	50 - 200	-0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	88593	16.624	133856	16.619	66	50 - 200	0.0050	+/-0.50	
WS-5 (1601025-05)			Lab File ID: 1601025-0559.d			Analyzed: 01/12/16 20:21			
Fluorobenzene	343824	12.439	391920	12.438	88	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	243984	14.904	286476	14.913	85	50 - 200	-0.0090	+/-0.50	
1,4-Dichlorobenzene-d4	103233	16.62	133856	16.619	77	50 - 200	0.0010	+/-0.50	
WS-6 (1601025-06)			Lab File ID: 1601025-0659.d			Analyzed: 01/12/16 20:53			
Fluorobenzene	334379	12.434	391920	12.438	85	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5	241510	14.909	286476	14.913	84	50 - 200	-0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	102719	16.615	133856	16.619	77	50 - 200	-0.0040	+/-0.50	
WS-7 (1601025-07)			Lab File ID: 1601025-0759.d			Analyzed: 01/12/16 21:24			
Fluorobenzene	332411	12.436	391920	12.438	85	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5	237399	14.902	286476	14.913	83	50 - 200	-0.0110	+/-0.50	
1,4-Dichlorobenzene-d4	98624	16.617	133856	16.619	74	50 - 200	-0.0020	+/-0.50	
WS-DUP (1601025-08)			Lab File ID: 1601025-0859.d			Analyzed: 01/12/16 21:56			
Fluorobenzene	330676	12.43	391920	12.438	84	50 - 200	-0.0080	+/-0.50	
Chlorobenzene-d5	234102	14.905	286476	14.913	82	50 - 200	-0.0080	+/-0.50	
1,4-Dichlorobenzene-d4	93295	16.621	133856	16.619	70	50 - 200	0.0020	+/-0.50	

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K. Target Compound Results

(ANALYSIS DATA SHEETS)

Analysis Data Sheets (ADS), Tentatively Identified Compounds (TICs), and Surrogate Recovery Results

Sample data shall be arranged in packets with the Analysis Data Sheet, followed by the raw data for volatile or semivolatile samples. These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers.

a. Target Analyte Results (ANALYSIS DATA SHEET)

Tabulated results (identification and quantitation) and Tentatively Identified Compounds (TICs) shall be included.

b. Reconstructed Ion Chromatograms (RICs)

Include for each sample or sample extract, including dilutions and reanalyses. The RIC shall contain the following header information: Client Sample ID Number, date and time of analysis, instrument ID, Lab file ID, and analyst ID.

d. Quantitation Report for target analytes and TICs.

Include a printout of the Extracted Ion Current Profile (EICP) for all manual changes to all compounds, internal standards, and surrogate compounds.

e. Copies of raw spectra and copies of background-subtracted mass spectra of target analytes plus TICs identified in the sample.

- The spectra shall include the following information: Client Sample ID number, Lab file ID, date and time of analysis, and instrument ID.
- The compound name must be clearly marked.

ANALYSIS DATA SHEET

SW 8260B

WS-1

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0159.d Sampled: 01/07/16 12:00

Initial/Final: 6.13g / 5mL Lab ID: 1601025-01 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 18 Analyzed: 01/12/16 18:46

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00032	0.0050	U
75-01-4	Vinyl chloride		0.00042	0.0050	U
74-83-9	Bromomethane		0.00058	0.0050	U
75-00-3	Chloroethane		0.00071	0.0050	U
75-69-4	Trichlorofluoromethane		0.00030	0.0050	U
75-35-4	1,1-Dichloroethene		0.0011	0.0050	U
67-64-1	Acetone	0.052	0.0050	0.012	
74-88-4	Iodomethane		0.00032	0.0050	U
75-15-0	Carbon disulfide		0.00014	0.0050	U
75-09-2	Methylene chloride		0.00049	0.0050	U
107-13-1	Acrylonitrile		0.0037	0.050	U
156-60-5	trans-1,2-Dichloroethene		0.0010	0.0050	U
75-34-3	1,1-Dichloroethane		0.00047	0.0050	U
108-05-4	Vinyl acetate		0.00021	0.0050	U
156-59-2	cis-1,2-Dichloroethene		0.00042	0.0050	U
78-93-3	2-Butanone		0.0013	0.012	U
74-97-5	Bromochloromethane		0.00053	0.0050	U
67-66-3	Chloroform		0.00031	0.0050	U
71-55-6	1,1,1-Trichloroethane		0.00050	0.0050	U
56-23-5	Carbon tetrachloride		0.00045	0.0050	U
107-06-2	1,2-Dichloroethane		0.00027	0.0050	U
71-43-2	Benzene		0.00031	0.0050	U
79-01-6	Trichloroethene		0.00032	0.0050	U
78-87-5	1,2-Dichloropropane		0.00063	0.0050	U
74-95-3	Dibromomethane		0.0012	0.0050	U
75-27-4	Bromodichloromethane		0.00038	0.0050	U
10061-01-5	cis-1,3-Dichloropropene		0.00039	0.0050	U
108-10-1	4-Methyl-2-pentanone		0.0013	0.012	U
108-88-3	Toluene		0.00034	0.0050	U
10061-02-6	trans-1,3-Dichloropropene		0.00041	0.0050	U
79-00-5	1,1,2-Trichloroethane		0.00072	0.0050	U
127-18-4	Tetrachloroethene		0.0016	0.0050	U
591-78-6	2-Hexanone		0.0010	0.012	U
124-48-1	Dibromochloromethane		0.00056	0.0050	U
106-93-4	1,2-Dibromoethane		0.00022	0.0050	U

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ANALYSIS DATA SHEET

SW 8260B

WS-1

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0159.d Sampled: 01/07/16 12:00

Initial/Final: 6.13g / 5mL Lab ID: 1601025-01 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 18 Analyzed: 01/12/16 18:46

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00025	0.0050	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00032	0.0050	*U*
100-41-4	Ethylbenzene		0.00058	0.0050	*U*
100-42-5	Styrene		0.000080	0.0050	*U*
75-25-2	Bromoform		0.0011	0.0050	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00037	0.0050	*U*
96-18-4	1,2,3-Trichloropropane		0.00091	0.0050	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0018	0.020	*U*
106-46-7	1,4-Dichlorobenzene		0.00021	0.0050	*U*
95-50-1	1,2-Dichlorobenzene		0.00036	0.0050	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.00065	0.0050	*U*
1330-20-7	Xylenes (total)		0.00014	0.0050	*U*

SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.04997	0.04810	96	71 - 141	
1,2-Dichloroethane-d4	0.04997	0.05445	109	70 - 139	
Toluene-d8	0.04997	0.05022	100	72 - 123	
Bromofluorobenzene	0.04997	0.05105	102	65 - 131	

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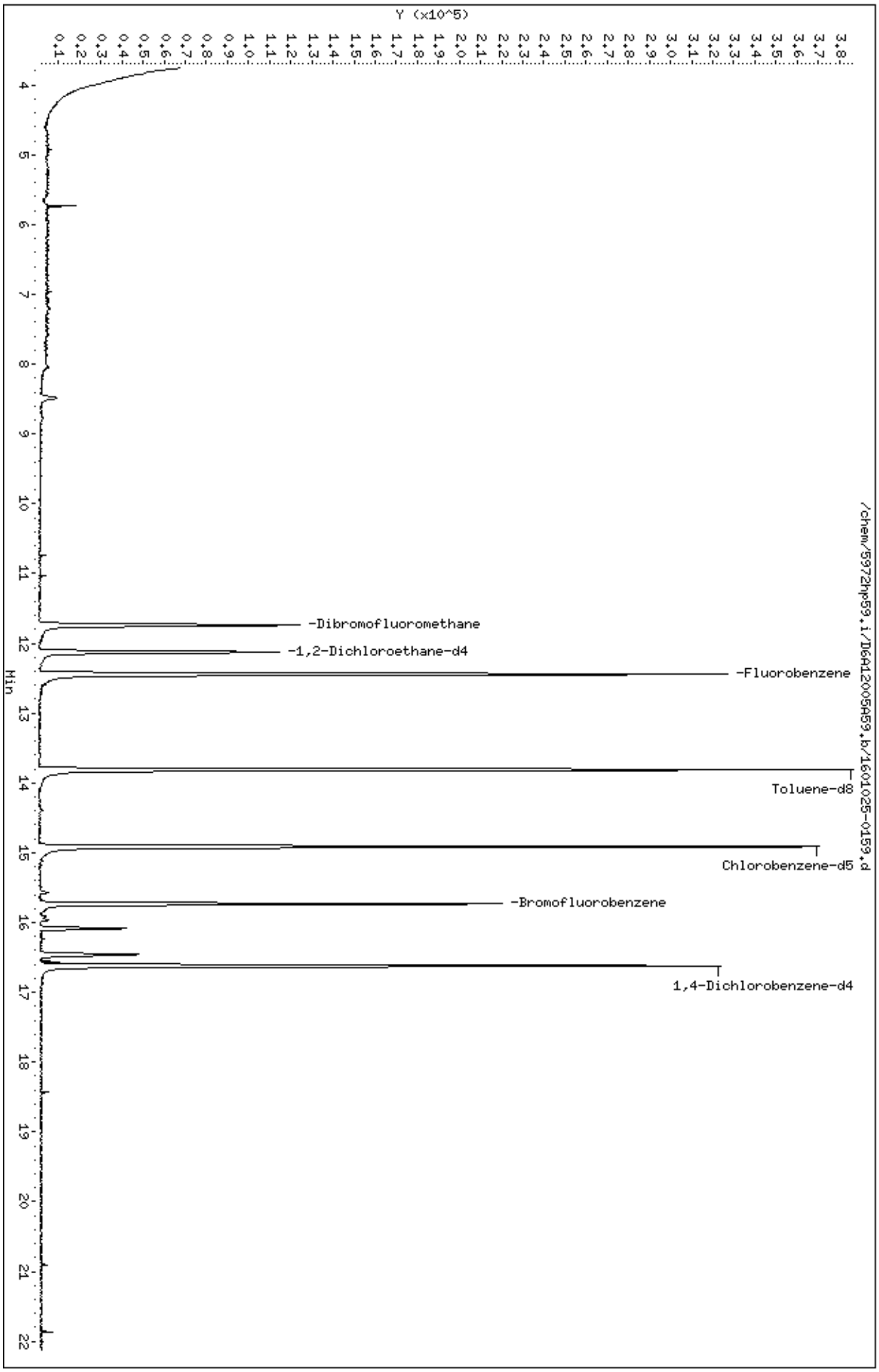
Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0159.d
Date : 12-JAN-2016 18:46
Client ID: WS-1
Sample Info: 1601025-01:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0159.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0159.d
Lab Smp Id: 1601025-01 Client Smp ID: WS-1
Inj Date : 12-JAN-2016 18:46
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-01:JAO
Misc Info : WS-1
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	6.13000	Weight of sample extracted (g)
M	18.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.439	12.418	(1.000)	352432	250.000	
* 2 Chlorobenzene-d5	117	14.914	14.894	(1.000)	245949	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.620	16.600	(1.000)	104763	250.000	
$ 4 Dibromofluoromethane	113	11.739	11.718	(0.944)	97649	240.644	47.8742
$ 5 1,2-Dichloroethane-d4	65	12.124	12.113	(0.975)	101359	272.410	54.1938
$ 6 Toluene-d8	98	13.810	13.789	(0.926)	278442	251.232	49.9806
$ 7 Bromofluorobenzene	95	15.733	15.722	(0.947)	82338	255.364	50.8026
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	8.485	8.464	(0.682)	18738	261.992	52.1211
19 Iodomethane	142	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0159.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

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SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0159.d
Lab Smp Id: 1601025-01 Client Smp ID: WS-1
Inj Date : 12-JAN-2016 18:46
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-01:JAO
Misc Info : WS-1
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0159.d

Date : 12-JAN-2016 18:46

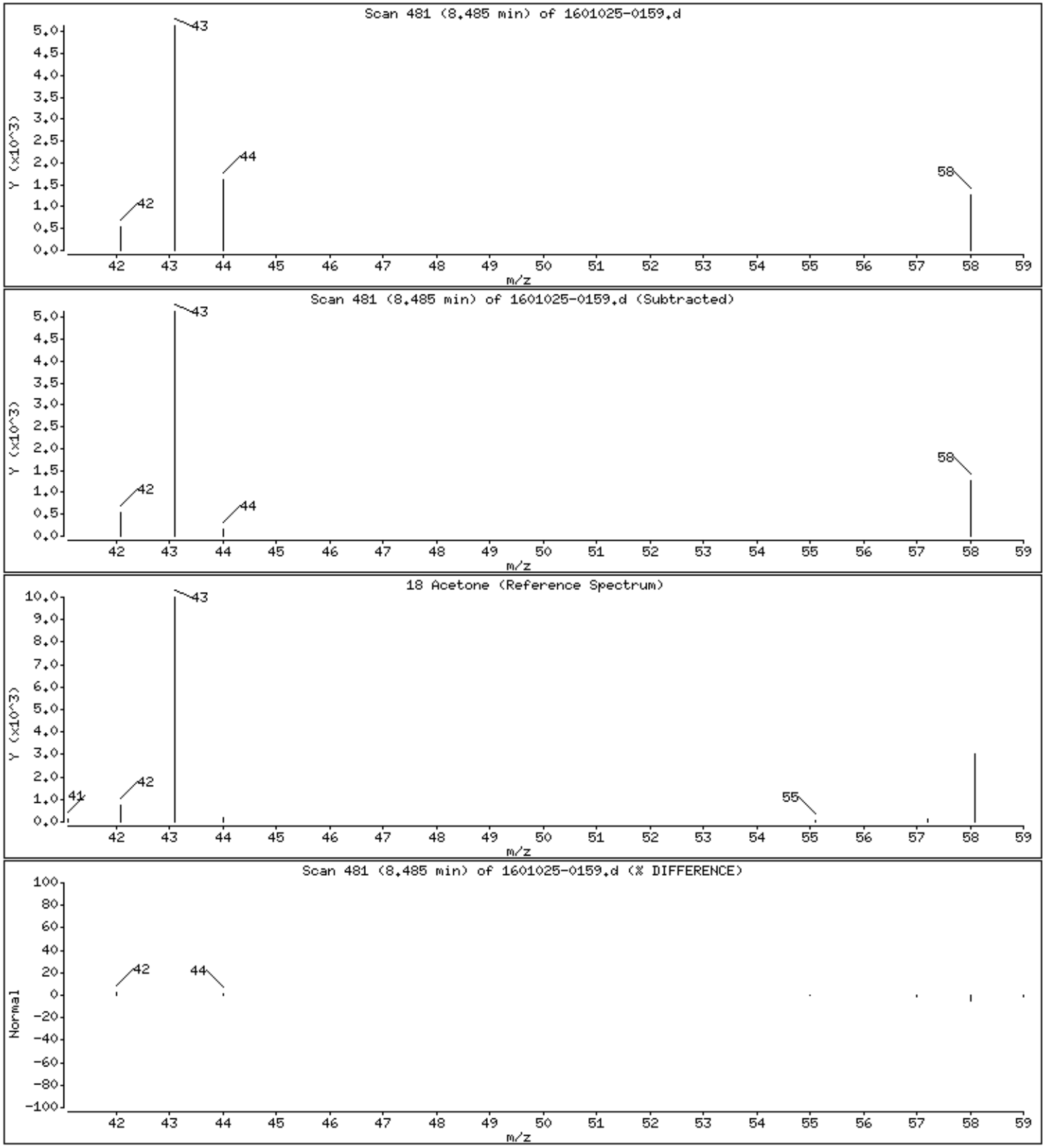
Client ID: WS-1 Instrument: 5972hp59.i

Sample Info: 1601025-01:JAO

Operator: JAO

Column phase: SPB-624 Column diameter: 0.32

18 Acetone Concentration: 52.1211 ug/Kg



ANALYSIS DATA SHEET

SW 8260B

WS-2

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0259.d Sampled: 01/07/16 12:20

Initial/Final: 5.71g / 5mL Lab ID: 1601025-02 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 14 Analyzed: 01/12/16 19:17

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00033	0.0051	U
75-01-4	Vinyl chloride		0.00043	0.0051	U
74-83-9	Bromomethane		0.00059	0.0051	U
75-00-3	Chloroethane		0.00073	0.0051	U
75-69-4	Trichlorofluoromethane		0.00031	0.0051	U
75-35-4	1,1-Dichloroethene		0.0011	0.0051	U
67-64-1	Acetone		0.0051	0.013	U
74-88-4	Iodomethane		0.00033	0.0051	U
75-15-0	Carbon disulfide		0.00014	0.0051	U
75-09-2	Methylene chloride		0.00050	0.0051	U
107-13-1	Acrylonitrile		0.0038	0.051	U
156-60-5	trans-1,2-Dichloroethene		0.0010	0.0051	U
75-34-3	1,1-Dichloroethane		0.00048	0.0051	U
108-05-4	Vinyl acetate		0.00022	0.0051	U
156-59-2	cis-1,2-Dichloroethene		0.00043	0.0051	U
78-93-3	2-Butanone		0.0013	0.013	U
74-97-5	Bromochloromethane		0.00054	0.0051	U
67-66-3	Chloroform		0.00032	0.0051	U
71-55-6	1,1,1-Trichloroethane		0.00051	0.0051	U
56-23-5	Carbon tetrachloride		0.00046	0.0051	U
107-06-2	1,2-Dichloroethane		0.00028	0.0051	U
71-43-2	Benzene		0.00032	0.0051	U
79-01-6	Trichloroethene		0.00033	0.0051	U
78-87-5	1,2-Dichloropropane		0.00065	0.0051	U
74-95-3	Dibromomethane		0.0012	0.0051	U
75-27-4	Bromodichloromethane		0.00039	0.0051	U
10061-01-5	cis-1,3-Dichloropropene		0.00040	0.0051	U
108-10-1	4-Methyl-2-pentanone		0.0013	0.013	U
108-88-3	Toluene		0.00035	0.0051	U
10061-02-6	trans-1,3-Dichloropropene		0.00042	0.0051	U
79-00-5	1,1,2-Trichloroethane		0.00074	0.0051	U
127-18-4	Tetrachloroethene		0.0016	0.0051	U
591-78-6	2-Hexanone		0.0010	0.013	U
124-48-1	Dibromochloromethane		0.00057	0.0051	U
106-93-4	1,2-Dibromoethane		0.00023	0.0051	U

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ANALYSIS DATA SHEET

SW 8260B

WS-2

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0259.d Sampled: 01/07/16 12:20

Initial/Final: 5.71g / 5mL Lab ID: 1601025-02 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 14 Analyzed: 01/12/16 19:17

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00026	0.0051	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00033	0.0051	*U*
100-41-4	Ethylbenzene		0.00059	0.0051	*U*
100-42-5	Styrene		0.000082	0.0051	*U*
75-25-2	Bromoform		0.0011	0.0051	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00038	0.0051	*U*
96-18-4	1,2,3-Trichloropropane		0.00093	0.0051	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0018	0.020	*U*
106-46-7	1,4-Dichlorobenzene		0.00022	0.0051	*U*
95-50-1	1,2-Dichlorobenzene		0.00037	0.0051	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.00067	0.0051	*U*
1330-20-7	Xylenes (total)		0.00014	0.0051	*U*

SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.05120	0.04930	96	71 - 141	
1,2-Dichloroethane-d4	0.05120	0.05332	104	70 - 139	
Toluene-d8	0.05120	0.05083	99	72 - 123	
Bromofluorobenzene	0.05120	0.05397	105	65 - 131	

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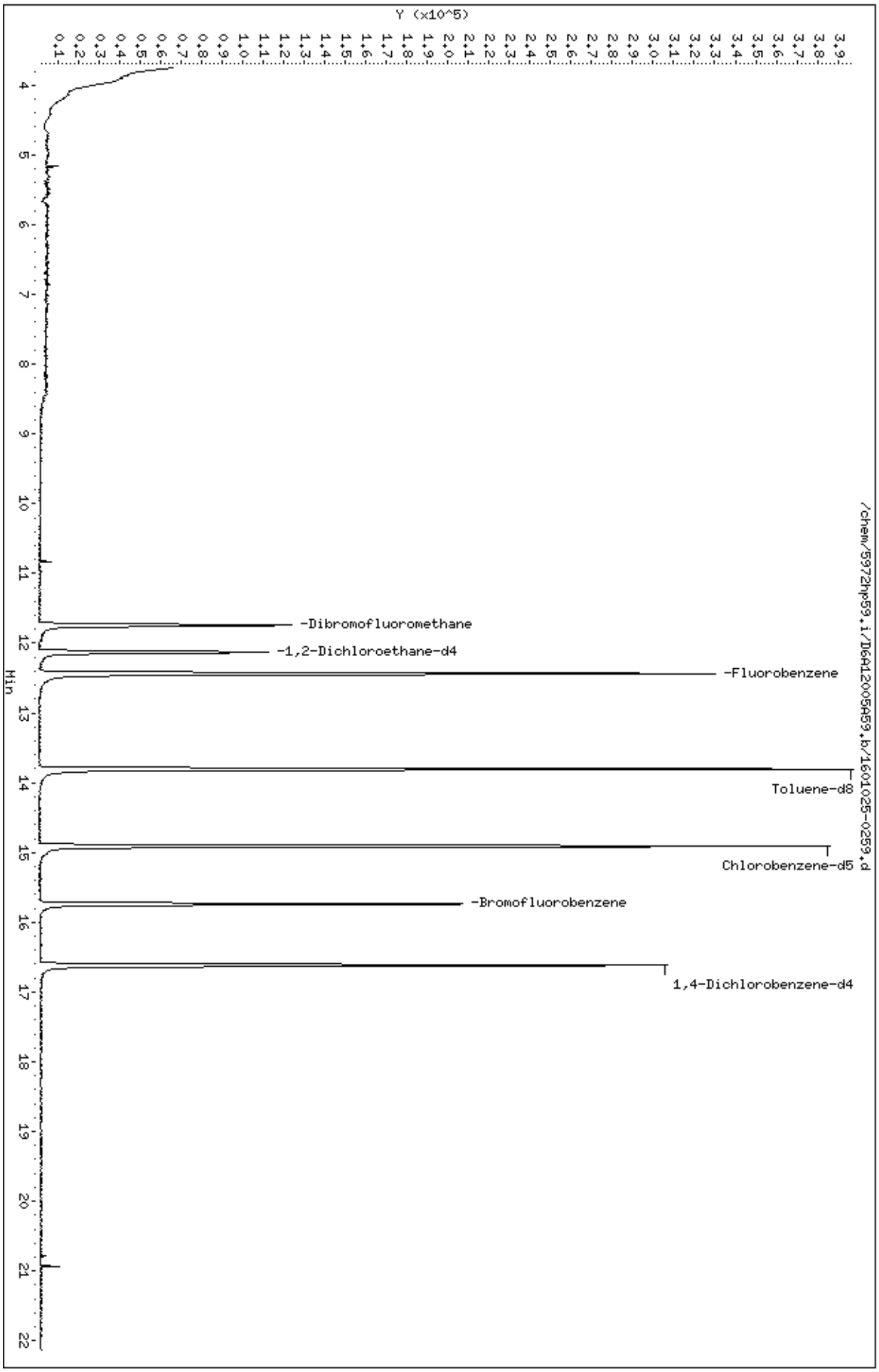
Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0259.d
Date : 12-JAN-2016 19:17
Client ID: WS-2
Sample Info: 1601025-02:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0259.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0259.d
Lab Smp Id: 1601025-02 Client Smp ID: WS-2
Inj Date : 12-JAN-2016 19:17
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-02:JAO
Misc Info : WS-2
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.71000	Weight of sample extracted (g)
M	14.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.437	12.418	(1.000)	347030	250.000	
* 2 Chlorobenzene-d5	117	14.912	14.894	(1.000)	247757	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.618	16.600	(1.000)	100576	250.000	
$ 4 Dibromofluoromethane	113	11.737	11.718	(0.944)	96184	240.724	49.0213
$ 5 1,2-Dichloroethane-d4	65	12.132	12.113	(0.975)	95380	260.332	53.0142
$ 6 Toluene-d8	98	13.808	13.789	(0.926)	277056	248.157	50.5351
$ 7 Bromofluorobenzene	95	15.731	15.722	(0.947)	81562	263.488	53.6570
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0259.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0259.d
Lab Smp Id: 1601025-02 Client Smp ID: WS-2
Inj Date : 12-JAN-2016 19:17
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-02:JAO
Misc Info : WS-2
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

ANALYSIS DATA SHEET

SW 8260B

WS-3

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0359.d Sampled: 01/07/16 12:55

Initial/Final: 5.04g / 5mL Lab ID: 1601025-03 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 33 Analyzed: 01/12/16 19:49

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00048	0.0074	U
75-01-4	Vinyl chloride		0.00062	0.0074	U
74-83-9	Bromomethane		0.00086	0.0074	U
75-00-3	Chloroethane		0.0011	0.0074	U
75-69-4	Trichlorofluoromethane		0.00045	0.0074	U
75-35-4	1,1-Dichloroethene		0.0016	0.0074	U
67-64-1	Acetone		0.0074	0.019	U
74-88-4	Iodomethane		0.00048	0.0074	U
75-15-0	Carbon disulfide		0.00021	0.0074	U
75-09-2	Methylene chloride		0.00073	0.0074	U
107-13-1	Acrylonitrile		0.0055	0.074	U
156-60-5	trans-1,2-Dichloroethene		0.0015	0.0074	U
75-34-3	1,1-Dichloroethane		0.00070	0.0074	U
108-05-4	Vinyl acetate		0.00031	0.0074	U
156-59-2	cis-1,2-Dichloroethene		0.00062	0.0074	U
78-93-3	2-Butanone		0.0019	0.019	U
74-97-5	Bromochloromethane		0.00079	0.0074	U
67-66-3	Chloroform		0.00046	0.0074	U
71-55-6	1,1,1-Trichloroethane		0.00074	0.0074	U
56-23-5	Carbon tetrachloride		0.00067	0.0074	U
107-06-2	1,2-Dichloroethane		0.00040	0.0074	U
71-43-2	Benzene		0.00046	0.0074	U
79-01-6	Trichloroethene		0.00048	0.0074	U
78-87-5	1,2-Dichloropropane		0.00094	0.0074	U
74-95-3	Dibromomethane		0.0018	0.0074	U
75-27-4	Bromodichloromethane		0.00057	0.0074	U
10061-01-5	cis-1,3-Dichloropropene		0.00058	0.0074	U
108-10-1	4-Methyl-2-pentanone		0.0019	0.019	U
108-88-3	Toluene		0.00051	0.0074	U
10061-02-6	trans-1,3-Dichloropropene		0.00061	0.0074	U
79-00-5	1,1,2-Trichloroethane		0.0011	0.0074	U
127-18-4	Tetrachloroethene		0.0024	0.0074	U
591-78-6	2-Hexanone		0.0015	0.019	U
124-48-1	Dibromochloromethane		0.00083	0.0074	U
106-93-4	1,2-Dibromoethane		0.00033	0.0074	U

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

WS-3

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0359.d Sampled: 01/07/16 12:55

Initial/Final: 5.04g / 5mL Lab ID: 1601025-03 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 33 Analyzed: 01/12/16 19:49

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00037	0.0074	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00048	0.0074	*U*
100-41-4	Ethylbenzene		0.00086	0.0074	*U*
100-42-5	Styrene		0.00012	0.0074	*U*
75-25-2	Bromoform		0.0016	0.0074	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00055	0.0074	*U*
96-18-4	1,2,3-Trichloropropane		0.0014	0.0074	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0027	0.030	*U*
106-46-7	1,4-Dichlorobenzene		0.00031	0.0074	*U*
95-50-1	1,2-Dichlorobenzene		0.00054	0.0074	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.00097	0.0074	*U*
1330-20-7	Xylenes (total)		0.00021	0.0074	*U*

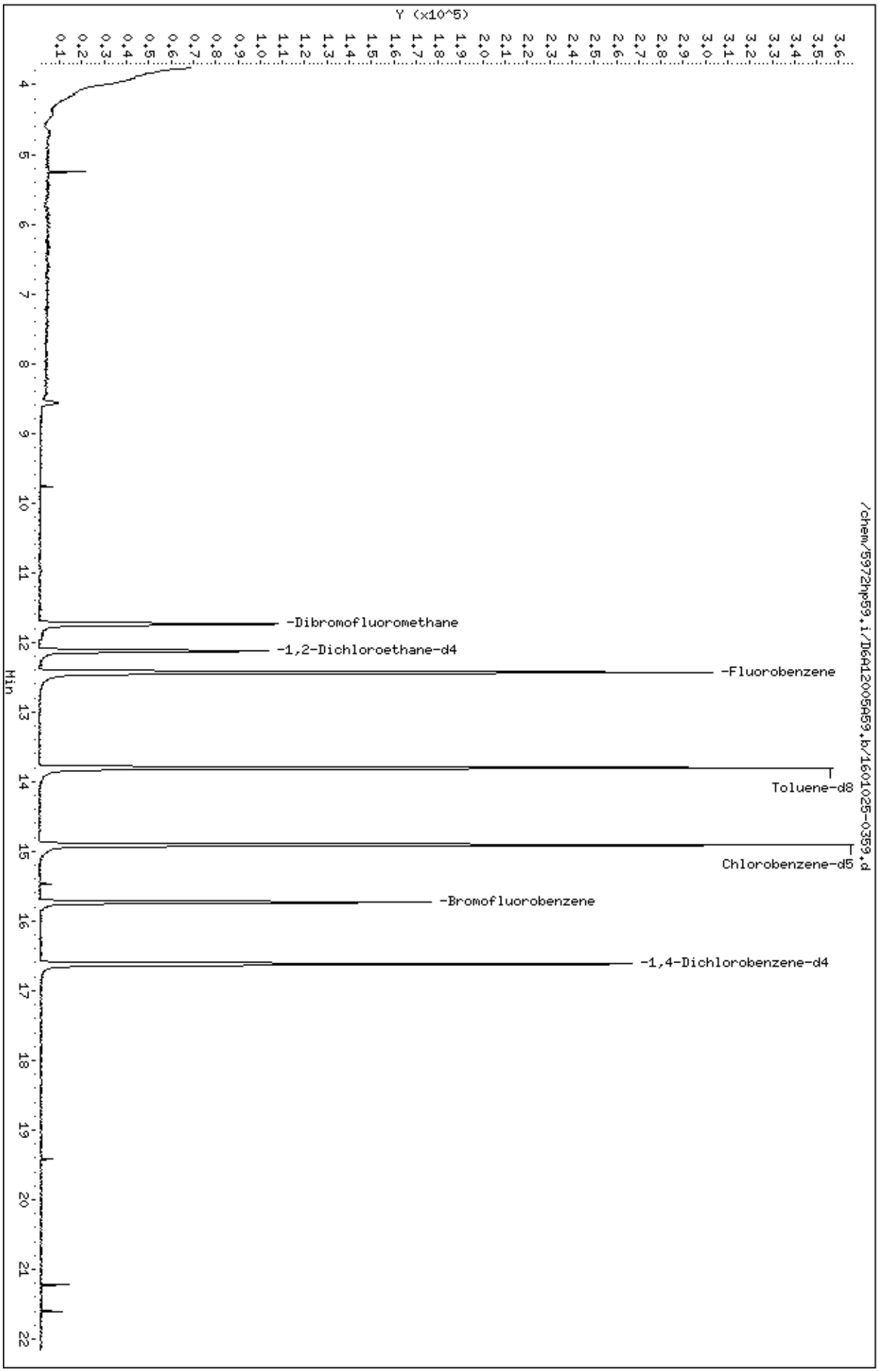
SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.07440	0.06991	94	71 - 141	
1,2-Dichloroethane-d4	0.07440	0.07498	101	70 - 139	
Toluene-d8	0.07440	0.07185	97	72 - 123	
Bromofluorobenzene	0.07440	0.07256	98	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0359.d
Date : 12-JAN-2016 19:49
Client ID: WS-3
Sample Info: 1601025-03:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0359.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0359.d
Lab Smp Id: 1601025-03 Client Smp ID: WS-3
Inj Date : 12-JAN-2016 19:49
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-03:JAO
Misc Info : WS-3
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.04000	Weight of sample extracted (g)
M	33.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.433	12.418	(1.000)	326282	250.000	
* 2 Chlorobenzene-d5	117	14.908	14.894	(1.000)	227396	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.624	16.600	(1.000)	88593	250.000	
$ 4 Dibromofluoromethane	113	11.733	11.718	(0.944)	88247	234.904	69.5640
$ 5 1,2-Dichloroethane-d4	65	12.127	12.113	(0.975)	86781	251.923	74.6041
$ 6 Toluene-d8	98	13.804	13.789	(0.926)	247395	241.431	71.4971
$ 7 Bromofluorobenzene	95	15.736	15.722	(0.947)	66481	243.818	72.2039
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0359.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0359.d
Lab Smp Id: 1601025-03 Client Smp ID: WS-3
Inj Date : 12-JAN-2016 19:49
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-03:JAO
Misc Info : WS-3
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

ANALYSIS DATA SHEET

SW 8260B

WS-4

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0459.d Sampled: 01/07/16 13:20

Initial/Final: 4.51g / 5mL Lab ID: 1601025-04 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 32 Analyzed: 01/12/16 18:14

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00052	0.0082	U
75-01-4	Vinyl chloride		0.00069	0.0082	U
74-83-9	Bromomethane		0.00095	0.0082	U
75-00-3	Chloroethane		0.0012	0.0082	U
75-69-4	Trichlorofluoromethane		0.00049	0.0082	U
75-35-4	1,1-Dichloroethene		0.0018	0.0082	U
67-64-1	Acetone		0.0082	0.020	U
74-88-4	Iodomethane		0.00052	0.0082	U
75-15-0	Carbon disulfide		0.00023	0.0082	U
75-09-2	Methylene chloride		0.00080	0.0082	U
107-13-1	Acrylonitrile		0.0060	0.082	U
156-60-5	trans-1,2-Dichloroethene		0.0016	0.0082	U
75-34-3	1,1-Dichloroethane		0.00077	0.0082	U
108-05-4	Vinyl acetate		0.00034	0.0082	U
156-59-2	cis-1,2-Dichloroethene		0.00069	0.0082	U
78-93-3	2-Butanone		0.0021	0.020	U
74-97-5	Bromochloromethane		0.00087	0.0082	U
67-66-3	Chloroform		0.00051	0.0082	U
71-55-6	1,1,1-Trichloroethane		0.00082	0.0082	U
56-23-5	Carbon tetrachloride		0.00074	0.0082	U
107-06-2	1,2-Dichloroethane		0.00044	0.0082	U
71-43-2	Benzene		0.00051	0.0082	U
79-01-6	Trichloroethene		0.00052	0.0082	U
78-87-5	1,2-Dichloropropane		0.0010	0.0082	U
74-95-3	Dibromomethane		0.0020	0.0082	U
75-27-4	Bromodichloromethane		0.00062	0.0082	U
10061-01-5	cis-1,3-Dichloropropene		0.00064	0.0082	U
108-10-1	4-Methyl-2-pentanone		0.0021	0.020	U
108-88-3	Toluene		0.00056	0.0082	U
10061-02-6	trans-1,3-Dichloropropene		0.00067	0.0082	U
79-00-5	1,1,2-Trichloroethane		0.0012	0.0082	U
127-18-4	Tetrachloroethene		0.0026	0.0082	U
591-78-6	2-Hexanone		0.0016	0.020	U
124-48-1	Dibromochloromethane		0.00091	0.0082	U
106-93-4	1,2-Dibromoethane		0.00036	0.0082	U

Liberty Analytical

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ANALYSIS DATA SHEET

SW 8260B

WS-4

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0459.d Sampled: 01/07/16 13:20

Initial/Final: 4.51g / 5mL Lab ID: 1601025-04 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 32 Analyzed: 01/12/16 18:14

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00041	0.0082	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00052	0.0082	*U*
100-41-4	Ethylbenzene		0.00095	0.0082	*U*
100-42-5	Styrene		0.00013	0.0082	*U*
75-25-2	Bromoform		0.0018	0.0082	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00060	0.0082	*U*
96-18-4	1,2,3-Trichloropropane		0.0015	0.0082	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0029	0.033	*U*
106-46-7	1,4-Dichlorobenzene		0.00034	0.0082	*U*
95-50-1	1,2-Dichlorobenzene		0.00059	0.0082	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.0011	0.0082	*U*
1330-20-7	Xylenes (total)		0.00023	0.0082	*U*

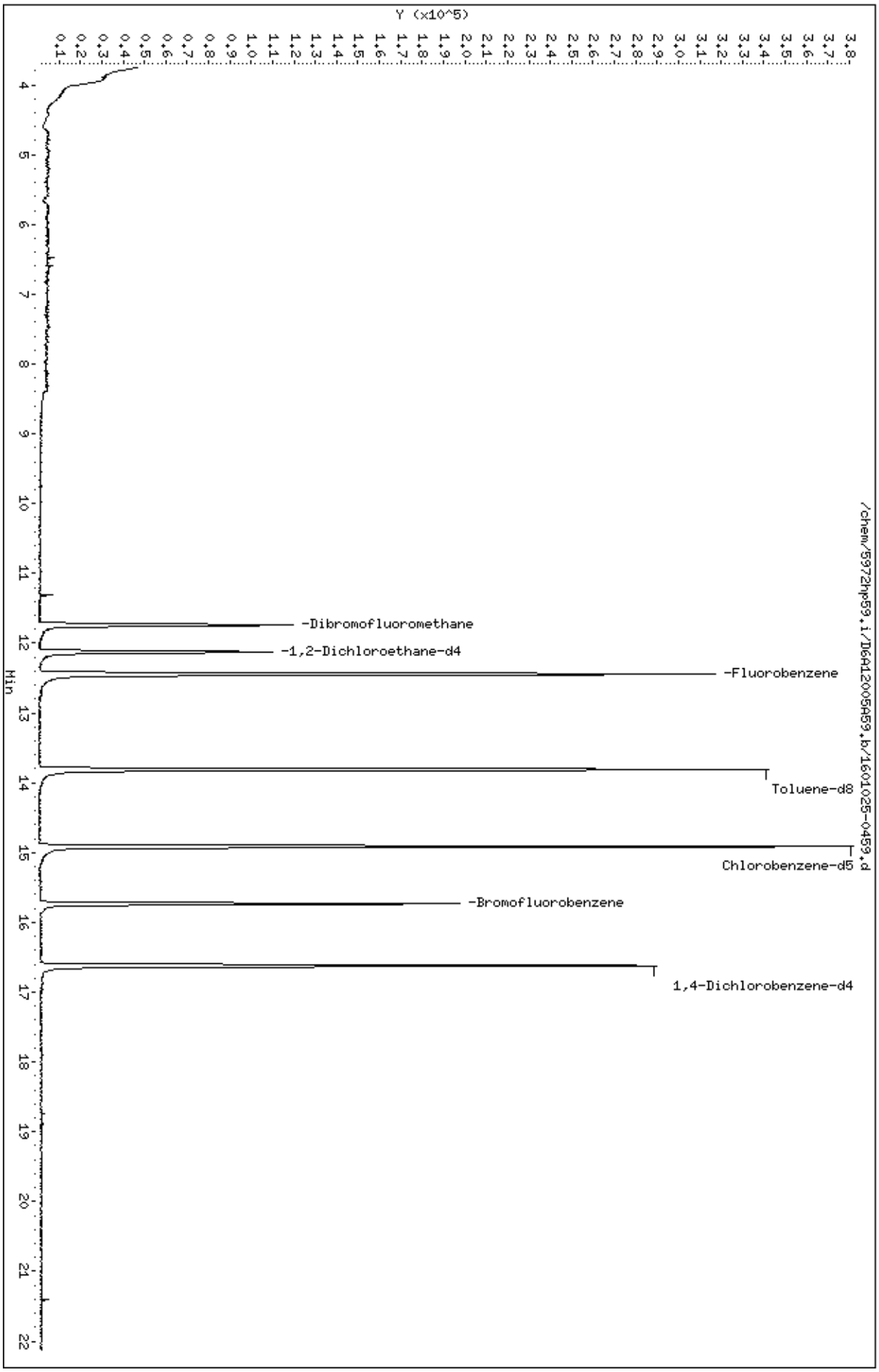
SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.08168	0.07561	93	71 - 141	
1,2-Dichloroethane-d4	0.08168	0.08162	100	70 - 139	
Toluene-d8	0.08168	0.07809	96	72 - 123	
Bromofluorobenzene	0.08168	0.07838	96	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0459.d
Date : 12-JAN-2016 18:14
Client ID: WS-4
Sample Info: 1601025-04:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0459.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0459.d
Lab Smp Id: 1601025-04 Client Smp ID: WS-4
Inj Date : 12-JAN-2016 18:14
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-04:JAO
Misc Info : WS-4
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	4.51000	Weight of sample extracted (g)
M	32.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.442	12.418	(1.000)	348588	250.000	
* 2 Chlorobenzene-d5	117	14.908	14.894	(1.000)	240692	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.623	16.600	(1.000)	98275	250.000	
$ 4 Dibromofluoromethane	113	11.742	11.718	(0.944)	92879	231.413	75.4576
$ 5 1,2-Dichloroethane-d4	65	12.127	12.113	(0.975)	91931	249.796	81.4518
$ 6 Toluene-d8	98	13.803	13.789	(0.926)	259244	239.019	77.9377
$ 7 Bromofluorobenzene	95	15.736	15.722	(0.947)	72562	239.902	78.2255
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0459.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0459.d
Lab Smp Id: 1601025-04 Client Smp ID: WS-4
Inj Date : 12-JAN-2016 18:14
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-04:JAO
Misc Info : WS-4
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

ANALYSIS DATA SHEET

SW 8260B

WS-5

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0559.d Sampled: 01/07/16 13:50

Initial/Final: 5.44g / 5mL Lab ID: 1601025-05 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 30 Analyzed: 01/12/16 20:21

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00042	0.0066	U
75-01-4	Vinyl chloride		0.00055	0.0066	U
74-83-9	Bromomethane		0.00077	0.0066	U
75-00-3	Chloroethane		0.00094	0.0066	U
75-69-4	Trichlorofluoromethane		0.00040	0.0066	U
75-35-4	1,1-Dichloroethene		0.0015	0.0066	U
67-64-1	Acetone		0.0066	0.017	U
74-88-4	Iodomethane		0.00042	0.0066	U
75-15-0	Carbon disulfide		0.00018	0.0066	U
75-09-2	Methylene chloride		0.00065	0.0066	U
107-13-1	Acrylonitrile		0.0049	0.066	U
156-60-5	trans-1,2-Dichloroethene		0.0013	0.0066	U
75-34-3	1,1-Dichloroethane		0.00062	0.0066	U
108-05-4	Vinyl acetate		0.00028	0.0066	U
156-59-2	cis-1,2-Dichloroethene		0.00055	0.0066	U
78-93-3	2-Butanone		0.0017	0.017	U
74-97-5	Bromochloromethane		0.00070	0.0066	U
67-66-3	Chloroform		0.00041	0.0066	U
71-55-6	1,1,1-Trichloroethane		0.00066	0.0066	U
56-23-5	Carbon tetrachloride		0.00059	0.0066	U
107-06-2	1,2-Dichloroethane		0.00036	0.0066	U
71-43-2	Benzene		0.00041	0.0066	U
79-01-6	Trichloroethene		0.00042	0.0066	U
78-87-5	1,2-Dichloropropane		0.00083	0.0066	U
74-95-3	Dibromomethane		0.0016	0.0066	U
75-27-4	Bromodichloromethane		0.00050	0.0066	U
10061-01-5	cis-1,3-Dichloropropene		0.00052	0.0066	U
108-10-1	4-Methyl-2-pentanone		0.0017	0.017	U
108-88-3	Toluene		0.00045	0.0066	U
10061-02-6	trans-1,3-Dichloropropene		0.00054	0.0066	U
79-00-5	1,1,2-Trichloroethane		0.00095	0.0066	U
127-18-4	Tetrachloroethene		0.0021	0.0066	U
591-78-6	2-Hexanone		0.0013	0.017	U
124-48-1	Dibromochloromethane		0.00074	0.0066	U
106-93-4	1,2-Dibromoethane		0.00029	0.0066	U

Liberty Analytical

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ANALYSIS DATA SHEET

SW 8260B

WS-5

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0559.d Sampled: 01/07/16 13:50

Initial/Final: 5.44g / 5mL Lab ID: 1601025-05 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 30 Analyzed: 01/12/16 20:21

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00033	0.0066	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00042	0.0066	*U*
100-41-4	Ethylbenzene		0.00077	0.0066	*U*
100-42-5	Styrene		0.00011	0.0066	*U*
75-25-2	Bromoform		0.0015	0.0066	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00049	0.0066	*U*
96-18-4	1,2,3-Trichloropropane		0.0012	0.0066	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0024	0.026	*U*
106-46-7	1,4-Dichlorobenzene		0.00028	0.0066	*U*
95-50-1	1,2-Dichlorobenzene		0.00048	0.0066	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.00086	0.0066	*U*
1330-20-7	Xylenes (total)		0.00018	0.0066	*U*

SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.06605	0.06392	97	71 - 141	
1,2-Dichloroethane-d4	0.06605	0.07046	107	70 - 139	
Toluene-d8	0.06605	0.06378	97	72 - 123	
Bromofluorobenzene	0.06605	0.07017	106	65 - 131	

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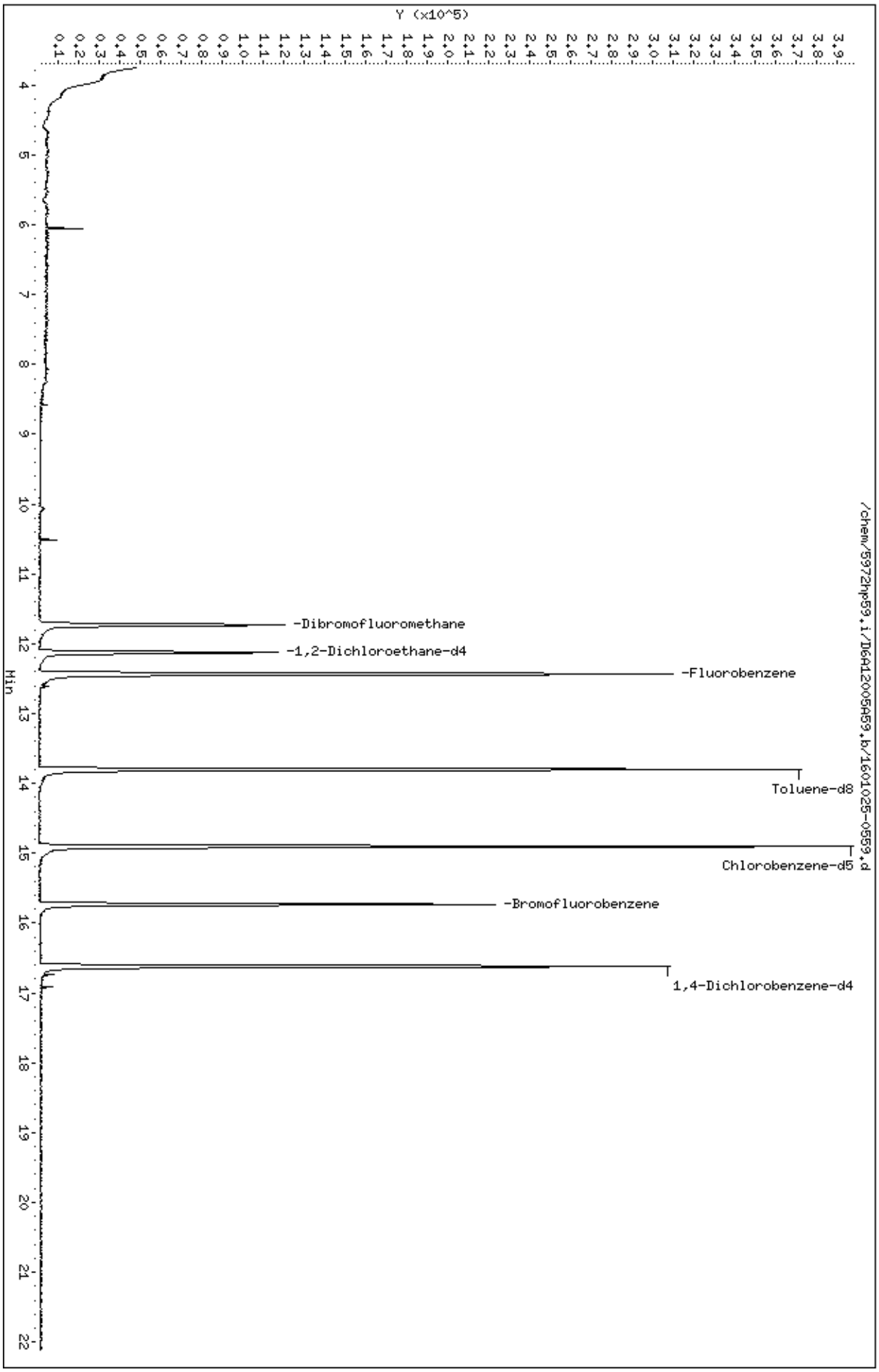
Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0559.d
Date : 12-JAN-2016 20:21
Client ID: WS-5
Sample Info: 1601025-05:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0559.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0559.d
Lab Smp Id: 1601025-05 Client Smp ID: WS-5
Inj Date : 12-JAN-2016 20:21
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-05:JAO
Misc Info : WS-5
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.44000	Weight of sample extracted (g)
M	30.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.439	12.418	(1.000)	343824	250.000	
* 2 Chlorobenzene-d5	117	14.904	14.894	(1.000)	243984	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.620	16.600	(1.000)	103233	250.000	
$ 4 Dibromofluoromethane	113	11.739	11.718	(0.944)	95776	241.938	63.5341
$ 5 1,2-Dichloroethane-d4	65	12.123	12.113	(0.975)	96806	266.688	70.0335
$ 6 Toluene-d8	98	13.800	13.789	(0.926)	265421	241.412	63.3961
$ 7 Bromofluorobenzene	95	15.733	15.722	(0.947)	84396	265.626	69.7548
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0559.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0559.d
Lab Smp Id: 1601025-05 Client Smp ID: WS-5
Inj Date : 12-JAN-2016 20:21
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-05:JAO
Misc Info : WS-5
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

ANALYSIS DATA SHEET

SW 8260B

WS-6

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0659.d Sampled: 01/07/16 14:10

Initial/Final: 4.74g / 5mL Lab ID: 1601025-06 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 34 Analyzed: 01/12/16 20:53

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00051	0.0080	U
75-01-4	Vinyl chloride		0.00067	0.0080	U
74-83-9	Bromomethane		0.00092	0.0080	U
75-00-3	Chloroethane		0.0011	0.0080	U
75-69-4	Trichlorofluoromethane		0.00048	0.0080	U
75-35-4	1,1-Dichloroethene		0.0018	0.0080	U
67-64-1	Acetone		0.0080	0.020	U
74-88-4	Iodomethane		0.00051	0.0080	U
75-15-0	Carbon disulfide		0.00022	0.0080	U
75-09-2	Methylene chloride		0.00078	0.0080	U
107-13-1	Acrylonitrile		0.0059	0.080	U
156-60-5	trans-1,2-Dichloroethene		0.0016	0.0080	U
75-34-3	1,1-Dichloroethane		0.00075	0.0080	U
108-05-4	Vinyl acetate		0.00033	0.0080	U
156-59-2	cis-1,2-Dichloroethene		0.00067	0.0080	U
78-93-3	2-Butanone		0.0021	0.020	U
74-97-5	Bromochloromethane		0.00085	0.0080	U
67-66-3	Chloroform		0.00049	0.0080	U
71-55-6	1,1,1-Trichloroethane		0.00080	0.0080	U
56-23-5	Carbon tetrachloride		0.00072	0.0080	U
107-06-2	1,2-Dichloroethane		0.00043	0.0080	U
71-43-2	Benzene		0.00049	0.0080	U
79-01-6	Trichloroethene		0.00051	0.0080	U
78-87-5	1,2-Dichloropropane		0.0010	0.0080	U
74-95-3	Dibromomethane		0.0019	0.0080	U
75-27-4	Bromodichloromethane		0.00061	0.0080	U
10061-01-5	cis-1,3-Dichloropropene		0.00062	0.0080	U
108-10-1	4-Methyl-2-pentanone		0.0021	0.020	U
108-88-3	Toluene		0.00054	0.0080	U
10061-02-6	trans-1,3-Dichloropropene		0.00065	0.0080	U
79-00-5	1,1,2-Trichloroethane		0.0011	0.0080	U
127-18-4	Tetrachloroethene		0.0026	0.0080	U
591-78-6	2-Hexanone		0.0016	0.020	U
124-48-1	Dibromochloromethane		0.00089	0.0080	U
106-93-4	1,2-Dibromoethane		0.00035	0.0080	U

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ANALYSIS DATA SHEET

SW 8260B

WS-6

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0659.d Sampled: 01/07/16 14:10

Initial/Final: 4.74g / 5mL Lab ID: 1601025-06 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 34 Analyzed: 01/12/16 20:53

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00040	0.0080	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00051	0.0080	*U*
100-41-4	Ethylbenzene		0.00092	0.0080	*U*
100-42-5	Styrene		0.00013	0.0080	*U*
75-25-2	Bromoform		0.0018	0.0080	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00059	0.0080	*U*
96-18-4	1,2,3-Trichloropropane		0.0015	0.0080	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0029	0.032	*U*
106-46-7	1,4-Dichlorobenzene		0.00033	0.0080	*U*
95-50-1	1,2-Dichlorobenzene		0.00057	0.0080	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.0010	0.0080	*U*
1330-20-7	Xylenes (total)		0.00022	0.0080	*U*

SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.07973	0.07601	95	71 - 141	
1,2-Dichloroethane-d4	0.07973	0.08254	104	70 - 139	
Toluene-d8	0.07973	0.07553	95	72 - 123	
Bromofluorobenzene	0.07973	0.07883	99	65 - 131	

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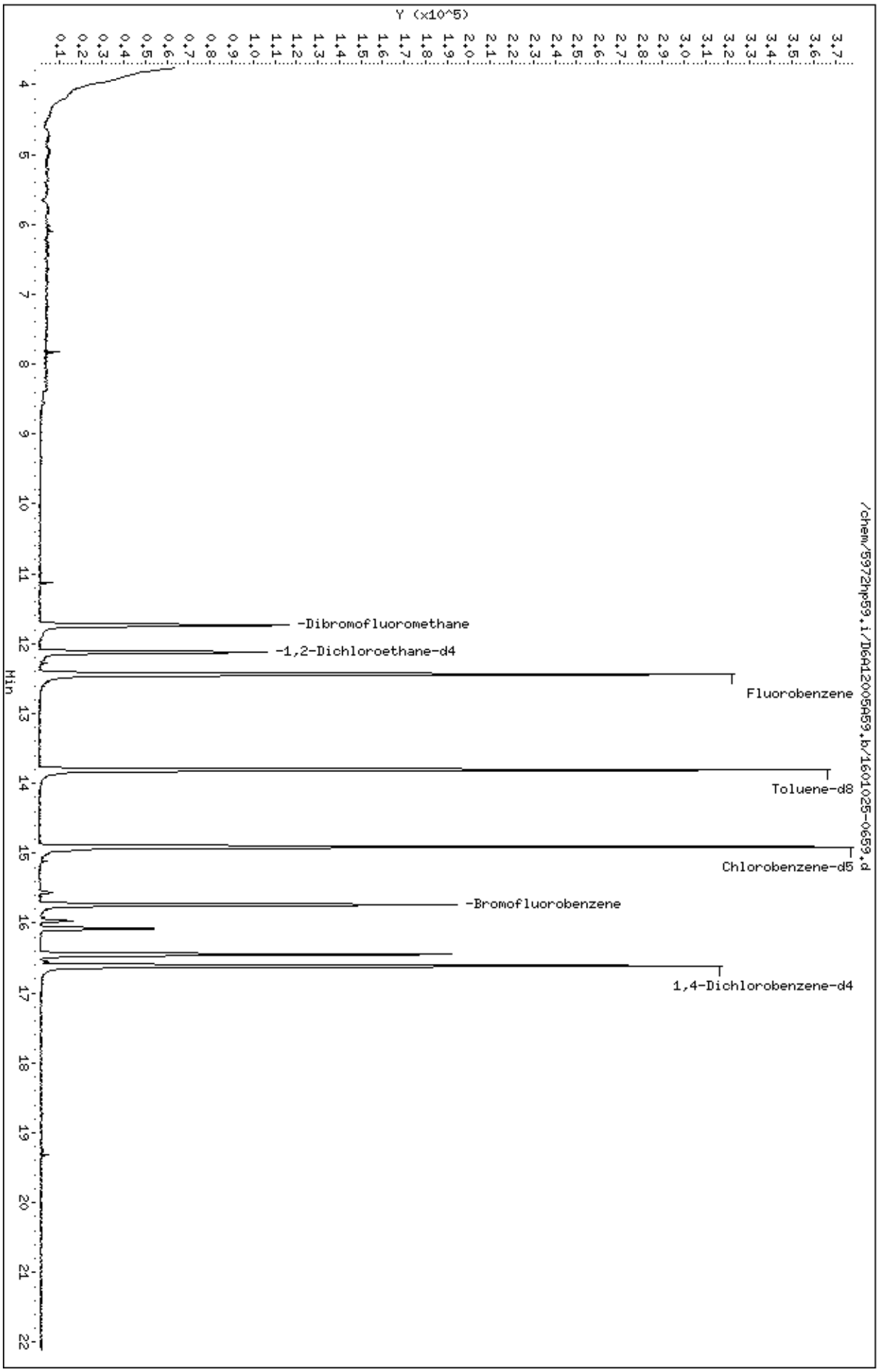
Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0659.d
Date : 12-JAN-2016 20:53
Client ID: WS-6
Sample Info: 1601025-06:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0659.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0659.d
Lab Smp Id: 1601025-06 Client Smp ID: WS-6
Inj Date : 12-JAN-2016 20:53
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-06:JAO
Misc Info : WS-6
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	4.74000	Weight of sample extracted (g)
M	34.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.434	12.418	(1.000)	334379	250.000	
* 2 Chlorobenzene-d5	117	14.909	14.894	(1.000)	241510	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.615	16.600	(1.000)	102719	250.000	
$ 4 Dibromofluoromethane	113	11.734	11.718	(0.944)	91756	238.330	76.1827
$ 5 1,2-Dichloroethane-d4	65	12.128	12.113	(0.975)	91358	258.788	82.7222
$ 6 Toluene-d8	98	13.805	13.789	(0.926)	257720	236.809	75.6966
$ 7 Bromofluorobenzene	95	15.727	15.722	(0.947)	78140	247.167	79.0075
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0659.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

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SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0659.d
Lab Smp Id: 1601025-06 Client Smp ID: WS-6
Inj Date : 12-JAN-2016 20:53
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-06:JAO
Misc Info : WS-6
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

ANALYSIS DATA SHEET

SW 8260B

WS-7

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0759.d Sampled: 01/07/16 14:35

Initial/Final: 5.34g / 5mL Lab ID: 1601025-07 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 29 Analyzed: 01/12/16 21:24

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00042	0.0066	U
75-01-4	Vinyl chloride		0.00056	0.0066	U
74-83-9	Bromomethane		0.00077	0.0066	U
75-00-3	Chloroethane		0.00094	0.0066	U
75-69-4	Trichlorofluoromethane		0.00040	0.0066	U
75-35-4	1,1-Dichloroethene		0.0015	0.0066	U
67-64-1	Acetone	0.034	0.0066	0.017	
74-88-4	Iodomethane		0.00042	0.0066	U
75-15-0	Carbon disulfide		0.00019	0.0066	U
75-09-2	Methylene chloride		0.00065	0.0066	U
107-13-1	Acrylonitrile		0.0049	0.066	U
156-60-5	trans-1,2-Dichloroethene		0.0013	0.0066	U
75-34-3	1,1-Dichloroethane		0.00062	0.0066	U
108-05-4	Vinyl acetate		0.00028	0.0066	U
156-59-2	cis-1,2-Dichloroethene		0.00056	0.0066	U
78-93-3	2-Butanone		0.0017	0.017	U
74-97-5	Bromochloromethane		0.00070	0.0066	U
67-66-3	Chloroform		0.00041	0.0066	U
71-55-6	1,1,1-Trichloroethane		0.00066	0.0066	U
56-23-5	Carbon tetrachloride		0.00060	0.0066	U
107-06-2	1,2-Dichloroethane		0.00036	0.0066	U
71-43-2	Benzene		0.00041	0.0066	U
79-01-6	Trichloroethene		0.00042	0.0066	U
78-87-5	1,2-Dichloropropane		0.00083	0.0066	U
74-95-3	Dibromomethane		0.0016	0.0066	U
75-27-4	Bromodichloromethane		0.00050	0.0066	U
10061-01-5	cis-1,3-Dichloropropene		0.00052	0.0066	U
108-10-1	4-Methyl-2-pentanone		0.0017	0.017	U
108-88-3	Toluene		0.00045	0.0066	U
10061-02-6	trans-1,3-Dichloropropene		0.00054	0.0066	U
79-00-5	1,1,2-Trichloroethane		0.00095	0.0066	U
127-18-4	Tetrachloroethene		0.0021	0.0066	U
591-78-6	2-Hexanone		0.0013	0.017	U
124-48-1	Dibromochloromethane		0.00074	0.0066	U
106-93-4	1,2-Dibromoethane		0.00029	0.0066	U

Liberty Analytical

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ANALYSIS DATA SHEET

SW 8260B

WS-7

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0759.d Sampled: 01/07/16 14:35

Initial/Final: 5.34g / 5mL Lab ID: 1601025-07 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 29 Analyzed: 01/12/16 21:24

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00033	0.0066	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00042	0.0066	*U*
100-41-4	Ethylbenzene		0.00077	0.0066	*U*
100-42-5	Styrene		0.00011	0.0066	*U*
75-25-2	Bromoform		0.0015	0.0066	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00049	0.0066	*U*
96-18-4	1,2,3-Trichloropropane		0.0012	0.0066	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0024	0.026	*U*
106-46-7	1,4-Dichlorobenzene		0.00028	0.0066	*U*
95-50-1	1,2-Dichlorobenzene		0.00048	0.0066	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.00086	0.0066	*U*
1330-20-7	Xylenes (total)		0.00019	0.0066	*U*

SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.06612	0.06376	96	71 - 141	
1,2-Dichloroethane-d4	0.06612	0.06732	102	70 - 139	
Toluene-d8	0.06612	0.06405	97	72 - 123	
Bromofluorobenzene	0.06612	0.06824	103	65 - 131	

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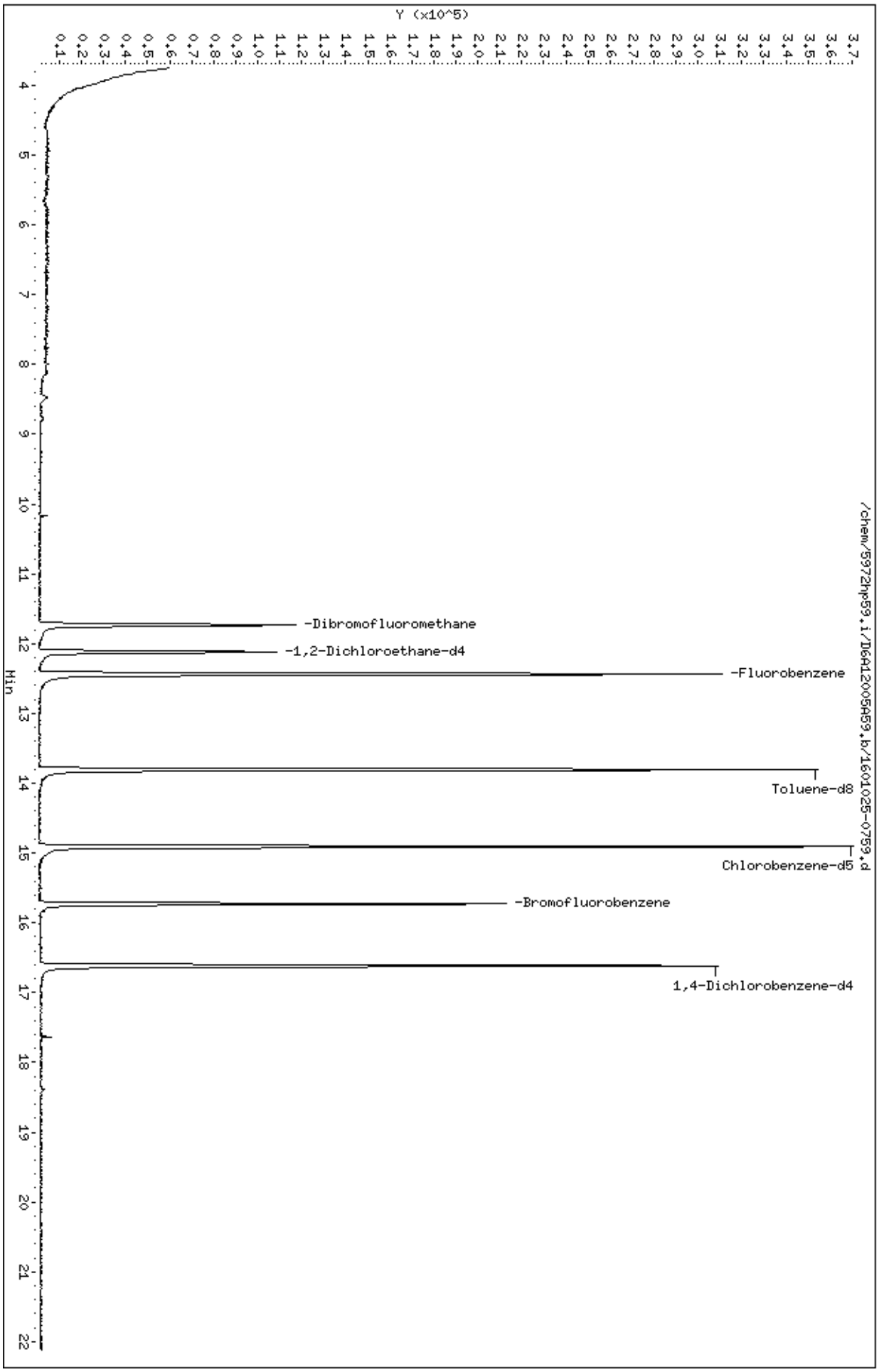
Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0759.d
Date : 12-JAN-2016 21:24
Client ID: WS-7
Sample Info: 1601025-07:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0759.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0759.d
Lab Smp Id: 1601025-07 Client Smp ID: WS-7
Inj Date : 12-JAN-2016 21:24
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-07:JAO
Misc Info : WS-7
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 30
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.34000	Weight of sample extracted (g)
M	29.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.436	12.418	(1.000)	332411	250.000	
* 2 Chlorobenzene-d5	117	14.902	14.894	(1.000)	237399	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.617	16.600	(1.000)	98624	250.000	
$ 4 Dibromofluoromethane	113	11.736	11.718	(0.944)	92266	241.074	63.5843
$ 5 1,2-Dichloroethane-d4	65	12.121	12.113	(0.975)	89331	254.544	67.1373
$ 6 Toluene-d8	98	13.807	13.789	(0.927)	259058	242.161	63.8711
$ 7 Bromofluorobenzene	95	15.730	15.722	(0.947)	78314	258.003	68.0495
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	8.472	8.464	(0.681)	8639	128.064	33.7776
19 Iodomethane	142	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0759.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0759.d
Lab Smp Id: 1601025-07 Client Smp ID: WS-7
Inj Date : 12-JAN-2016 21:24
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-07:JAO
Misc Info : WS-7
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 30
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0759.d

Date : 12-JAN-2016 21:24

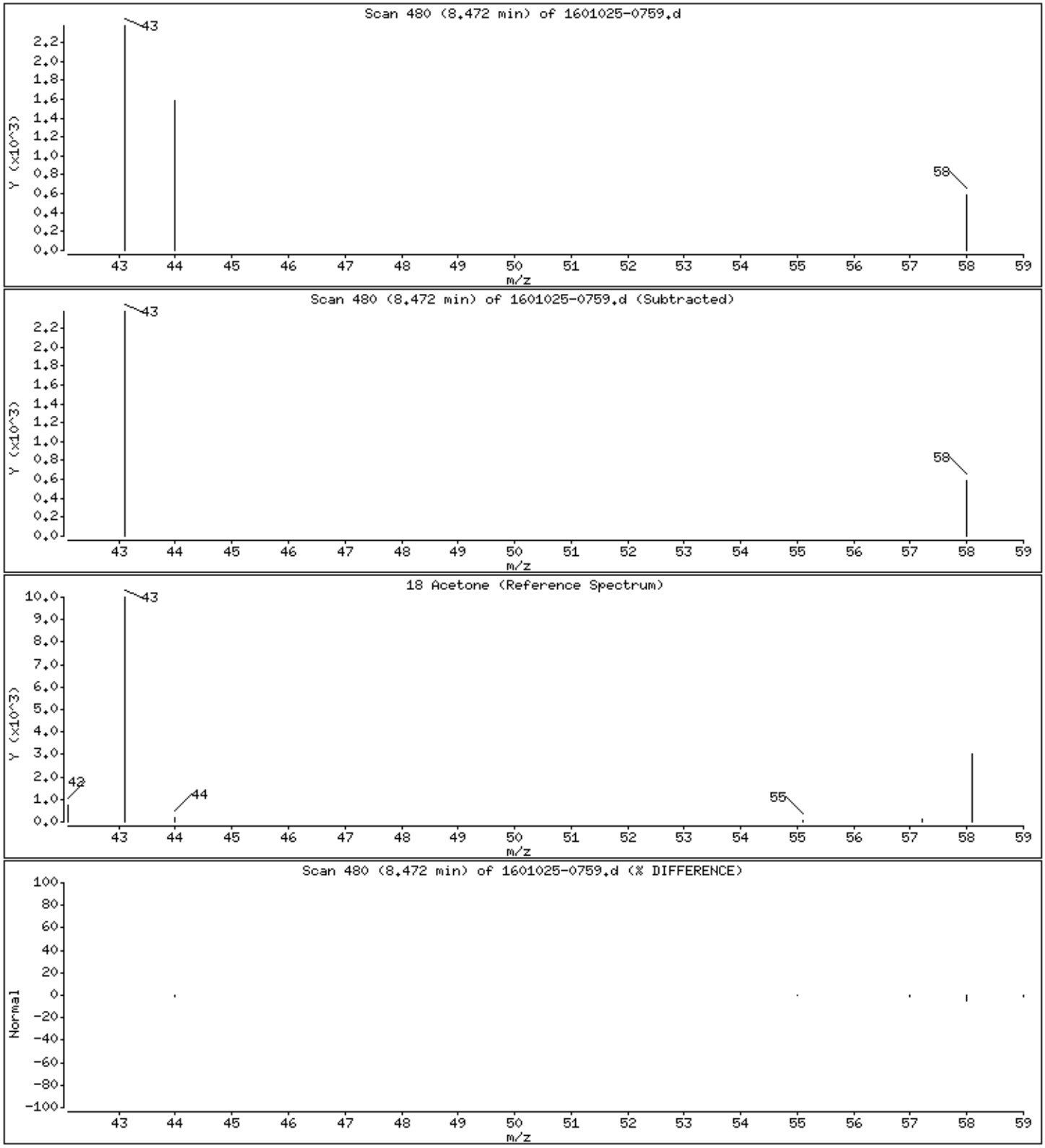
Client ID: WS-7 Instrument: 5972hp59.i

Sample Info: 1601025-07:JAO

Operator: JAO

Column phase: SPB-624 Column diameter: 0.32

18 Acetone Concentration: 33.7776 ug/Kg



1/13/2016

ANALYSIS DATA SHEET

SW 8260B

WS-DUP

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0859.d Sampled: 01/07/16 12:30

Initial/Final: 5.25g / 5mL Lab ID: 1601025-08 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 24 Analyzed: 01/12/16 21:56

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane		0.00040	0.0063	U
75-01-4	Vinyl chloride		0.00053	0.0063	U
74-83-9	Bromomethane		0.00073	0.0063	U
75-00-3	Chloroethane		0.00089	0.0063	U
75-69-4	Trichlorofluoromethane		0.00038	0.0063	U
75-35-4	1,1-Dichloroethene		0.0014	0.0063	U
67-64-1	Acetone		0.0063	0.016	U
74-88-4	Iodomethane		0.00040	0.0063	U
75-15-0	Carbon disulfide		0.00018	0.0063	U
75-09-2	Methylene chloride		0.00061	0.0063	U
107-13-1	Acrylonitrile		0.0046	0.063	U
156-60-5	trans-1,2-Dichloroethene		0.0013	0.0063	U
75-34-3	1,1-Dichloroethane		0.00059	0.0063	U
108-05-4	Vinyl acetate		0.00026	0.0063	U
156-59-2	cis-1,2-Dichloroethene		0.00053	0.0063	U
78-93-3	2-Butanone		0.0016	0.016	U
74-97-5	Bromochloromethane		0.00066	0.0063	U
67-66-3	Chloroform		0.00039	0.0063	U
71-55-6	1,1,1-Trichloroethane		0.00063	0.0063	U
56-23-5	Carbon tetrachloride		0.00056	0.0063	U
107-06-2	1,2-Dichloroethane		0.00034	0.0063	U
71-43-2	Benzene		0.00039	0.0063	U
79-01-6	Trichloroethene		0.00040	0.0063	U
78-87-5	1,2-Dichloropropane		0.00079	0.0063	U
74-95-3	Dibromomethane		0.0015	0.0063	U
75-27-4	Bromodichloromethane		0.00048	0.0063	U
10061-01-5	cis-1,3-Dichloropropene		0.00049	0.0063	U
108-10-1	4-Methyl-2-pentanone		0.0016	0.016	U
108-88-3	Toluene		0.00043	0.0063	U
10061-02-6	trans-1,3-Dichloropropene		0.00051	0.0063	U
79-00-5	1,1,2-Trichloroethane		0.00090	0.0063	U
127-18-4	Tetrachloroethene		0.0020	0.0063	U
591-78-6	2-Hexanone		0.0013	0.016	U
124-48-1	Dibromochloromethane		0.00070	0.0063	U
106-93-4	1,2-Dibromoethane		0.00028	0.0063	U

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ANALYSIS DATA SHEET

SW 8260B

WS-DUP

Client: DRAPER ADEN ASSOCIATES SDG 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Preparation: EPA 5035A File ID: 1601025-0859.d Sampled: 01/07/16 12:30

Initial/Final: 5.25g / 5mL Lab ID: 1601025-08 Received: 01/08/16 09:06

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 24 Analyzed: 01/12/16 21:56

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (mg/kg dry)	MDL	RL	Q
108-90-7	Chlorobenzene		0.00031	0.0063	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.00040	0.0063	*U*
100-41-4	Ethylbenzene		0.00073	0.0063	*U*
100-42-5	Styrene		0.00010	0.0063	*U*
75-25-2	Bromoform		0.0014	0.0063	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.00046	0.0063	*U*
96-18-4	1,2,3-Trichloropropane		0.0011	0.0063	*U*
110-57-6	trans-1,4-Dichloro-2-butene		0.0023	0.025	*U*
106-46-7	1,4-Dichlorobenzene		0.00026	0.0063	*U*
95-50-1	1,2-Dichlorobenzene		0.00045	0.0063	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.00081	0.0063	*U*
1330-20-7	Xylenes (total)		0.00018	0.0063	*U*

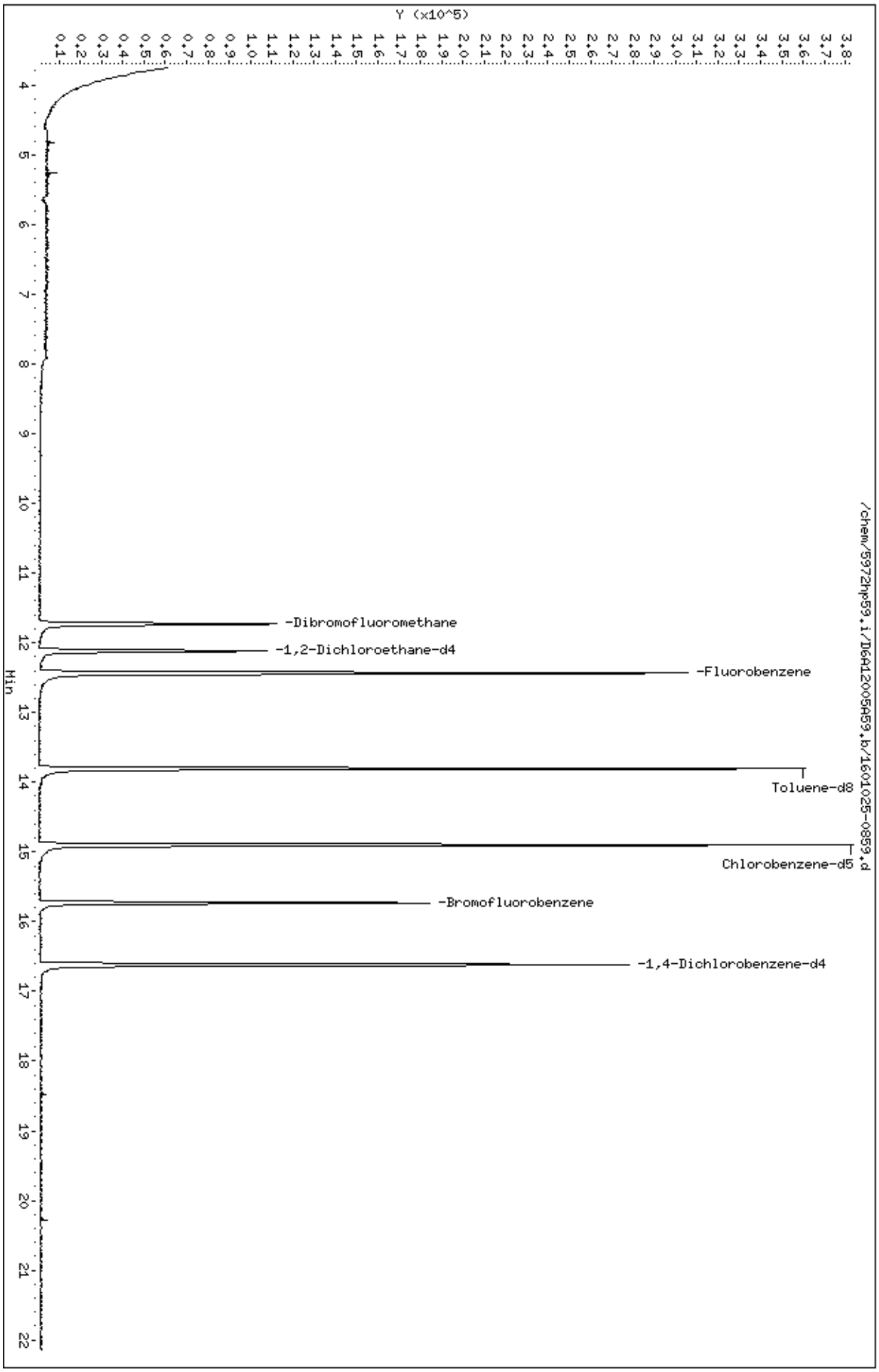
SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.06259	0.06032	96	71 - 141	
1,2-Dichloroethane-d4	0.06259	0.06430	103	70 - 139	
Toluene-d8	0.06259	0.05646	90	72 - 123	
Bromofluorobenzene	0.06259	0.06044	97	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0859.d
Date : 12-JAN-2016 21:56
Client ID: WS-DUP
Sample Info: 1601025-08:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0859.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0859.d
Lab Smp Id: 1601025-08 Client Smp ID: WS-DUP
Inj Date : 12-JAN-2016 21:56
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-08:JAO
Misc Info : WS-DUP
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 31
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.25000	Weight of sample extracted (g)
M	24.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.430	12.418	(1.000)	330676	250.000	
* 2 Chlorobenzene-d5	117	14.905	14.894	(1.000)	234102	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.621	16.600	(1.000)	93295	250.000	
$ 4 Dibromofluoromethane	113	11.729	11.718	(0.944)	91721	240.907	60.3777
$ 5 1,2-Dichloroethane-d4	65	12.124	12.113	(0.975)	89662	256.828	64.3679
$ 6 Toluene-d8	98	13.800	13.789	(0.926)	237892	225.507	56.5181
$ 7 Bromofluorobenzene	95	15.733	15.722	(0.947)	69314	241.396	60.5003
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0859.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Data File: /chem/5972hp59.i/D6A12005A59.b/1601025-0859.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601025-0859.d
Lab Smp Id: 1601025-08 Client Smp ID: WS-DUP
Inj Date : 12-JAN-2016 21:56
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601025-08:JAO
Misc Info : WS-DUP
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 31
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

L. Initial Calibration and Second Source Calibration Verification Data

(INITIAL CALIBRATION DATA) (SECOND-SOURCE CALIBRATION VERIFICATION)

If more than one instrument is used, forms shall be arranged in order by instrument. Multiple initial calibrations from the same instrument shall be in chronological order. Within each initial calibration, the standards are in order by level, from lowest to highest. The calibration is followed by the second source calibration verification form.

(1) RICs and Quantitation reports for the initial calibration and the second source calibration verification. Spectra not required.

(2) EICPs displaying each manual integration.

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Chloromethane	5	0.4359721	10	0.3944955	20	0.4419522	50	0.4328191	100	0.4598268	200	0.4109895
Chloromethane	5	0.4359721	10	0.3944955	20	0.4419522	50	0.4328191	100	0.4598268	200	0.4109895
Vinyl chloride	5	0.2926313	10	0.2341472	20	0.2914651	50	0.302564	100	0.2901067	200	0.2837613
Vinyl chloride	5	0.2926313	10	0.2341472	20	0.2914651	50	0.302564	100	0.2901067	200	0.2837613
Bromomethane	5	0.1403789	10	0.1446825	20	0.1357357	50	0.1544784	100	0.1341185	200	0.143931
Bromomethane	5	0.1403789	10	0.1446825	20	0.1357357	50	0.1544784	100	0.1341185	200	0.143931
Chloroethane	5	0.1423795	10	0.1143021	20	0.1295724	50	0.1396116	100	0.1204362	200	0.1144328
Chloroethane	5	0.1423795	10	0.1143021	20	0.1295724	50	0.1396116	100	0.1204362	200	0.1144328
Trichlorofluoromethane	5	0.2203504	10	0.2122503	20	0.2465336	50	0.2551115	100	0.2462841	200	0.2262193
Trichlorofluoromethane	5	0.2203504	10	0.2122503	20	0.2465336	50	0.2551115	100	0.2462841	200	0.2262193
1,1-Dichloroethene	5	0.1432888	10	0.1320574	20	0.1704401	50	0.1632235	100	0.1846333	200	0.1613264
1,1-Dichloroethene	5	0.1432888	10	0.1320574	20	0.1704401	50	0.1632235	100	0.1846333	200	0.1613264
Acetone	12.5	4.931318E-02	25	4.377388E-02	50	5.963676E-02	125	5.101221E-02	250	5.072625E-02	500	4.994251E-02
Acetone	12.5	4.931318E-02	25	4.377388E-02	50	5.963676E-02	125	5.101221E-02	250	5.072625E-02	500	4.994251E-02
Iodomethane	5	0.1046281	10	0.1400779	20	0.1452178	50	0.1834517	100	0.1564949	200	0.1636268
Iodomethane	5	0.1046281	10	0.1400779	20	0.1452178	50	0.1834517	100	0.1564949	200	0.1636268
Carbon disulfide	5	0.6509703	10	0.6466107	20	0.7228244	50	0.7721606	100	0.7838172	200	0.6892086
Carbon disulfide	5	0.6509703	10	0.6466107	20	0.7228244	50	0.7721606	100	0.7838172	200	0.6892086
Methylene chloride	5	0.2189734	10	0.2123254	20	0.2297707	50	0.2460926	100	0.2360011	200	0.2236308
Methylene chloride	5	0.2189734	10	0.2123254	20	0.2297707	50	0.2460926	100	0.2360011	200	0.2236308
Acrylonitrile	50	0.0632965	100	6.217483E-02	200	6.968232E-02	500	0.0708297	1000	6.845265E-02	2000	0.063457
Acrylonitrile	50	0.0632965	100	6.217483E-02	200	6.968232E-02	500	0.0708297	1000	6.845265E-02	2000	0.063457
trans-1,2-Dichloroethene	5	0.1972527	10	0.1969474	20	0.2193743	50	0.2375175	100	0.2480711	200	0.2291785
trans-1,2-Dichloroethene	5	0.1972527	10	0.1969474	20	0.2193743	50	0.2375175	100	0.2480711	200	0.2291785
1,1-Dichloroethane	5	0.424748	10	0.3970856	20	0.4455079	50	0.5062146	100	0.5058337	200	0.4464006
1,1-Dichloroethane	5	0.424748	10	0.3970856	20	0.4455079	50	0.5062146	100	0.5058337	200	0.4464006
Vinyl acetate	5	0.5619831	10	0.5378267	20	0.5252589	50	0.5939533	100	0.6147418	200	0.559262

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INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Vinyl acetate	5	0.5619831	10	0.5378267	20	0.5252589	50	0.5939533	100	0.6147418	200	0.559262
cis-1,2-Dichloroethene	5	0.2318862	10	0.2234365	20	0.2620029	50	0.287559	100	0.2859284	200	0.2577188
cis-1,2-Dichloroethene	5	0.2318862	10	0.2234365	20	0.2620029	50	0.287559	100	0.2859284	200	0.2577188
2-Butanone	12.5	0.1289625	25	0.104755	50	0.1218824	125	0.116342	250	0.1210535	500	0.1153269
2-Butanone	12.5	0.1289625	25	0.104755	50	0.1218824	125	0.116342	250	0.1210535	500	0.1153269
Bromochloromethane	5	0.1017441	10	0.1025153	20	0.1100935	50	0.1149736	100	0.1089823	200	0.104402
Bromochloromethane	5	0.1017441	10	0.1025153	20	0.1100935	50	0.1149736	100	0.1089823	200	0.104402
Chloroform	5	0.3883218	10	0.3754889	20	0.4347526	50	0.4751414	100	0.4541663	200	0.4058296
Chloroform	5	0.3883218	10	0.3754889	20	0.4347526	50	0.4751414	100	0.4541663	200	0.4058296
1,1,1-Trichloroethane	5	0.2982953	10	0.2850983	20	0.3095216	50	0.3511249	100	0.3582972	200	0.3114461
1,1,1-Trichloroethane	5	0.2982953	10	0.2850983	20	0.3095216	50	0.3511249	100	0.3582972	200	0.3114461
Carbon tetrachloride	5	0.2560752	10	0.244933	20	0.2900089	50	0.3096771	100	0.3258255	200	0.2869777
Carbon tetrachloride	5	0.2560752	10	0.244933	20	0.2900089	50	0.3096771	100	0.3258255	200	0.2869777
1,2-Dichloroethane	5	0.2861879	10	0.2810317	20	0.3323531	50	0.3200331	100	0.3238536	200	0.3041076
1,2-Dichloroethane	5	0.2861879	10	0.2810317	20	0.3323531	50	0.3200331	100	0.3238536	200	0.3041076
Benzene	5	0.824086	10	0.8296567	20	0.9214533	50	0.9553279	100	0.9706907	200	0.8687096
Benzene	5	0.824086	10	0.8296567	20	0.9214533	50	0.9553279	100	0.9706907	200	0.8687096
Trichloroethene	5	0.2147903	10	0.2157788	20	0.2492225	50	0.2743642	100	0.2808306	200	0.2501795
Trichloroethene	5	0.2147903	10	0.2157788	20	0.2492225	50	0.2743642	100	0.2808306	200	0.2501795
1,2-Dichloropropane	5	7.002055E-02	10	6.779296E-02	20	7.500989E-02	50	8.420874E-02	100	8.235345E-02	200	7.329175E-02
1,2-Dichloropropane	5	7.002055E-02	10	6.779296E-02	20	7.500989E-02	50	8.420874E-02	100	8.235345E-02	200	7.329175E-02
Dibromomethane	5	0.1312593	10	0.1346099	20	0.1534604	50	0.1664186	100	0.1626464	200	0.1531249
Dibromomethane	5	0.1312593	10	0.1346099	20	0.1534604	50	0.1664186	100	0.1626464	200	0.1531249
Bromodichloromethane	5	0.2653246	10	0.2714596	20	0.3062164	50	0.3272525	100	0.3143274	200	0.2970518
Bromodichloromethane	5	0.2653246	10	0.2714596	20	0.3062164	50	0.3272525	100	0.3143274	200	0.2970518
cis-1,3-Dichloropropene	5	0.3127152	10	0.327153	20	0.3483642	50	0.3975407	100	0.3992675	200	0.3745145
cis-1,3-Dichloropropene	5	0.3127152	10	0.327153	20	0.3483642	50	0.3975407	100	0.3992675	200	0.3745145

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
4-Methyl-2-pentanone	12.5	0.3329325	25	0.3436663	50	0.3889027	125	0.3665296	250	0.3592158	500	0.3366968
4-Methyl-2-pentanone	12.5	0.3329325	25	0.3436663	50	0.3889027	125	0.3665296	250	0.3592158	500	0.3366968
Toluene	5	0.5794008	10	0.6532814	20	0.6995564	50	0.7286453	100	0.7211694	200	0.6602194
Toluene	5	0.5794008	10	0.6532814	20	0.6995564	50	0.7286453	100	0.7211694	200	0.6602194
trans-1,3-Dichloropropene	5	0.3599368	10	0.4146708	20	0.4453284	50	0.4409579	100	0.4570257	200	0.4241089
trans-1,3-Dichloropropene	5	0.3599368	10	0.4146708	20	0.4453284	50	0.4409579	100	0.4570257	200	0.4241089
1,1,2-Trichloroethane	5	0.2169862	10	0.2354813	20	0.2511858	50	0.2538255	100	0.2528369	200	0.2353129
1,1,2-Trichloroethane	5	0.2169862	10	0.2354813	20	0.2511858	50	0.2538255	100	0.2528369	200	0.2353129
Tetrachloroethene	5	0.2242213	10	0.2359533	20	0.2618654	50	0.2783781	100	0.2780052	200	0.2552923
Tetrachloroethene	5	0.2242213	10	0.2359533	20	0.2618654	50	0.2783781	100	0.2780052	200	0.2552923
2-Hexanone	12.5	0.2169862	25	0.2296703	50	0.257473	125	0.2546818	250	0.2452155	500	0.240185
2-Hexanone	12.5	0.2169862	25	0.2296703	50	0.257473	125	0.2546818	250	0.2452155	500	0.240185
Dibromochloromethane	5	0.2674336	10	0.3007063	20	0.3310135	50	0.332425	100	0.3384683	200	0.3163962
Dibromochloromethane	5	0.2674336	10	0.3007063	20	0.3310135	50	0.332425	100	0.3384683	200	0.3163962
1,2-Dibromoethane	5	0.2428541	10	0.2504982	20	0.2782731	50	0.2769984	100	0.2811107	200	0.2635072
1,2-Dibromoethane	5	0.2428541	10	0.2504982	20	0.2782731	50	0.2769984	100	0.2811107	200	0.2635072
Chlorobenzene	5	0.6971443	10	0.758435	20	0.8155431	50	0.8452148	100	0.8346141	200	0.7632348
Chlorobenzene	5	0.6971443	10	0.758435	20	0.8155431	50	0.8452148	100	0.8346141	200	0.7632348
1,1,1,2-Tetrachloroethane	5	0.2641959	10	0.2875424	20	0.3002536	50	0.3140832	100	0.3245795	200	0.303901
1,1,1,2-Tetrachloroethane	5	0.2641959	10	0.2875424	20	0.3002536	50	0.3140832	100	0.3245795	200	0.303901
Ethylbenzene	5	0.3254133	10	0.355512	20	0.3740426	50	0.3989453	100	0.4155437	200	0.3695925
Ethylbenzene	5	0.3254133	10	0.355512	20	0.3740426	50	0.3989453	100	0.4155437	200	0.3695925
Styrene	5	0.6141226	10	0.685518	20	0.7773833	50	0.8168341	100	0.8368686	200	0.7931226
Styrene	5	0.6141226	10	0.685518	20	0.7773833	50	0.8168341	100	0.8368686	200	0.7931226
Bromoform	5	0.382844	10	0.3874154	20	0.4134483	50	0.4385614	100	0.444852	200	0.4066968
Bromoform	5	0.382844	10	0.3874154	20	0.4134483	50	0.4385614	100	0.444852	200	0.4066968
1,1,2,2-Tetrachloroethane	5	0.7431543	10	0.739718	20	0.7208499	50	0.7297122	100	0.7439788	200	0.6689755

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
1,1,2,2-Tetrachloroethane	5	0.7431543	10	0.739718	20	0.7208499	50	0.7297122	100	0.7439788	200	0.6689755
1,2,3-Trichloropropane	5	0.0720204	10	7.641341E-02	20	8.412144E-02	50	8.575084E-02	100	8.590592E-02	200	0.0857995
1,2,3-Trichloropropane	5	0.0720204	10	7.641341E-02	20	8.412144E-02	50	8.575084E-02	100	8.590592E-02	200	0.0857995
trans-1,4-Dichloro-2-butene	20	7.567098E-02	40	8.631254E-02	80	9.512081E-02	200	0.0933682	400	9.428667E-02	800	8.898961E-02
trans-1,4-Dichloro-2-butene	20	7.567098E-02	40	8.631254E-02	80	9.512081E-02	200	0.0933682	400	9.428667E-02	800	8.898961E-02
1,4-Dichlorobenzene	5	1.310835	10	1.278039	20	1.2784	50	1.352131	100	1.378145	200	1.177212
1,4-Dichlorobenzene	5	1.310835	10	1.278039	20	1.2784	50	1.352131	100	1.378145	200	1.177212
1,2-Dichlorobenzene	5	1.062508	10	1.080998	20	1.150217	50	1.181283	100	1.187625	200	1.065216
1,2-Dichlorobenzene	5	1.062508	10	1.080998	20	1.150217	50	1.181283	100	1.187625	200	1.065216
1,2-Dibromo-3-chloropropane	5	8.922114E-02	10	0.1159443	20	0.1182169	50	0.1296271	100	0.1302867	200	0.1133761
1,2-Dibromo-3-chloropropane	5	8.922114E-02	10	0.1159443	20	0.1182169	50	0.1296271	100	0.1302867	200	0.1133761
Xylenes (total)	15	0.407554	30	0.4359521	60	0.489268	150	0.5173361	300	0.5307801	600	0.4889122
Xylenes (total)	15	0.407554	30	0.4359521	60	0.489268	150	0.5173361	300	0.5307801	600	0.4889122
Dibromofluoromethane	5	0.2741584	10	0.2656413	20	0.291736	50	0.3011658	100	0.29329	200	0.3010708
Dibromofluoromethane	5	0.2741584	10	0.2656413	20	0.291736	50	0.3011658	100	0.29329	200	0.3010708
1,2-Dichloroethane-d4	5	0.2654545	10	0.2489371	20	0.2712005	50	0.2685589	100	0.2635326	200	0.2659492
1,2-Dichloroethane-d4	5	0.2654545	10	0.2489371	20	0.2712005	50	0.2685589	100	0.2635326	200	0.2659492
Toluene-d8	5	1.016545	10	1.11066	20	1.164746	50	1.170973	100	1.120531	200	1.175905
Toluene-d8	5	1.016545	10	1.11066	20	1.164746	50	1.170973	100	1.120531	200	1.175905
Bromofluorobenzene	5	0.7255689	10	0.7537707	20	0.7814937	50	0.7884428	100	0.7925384	200	0.7747988
Bromofluorobenzene	5	0.7255689	10	0.7537707	20	0.7814937	50	0.7884428	100	0.7925384	200	0.7747988

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INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
Chloromethane	0.4293425	5.407908	4.639833	5.213894E-02			CCC (15)	
Chloromethane	0.4293425	5.407908	4.639833	5.213894E-02			CCC (15)	
Vinyl chloride	0.2824459	8.647834	4.944167	7.608906E-02			CCC (30)	
Vinyl chloride	0.2824459	8.647834	4.944167	7.608906E-02			CCC (30)	
Bromomethane	0.1422208	5.170087	5.920167	0.14831			CCC (15)	
Bromomethane	0.1422208	5.170087	5.920167	0.14831			CCC (15)	
Chloroethane	0.1267891	9.750617	6.237667	8.645976E-02			CCC (15)	
Chloroethane	0.1267891	9.750617	6.237667	8.645976E-02			CCC (15)	
Trichlorofluoromethane	0.2344582	7.318996	6.972167	6.891093E-02			CCC (15)	
Trichlorofluoromethane	0.2344582	7.318996	6.972167	6.891093E-02			CCC (15)	
1,1-Dichloroethene	0.1591616	11.86718	8.300166	4.601099E-02			CCC (30)	
1,1-Dichloroethene	0.1591616	11.86718	8.300166	4.601099E-02			CCC (30)	
Acetone	5.073413E-02	10.06689	8.467667	4.774105E-02			CCC (15)	
Acetone	5.073413E-02	10.06689	8.467667	4.774105E-02			CCC (15)	
Iodomethane	0.1489162	17.81682	8.637167	6.621125E-02	0.9977652		CCC (15)	
Iodomethane	0.1489162	17.81682	8.637167	6.621125E-02	0.9977652		CCC (15)	
Carbon disulfide	0.710932	8.299476	8.748667	4.317902E-02			CCC (15)	
Carbon disulfide	0.710932	8.299476	8.748667	4.317902E-02			CCC (15)	
Methylene chloride	0.227799	5.342305	9.312667	4.147101E-02			CCC (15)	
Methylene chloride	0.227799	5.342305	9.312667	4.147101E-02			CCC (15)	
Acrylonitrile	0.0663155	5.670816	9.766167	3.797726E-02			CCC (15)	
Acrylonitrile	0.0663155	5.670816	9.766167	3.797726E-02			CCC (15)	
trans-1,2-Dichloroethene	0.2213903	9.510764	9.7285	2.117292E-02			CCC (15)	
trans-1,2-Dichloroethene	0.2213903	9.510764	9.7285	2.117292E-02			CCC (15)	
1,1-Dichloroethane	0.4542984	9.663908	10.41883	2.115553E-02			CCC (15)	
1,1-Dichloroethane	0.4542984	9.663908	10.41883	2.115553E-02			CCC (15)	
Vinyl acetate	0.5655043	5.955277	10.4335	3.120793E-02			CCC (15)	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
Vinyl acetate	0.5655043	5.955277	10.4335	3.120793E-02			CCC (15)	
cis-1,2-Dichloroethene	0.2580886	10.31899	11.19617	3.182937E-02			CCC (15)	
cis-1,2-Dichloroethene	0.2580886	10.31899	11.19617	3.182937E-02			CCC (15)	
2-Butanone	0.1180537	6.880408	11.18117	5.267854E-02			CCC (15)	
2-Butanone	0.1180537	6.880408	11.18117	5.267854E-02			CCC (15)	
Bromochloromethane	0.1071185	4.787196	11.48383	0.0135455			CCC (15)	
Bromochloromethane	0.1071185	4.787196	11.48383	0.0135455			CCC (15)	
Chloroform	0.4222834	9.220204	11.54283	2.566641E-02			CCC (30)	
Chloroform	0.4222834	9.220204	11.54283	2.566641E-02			CCC (30)	
1,1,1-Trichloroethane	0.3189639	9.195342	11.75483	4.356968E-02			CCC (15)	
1,1,1-Trichloroethane	0.3189639	9.195342	11.75483	4.356968E-02			CCC (15)	
Carbon tetrachloride	0.2855829	10.78662	11.916	2.731353E-02			CCC (15)	
Carbon tetrachloride	0.2855829	10.78662	11.916	2.731353E-02			CCC (15)	
1,2-Dichloroethane	0.3079278	6.823463	12.19383	1.291538E-02			CCC (15)	
1,2-Dichloroethane	0.3079278	6.823463	12.19383	1.291538E-02			CCC (15)	
Benzene	0.8949874	7.076892	12.14283	3.168892E-02			CCC (15)	
Benzene	0.8949874	7.076892	12.14283	3.168892E-02			CCC (15)	
Trichloroethene	0.2475276	11.3103	12.774	3.003329E-02			CCC (15)	
Trichloroethene	0.2475276	11.3103	12.774	3.003329E-02			CCC (15)	
1,2-Dichloropropane	7.544622E-02	8.738587	13.8505	0.0126082			CCC (30)	
1,2-Dichloropropane	7.544622E-02	8.738587	13.8505	0.0126082			CCC (30)	
Dibromomethane	0.1502532	9.593633	13.12083	1.824179E-02			CCC (15)	
Dibromomethane	0.1502532	9.593633	13.12083	1.824179E-02			CCC (15)	
Bromodichloromethane	0.2969387	8.188457	13.2225	3.063624E-02			CCC (15)	
Bromodichloromethane	0.2969387	8.188457	13.2225	3.063624E-02			CCC (15)	
cis-1,3-Dichloropropene	0.3599258	10.10345	13.59217	2.765911E-02			CCC (15)	
cis-1,3-Dichloropropene	0.3599258	10.10345	13.59217	2.765911E-02			CCC (15)	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
4-Methyl-2-pentanone	0.3546573	5.981109	13.66283	1.529175E-02			CCC (15)	
4-Methyl-2-pentanone	0.3546573	5.981109	13.66283	1.529175E-02			CCC (15)	
Toluene	0.6737121	8.246138	13.8505	0.0126082			CCC (30)	
Toluene	0.6737121	8.246138	13.8505	0.0126082			CCC (30)	
trans-1,3-Dichloropropene	0.4236714	8.192488	14.0195	2.708791E-02			CCC (15)	
trans-1,3-Dichloropropene	0.4236714	8.192488	14.0195	2.708791E-02			CCC (15)	
1,1,2-Trichloroethane	0.2409381	6.008249	14.17083	1.299102E-02			CCC (15)	
1,1,2-Trichloroethane	0.2409381	6.008249	14.17083	1.299102E-02			CCC (15)	
Tetrachloroethene	0.2556193	8.625726	14.2745	1.946793E-02			CCC (15)	
Tetrachloroethene	0.2556193	8.625726	14.2745	1.946793E-02			CCC (15)	
2-Hexanone	0.240702	6.386276	14.28433	1.094562E-02			CCC (15)	
2-Hexanone	0.240702	6.386276	14.28433	1.094562E-02			CCC (15)	
Dibromochloromethane	0.3144072	8.507743	14.4765	2.079354E-02			CCC (15)	
Dibromochloromethane	0.3144072	8.507743	14.4765	2.079354E-02			CCC (15)	
1,2-Dibromoethane	0.2655403	6.027572	14.59317	4.103232E-02			CCC (15)	
1,2-Dibromoethane	0.2655403	6.027572	14.59317	4.103232E-02			CCC (15)	
Chlorobenzene	0.7856977	7.180727	14.9205	0.0220104			CCC (15)	
Chlorobenzene	0.7856977	7.180727	14.9205	0.0220104			CCC (15)	
1,1,1,2-Tetrachloroethane	0.2990926	7.092461	14.9615	2.194016E-02			CCC (15)	
1,1,1,2-Tetrachloroethane	0.2990926	7.092461	14.9615	2.194016E-02			CCC (15)	
Ethylbenzene	0.3731749	8.529693	14.94483	0.0176984			CCC (30)	
Ethylbenzene	0.3731749	8.529693	14.94483	0.0176984			CCC (30)	
Styrene	0.7539749	11.43211	15.328	2.500628E-02			CCC (15)	
Styrene	0.7539749	11.43211	15.328	2.500628E-02			CCC (15)	
Bromoform	0.412303	6.201541	15.52683	2.301701E-02			CCC (15)	
Bromoform	0.412303	6.201541	15.52683	2.301701E-02			CCC (15)	
1,1,2,2-Tetrachloroethane	0.7243981	3.944524	15.78333	9.180034E-03			CCC (15)	

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ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
1,1,2,2-Tetrachloroethane	0.7243981	3.944524	15.78333	9.180034E-03			CCC (15)	
1,2,3-Trichloropropane	8.166858E-02	7.314145	15.849	2.537084E-02			CCC (15)	
1,2,3-Trichloropropane	8.166858E-02	7.314145	15.849	2.537084E-02			CCC (15)	
trans-1,4-Dichloro-2-butene	8.895814E-02	8.250947	15.81283	1.593818E-02			CCC (15)	
trans-1,4-Dichloro-2-butene	8.895814E-02	8.250947	15.81283	1.593818E-02			CCC (15)	
1,4-Dichlorobenzene	1.295794	5.441778	16.6265	1.458902E-02			CCC (15)	
1,4-Dichlorobenzene	1.295794	5.441778	16.6265	1.458902E-02			CCC (15)	
1,2-Dichlorobenzene	1.121308	5.209202	16.9585	2.002981E-02			CCC (15)	
1,2-Dichlorobenzene	1.121308	5.209202	16.9585	2.002981E-02			CCC (15)	
1,2-Dibromo-3-chloropropane	0.116112	12.882	17.64517	3.128676E-02			CCC (15)	
1,2-Dibromo-3-chloropropane	0.116112	12.882	17.64517	3.128676E-02			CCC (15)	
Xylenes (total)	0.4783004	9.9433	15.31983	1.472473E-02			CCC (15)	
Xylenes (total)	0.4783004	9.9433	15.31983	1.472473E-02			CCC (15)	
Dibromofluoromethane	0.2878437	5.099901	11.72217	3.978905E-02			CCC (15)	
Dibromofluoromethane	0.2878437	5.099901	11.72217	3.978905E-02			CCC (15)	
1,2-Dichloroethane-d4	0.2639388	2.962185	12.11317	3.127988E-02			CCC (15)	
1,2-Dichloroethane-d4	0.2639388	2.962185	12.11317	3.127988E-02			CCC (15)	
Toluene-d8	1.12656	5.363983	13.79433	2.742076E-02			CCC (15)	
Toluene-d8	1.12656	5.363983	13.79433	2.742076E-02			CCC (15)	
Bromofluorobenzene	0.7694356	3.307822	15.72383	1.202549E-02			CCC (15)	
Bromofluorobenzene	0.7694356	3.307822	15.72383	1.202549E-02			CCC (15)	

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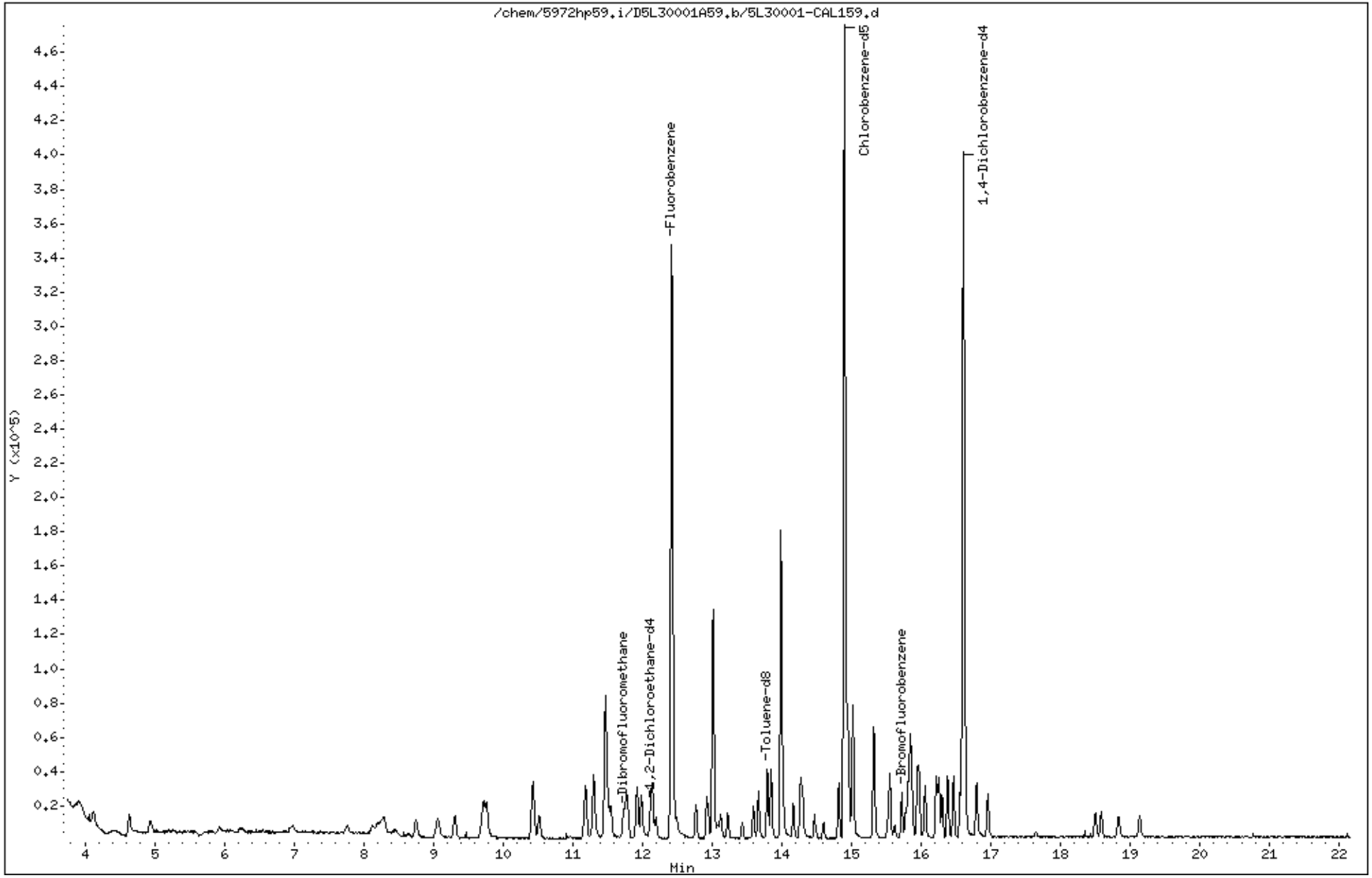
Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Date : 29-DEC-2015 18:00
Client ID: VSTD005AB
Sample Info: 5L30001-CAL1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hai 12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Lab Smp Id: 5L30001-CAL1 Client Smp ID: VSTD005AB
Inj Date : 29-DEC-2015 18:00
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL1:JAO
Misc Info : VSTD005AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 18:00 Cal File: 5L30001-CAL159.d
Als bottle: 24 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.423	12.423	(1.000)	384887	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.898	(1.000)	302692	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.604	(1.000)	131359	250.000	
$ 4 Dibromofluoromethane	113	11.723	11.723	(0.944)	10552	25.0000	25.0000
$ 5 1,2-Dichloroethane-d4	65	12.117	12.117	(0.975)	10217	25.0000	25.0000
$ 6 Toluene-d8	98	13.793	13.793	(0.926)	30770	25.0000	25.0000
$ 7 Bromofluorobenzene	95	15.726	15.726	(0.947)	9531	25.0000	25.0000
8 Dichlorodifluoromethane	85	4.129	4.129	(0.332)	11504	25.0000	25.0000
9 Chloromethane	50	4.642	4.642	(0.374)	16780	25.0000	25.0000
10 Vinyl Chloride	62	4.948	4.948	(0.398)	11263	25.0000	25.0000
11 Bromomethane	94	5.924	5.924	(0.477)	5403	25.0000	25.0000(M)
12 Chloroethane	64	6.240	6.240	(0.502)	5480	25.0000	25.0000
13 Trichlorofluoromethane	101	6.979	6.979	(0.562)	8481	25.0000	25.0000
178 Diethyl ether	45	7.758	7.758	(0.625)	4337	25.0000	25.0000
14 Acrolein	56	8.133	8.133	(0.655)	6661	250.000	250.000

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.212	8.212	(0.661)	2746	25.0000	25.0000
16 1,1,2-trichloro-1,2,2-trifluo	101	8.261	8.261	(0.665)	7220	25.0000	25.0000
17 1,1-Dichloroethene	96	8.301	8.301	(0.668)	5515	25.0000	25.0000
18 Acetone	43	8.468	8.468	(0.682)	4745	62.5000	62.5000(M)
19 Iodomethane	142	8.646	8.646	(0.696)	4027	25.0000	25.0000(M)
20 Carbon disulfide	76	8.744	8.744	(0.704)	25055	25.0000	25.0000
21 3-Chloropropene	76	9.050	9.050	(0.729)	3882	25.0000	25.0000
22 Acetonitrile	41	9.060	9.060	(0.729)	12931	25.0000	25.0000
23 Methyl acetate	43	9.090	9.090	(0.732)	8871	25.0000	25.0000
24 Methylene Chloride	84	9.316	9.316	(0.750)	8428	25.0000	25.0000
25 Acrylonitrile	53	9.770	9.770	(0.786)	24362	250.000	250.000
26 Methyl-tert-butyl ether	73	9.711	9.711	(0.782)	17473	25.0000	25.0000
28 trans-1,2-Dichloroethene	96	9.731	9.731	(0.783)	7592	25.0000	25.0000
29 trans-1,2-DCE (part of total)	96	9.731	9.731	(0.783)	7592	25.0000	25.0000
31 Isopropyl ether	45	10.431	10.431	(0.840)	30677	25.0000	25.0000
32 1,1-Dichloroethane	63	10.421	10.421	(0.839)	16348	25.0000	25.0000
33 Vinyl acetate	43	10.431	10.431	(0.840)	21630	25.0000	25.0000(M)
34 Chloroprene	53	10.520	10.520	(0.847)	11493	25.0000	25.0000
35 2-butanone	43	11.190	11.190	(0.901)	12409	62.5000	62.5000(M)
36 2,2-Dichloropropane	77	11.180	11.180	(0.900)	10963	25.0000	25.0000
37 cis-1,2-Dichloroethene	96	11.200	11.200	(0.902)	8925	25.0000	25.0000
38 cis-1,2-DCE (part of total)	96	11.200	11.200	(0.902)	8925	25.0000	25.0000
39 Propionitrile	54	11.308	11.308	(0.910)	49121	1250.00	1250.00
40 Methacrylonitrile	41	11.466	11.466	(0.923)	59523	250.000	250.000
41 Bromochloromethane	128	11.486	11.486	(0.925)	3916	25.0000	25.0000
180 Tetrahydrofuran	42	11.506	11.506	(0.926)	12331	100.000	100.000
42 Chloroform	83	11.545	11.545	(0.929)	14946	25.0000	25.0000
43 1,1,1-Trichloroethane	97	11.762	11.762	(0.947)	11481	25.0000	25.0000
44 Cyclohexane	56	11.782	11.782	(0.948)	11923	25.0000	25.0000
46 1,1-dichloropropene	75	11.930	11.930	(0.960)	10683	25.0000	25.0000
47 Isobutyl alcohol	43	11.989	11.989	(0.965)	21422	1250.00	1250.00
48 Carbon Tetrachloride	117	11.920	11.920	(0.959)	9856	25.0000	25.0000
49 Benzene	78	12.147	12.147	(0.978)	31718	25.0000	25.0000
50 1,2-Dichloroethane	62	12.196	12.196	(0.982)	11015	25.0000	25.0000
51 Trichloroethene	130	12.778	12.778	(1.029)	8267	25.0000	25.0000
52 Methylcyclohexane	83	12.935	12.935	(1.041)	10816	25.0000	25.0000
53 Methylmethacrylate	100	13.014	13.014	(1.048)	17719	250.000	250.000
54 1,2-Dichloropropane	63	13.853	13.853	(1.115)	2695	25.0000	25.0000
55 1,4-dioxane	88	13.083	13.083	(1.053)	3782	1250.00	1250.00
56 Dibromomethane	174	13.123	13.123	(1.056)	5052	25.0000	25.0000
57 Bromodichloromethane	83	13.221	13.221	(1.064)	10212	25.0000	25.0000
58 cis-1,3-Dichloropropene	75	13.596	13.596	(1.094)	12036	25.0000	25.0000
59 4-Methyl-2-pentanone	43	13.665	13.665	(0.917)	25194	62.5000	62.5000
60 Toluene	92	13.853	13.853	(0.930)	17538	25.0000	25.0000
61 Ethylmethacrylate	99	13.991	13.991	(0.939)	15584	250.000	250.000
62 trans-1,3-Dichloropropene	75	14.020	14.020	(0.941)	10895	25.0000	25.0000
63 1,1,2-Trichloroethane	97	14.168	14.168	(0.951)	6568	25.0000	25.0000

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Report Date: 30-Dec-2015 07:22

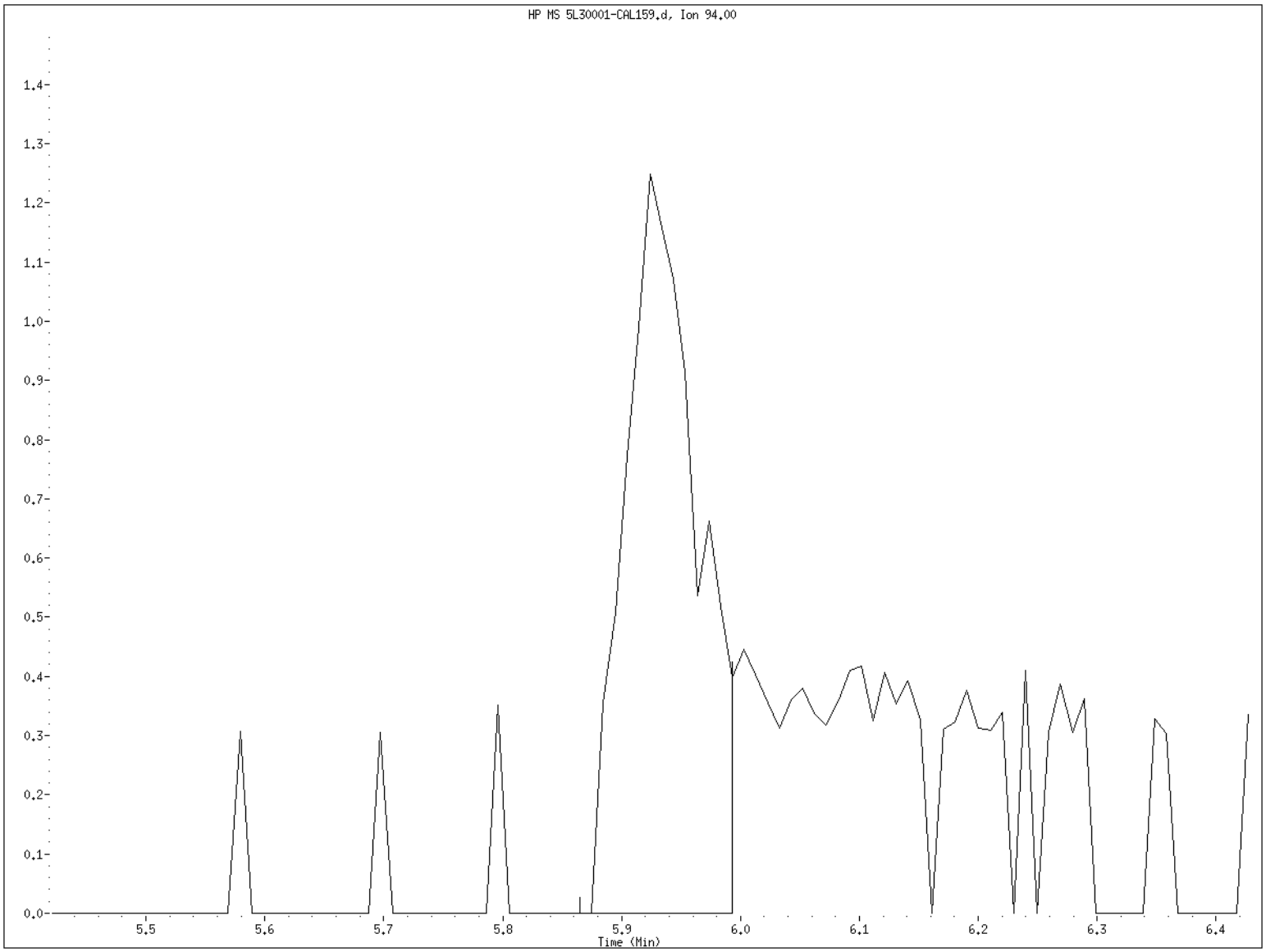
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64	2-hexanone	43	14.286	14.286	(0.959)	16420	62.5000	62.5000
65	2-chloroethyl vinyl ether	63	13.438	13.438	(1.082)	3873	25.0000	25.0000
66	1,3-Dichloropropane	76	14.306	14.306	(0.960)	11978	25.0000	25.0000
67	Tetrachloroethene	164	14.277	14.277	(0.958)	6787	25.0000	25.0000
68	Dibromochloromethane	129	14.474	14.474	(0.972)	8095	25.0000	25.0000
69	1,2-Dibromoethane	107	14.602	14.602	(0.980)	7351	25.0000	25.0000
70	1-Chlorohexane	55	14.819	14.819	(0.995)	8334	25.0000	25.0000
71	Chlorobenzene	112	14.918	14.918	(1.001)	21102	25.0000	25.0000
72	Ethylbenzene	106	14.947	14.947	(1.003)	9850	25.0000	25.0000
73	1,1,1,2-Tetrachloroethane	131	14.967	14.967	(1.005)	7997	25.0000	25.0000
74	m,p-Xylene	106	15.026	15.026	(1.009)	25417	50.0000	50.0000
75	m,p-Xylene (part of total)	106	15.026	15.026	(1.009)	25417	50.0000	50.0000
76	o-Xylene	106	15.322	15.322	(1.028)	11592	25.0000	25.0000
77	o-Xylene (part of total)	106	15.322	15.322	(1.028)	11592	25.0000	25.0000
78	Styrene	104	15.332	15.332	(1.029)	18589	25.0000	25.0000
79	Bromoform	173	15.529	15.529	(0.935)	5029	25.0000	25.0000(M)
80	Isopropyl Benzene	105	15.559	15.559	(1.044)	29149	25.0000	25.0000
81	1,1,2,2-Tetrachloroethane	83	15.785	15.785	(0.951)	9762	25.0000	25.0000
82	trans-1,4-dichloro-2-butene	53	15.815	15.815	(1.062)	9162	100.000	100.000
83	1,2,3-Trichloropropane	110	15.854	15.854	(1.064)	2180	25.0000	25.0000
84	Bromobenzene	156	15.874	15.874	(1.066)	8163	25.0000	25.0000
85	n-Propyl Benzene	91	15.845	15.845	(0.954)	38775	25.0000	25.0000
86	1,3,5-Trimethyl Benzene	105	15.953	15.953	(0.961)	23150	25.0000	25.0000
87	2-Chlorotoluene	91	15.983	15.983	(0.963)	25272	25.0000	25.0000
88	4-Chlorotoluene	91	16.052	16.052	(0.967)	23435	25.0000	25.0000
89	tert-Butyl Benzene	119	16.219	16.219	(0.977)	24426	25.0000	25.0000
90	1,2,4-Trimethyl Benzene	105	16.249	16.249	(0.979)	23719	25.0000	25.0000
91	Pentachloroethane	167	16.308	16.308	(0.982)	5233	25.0000	25.0000
92	sec-Butyl Benzene	105	16.377	16.377	(0.986)	33025	25.0000	25.0000
93	p-Isopropyl Toluene	119	16.466	16.466	(0.992)	25351	25.0000	25.0000
94	1,3-Dichlorobenzene	146	16.564	16.564	(0.998)	13950	25.0000	25.0000
95	1,4-Dichlorobenzene	146	16.624	16.624	(1.001)	17219	25.0000	25.0000
96	n-Butyl Benzene	91	16.801	16.801	(1.012)	24088	25.0000	25.0000
97	1,2-Dichlorobenzene	146	16.959	16.959	(1.021)	13957	25.0000	25.0000
98	1,2-Dibromo-3-Chloropropane	157	17.649	17.649	(1.063)	1172	25.0000	25.0000
99	1,2,4-Trichlorobenzene	180	18.507	18.507	(1.115)	8926	25.0000	25.0000
100	Hexachlorobutadiene	225	18.596	18.596	(1.120)	4665	25.0000	25.0000
101	Naphthalene	128	18.842	18.842	(1.135)	18183	25.0000	25.0000
102	1,2,3-Trichlorobenzene	180	19.128	19.128	(1.152)	8166	25.0000	25.0000
M 103	1,2-Dichloroethene (total)	96				16517	50.0000	50.0000
M 104	Xylene (total)	106				37009	75.0000	75.0000

QC Flag Legend

M - Compound response manually integrated.

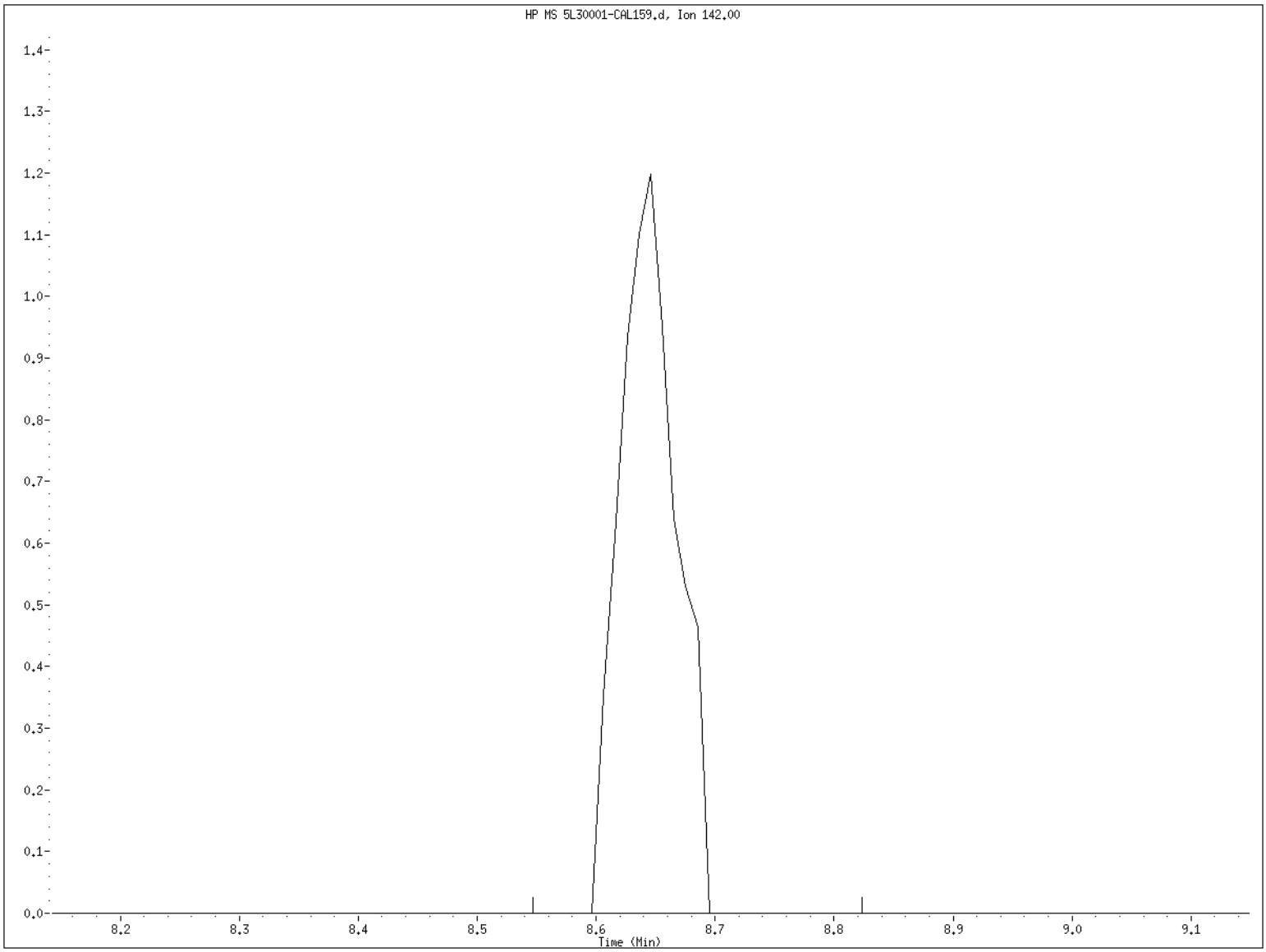
12/30/2015

Bromomethane CAS Number 74-83-9 Area = 5403 Manually integrated



File name: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 5.92
Operator ID: JAO

Iodomethane CAS Number 74-88-4 Area = 4027 Manually integrated



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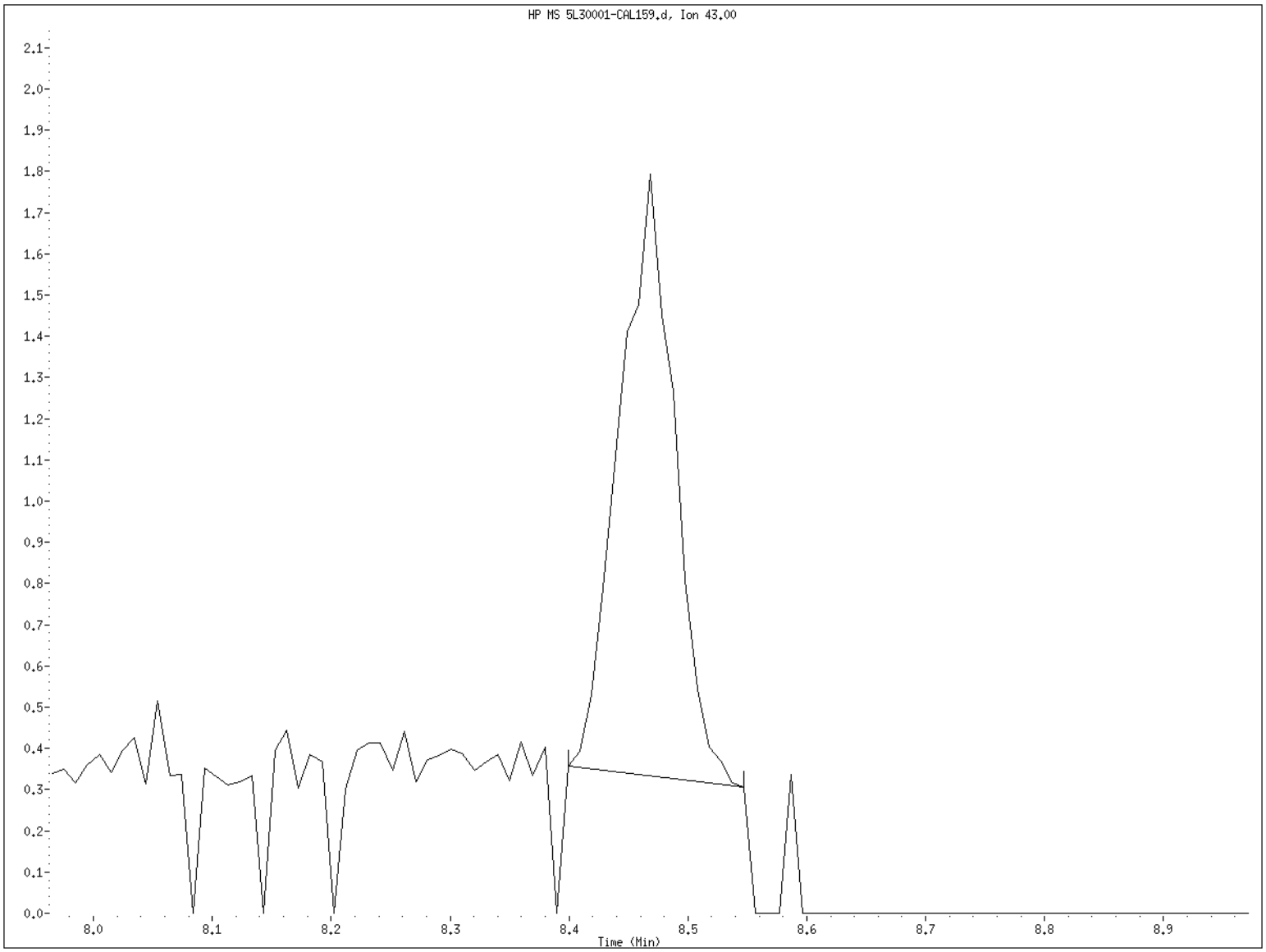
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 8.65
Operator ID: JAO

12/30/2015

Acetone CAS Number 67-64-1 Area = 4745 Manually integrated



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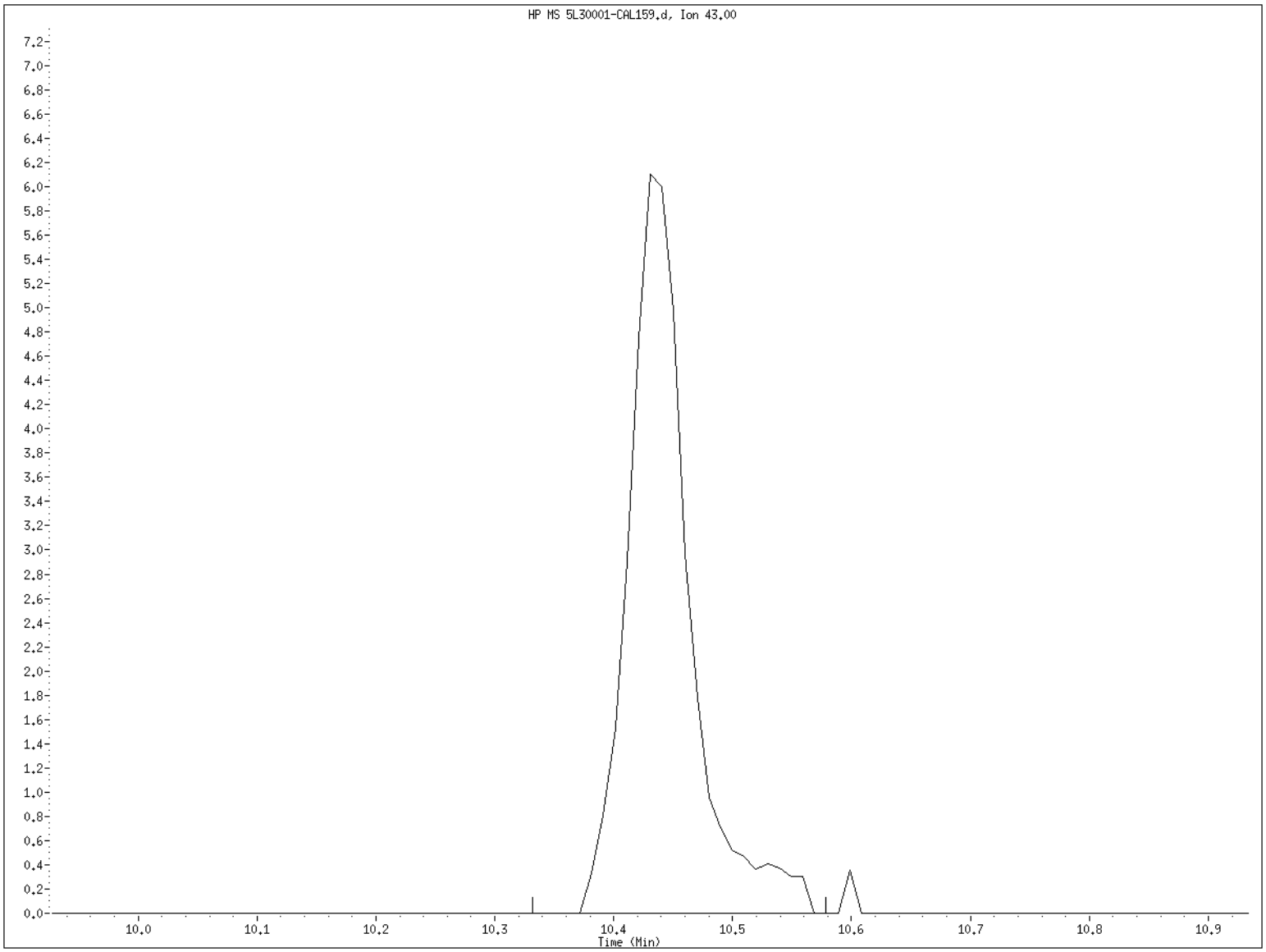
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 8.47
Operator ID: JAO

Vinyl acetate CAS Number 108-05-4 Area = 21630 Manually integrated



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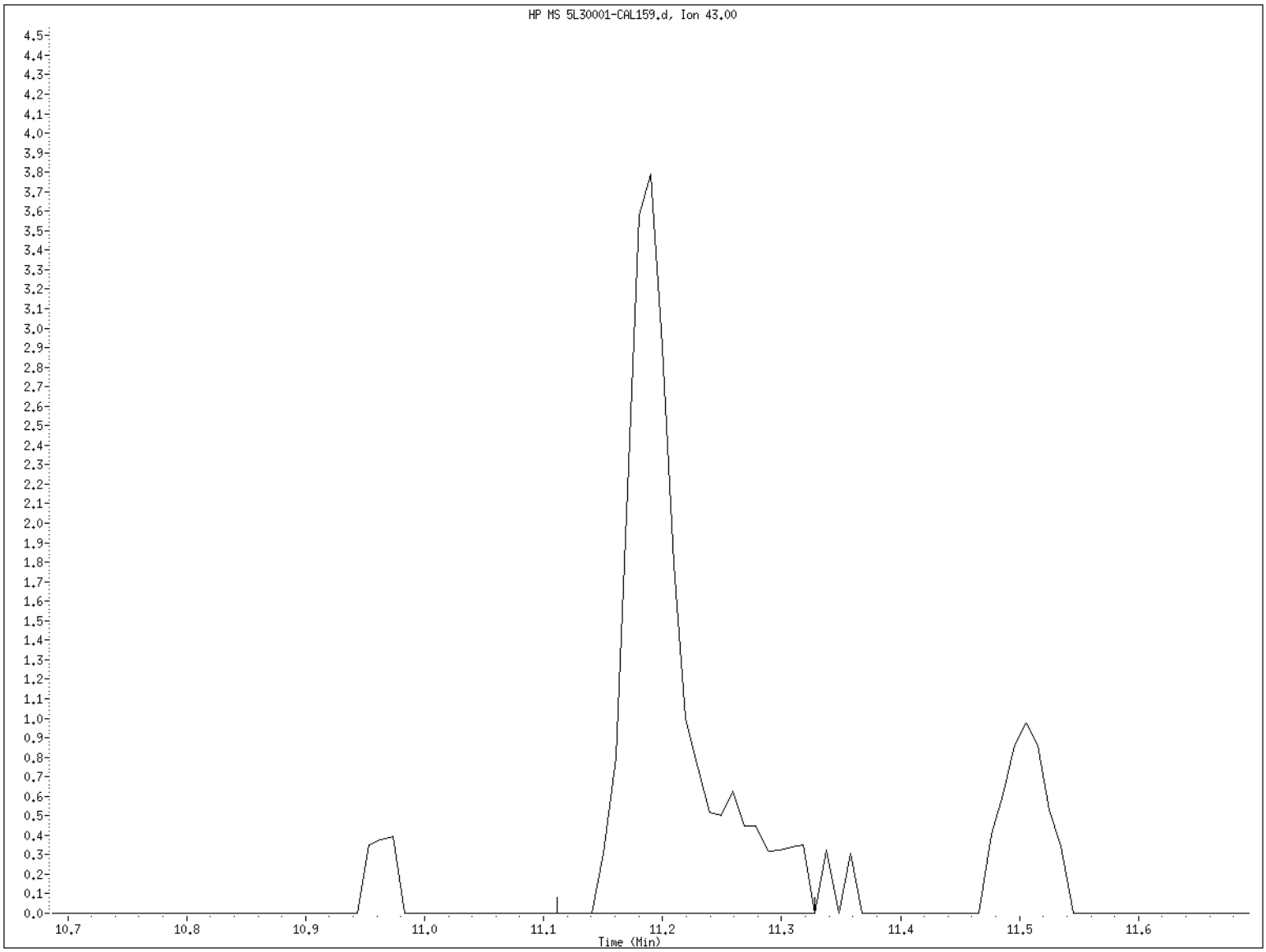
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 10.43
Operator ID: JAO

2-butanone CAS Number 78-93-3 Area = 12409 Manually integrated



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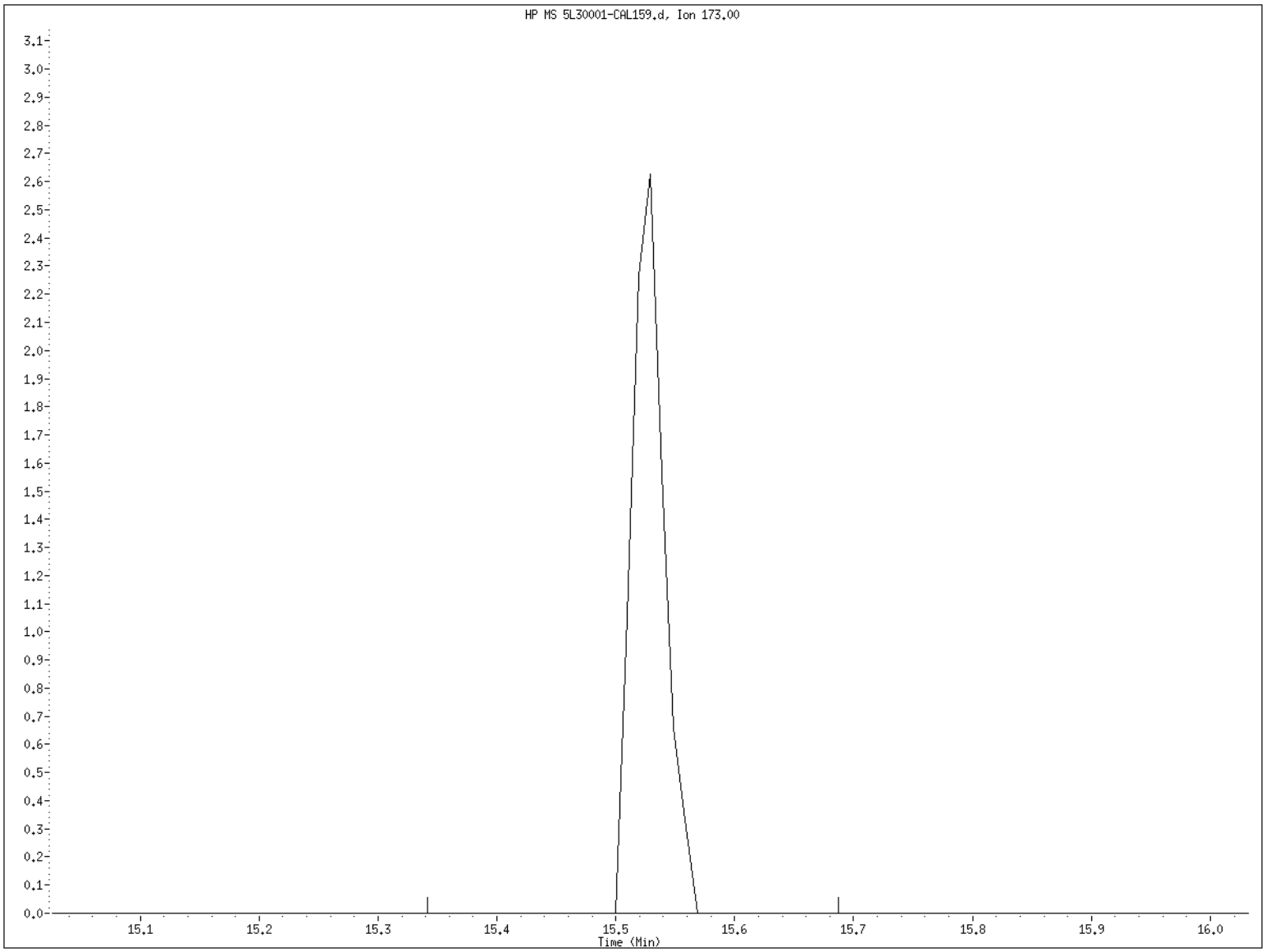
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 11.19
Operator ID: JAO

Bromoform CAS Number 75-25-2 Area = 5029 Manually integrated



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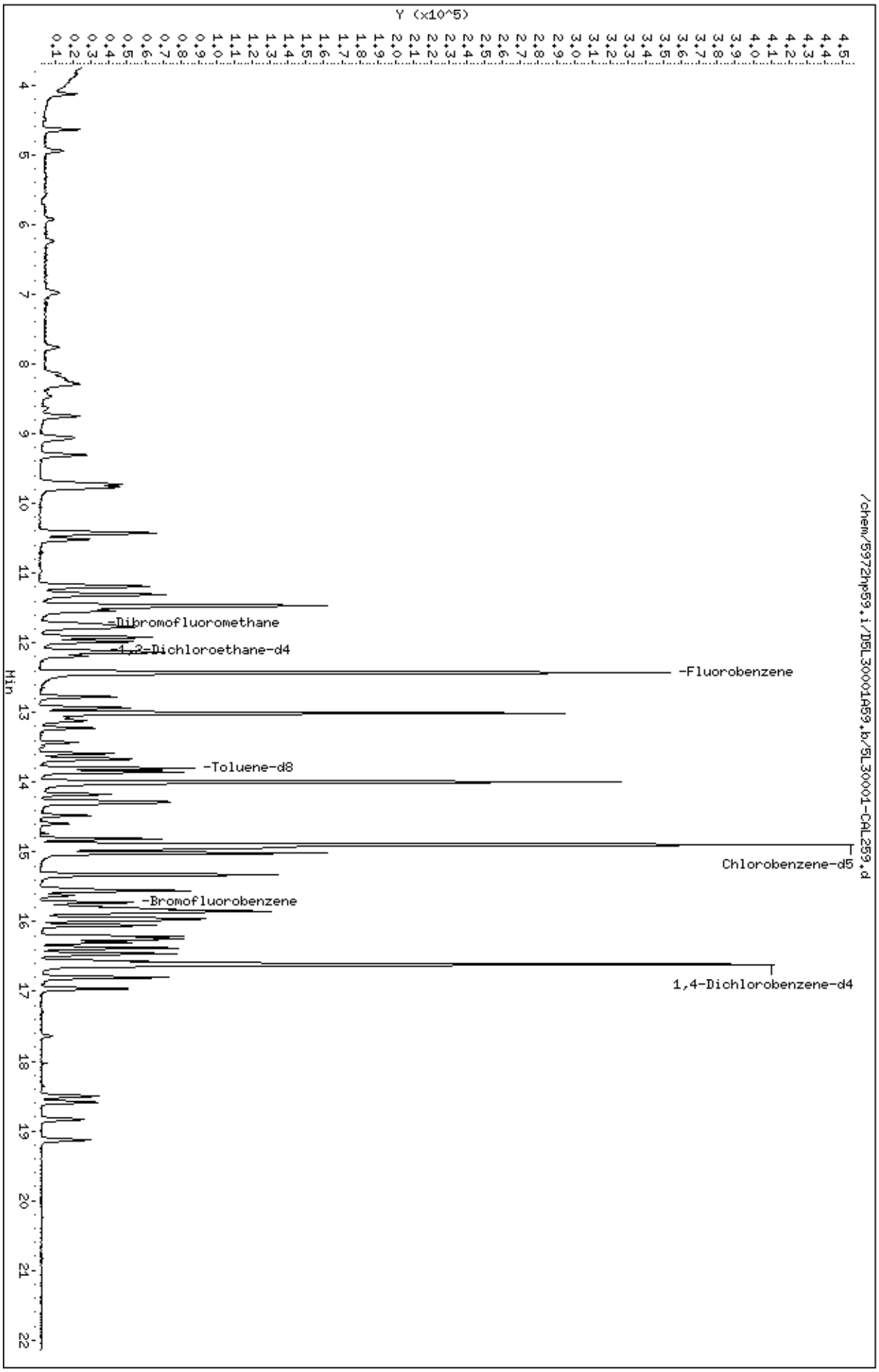
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 15.53
Operator ID: JAO

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Date : 29-DEC-2015 17:28
Client ID: WSTD010AB
Sample Info: 5L30001-CAL2:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Lab Smp Id: 5L30001-CAL2 Client Smp ID: VSTD010AB
Inj Date : 29-DEC-2015 17:28
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL2:JAO
Misc Info : VSTD010AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 17:28 Cal File: 5L30001-CAL259.d
Als bottle: 23 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.429	12.429	(1.000)	399599	250.000	
* 2 Chlorobenzene-d5	117	14.894	14.894	(1.000)	286010	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.610	16.610	(1.000)	132003	250.000	
$ 4 Dibromofluoromethane	113	11.729	11.729	(0.944)	21230	50.0000	49.2111
$ 5 1,2-Dichloroethane-d4	65	12.113	12.113	(0.975)	19895	50.0000	48.3945
$ 6 Toluene-d8	98	13.799	13.799	(0.927)	63532	50.0000	52.2122
$ 7 Bromofluorobenzene	95	15.722	15.722	(0.947)	19900	50.0000	50.9532
8 Dichlorodifluoromethane	85	4.126	4.126	(0.332)	21806	50.0000	47.7224
9 Chloromethane	50	4.638	4.638	(0.373)	31528	50.0000	47.5028
10 Vinyl Chloride	62	4.944	4.944	(0.398)	18713	50.0000	44.4489
11 Bromomethane	94	5.930	5.930	(0.477)	11563	50.0000	50.7549(M)
12 Chloroethane	64	6.246	6.246	(0.503)	9135	50.0000	44.5307
13 Trichlorofluoromethane	101	6.966	6.966	(0.560)	16963	50.0000	49.0638
178 Diethyl ether	45	7.774	7.774	(0.625)	7624	50.0000	45.8461
14 Acrolein	56	8.129	8.129	(0.654)	12903	500.000	482.640

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.208	8.208	(0.660)	5624	50.0000	49.6560
16 1,1,2-trichloro-1,2,2-trifluo	101	8.257	8.257	(0.664)	12979	50.0000	46.4017
17 1,1-Dichloroethene	96	8.307	8.307	(0.668)	10554	50.0000	47.9605
18 Acetone	43	8.474	8.474	(0.682)	8746	125.000	117.562(M)
19 Iodomethane	142	8.642	8.642	(0.695)	11195	50.0000	50.0000(M)
20 Carbon disulfide	76	8.751	8.751	(0.704)	51677	50.0000	49.8320
21 3-Chloropropene	76	9.056	9.056	(0.729)	7228	50.0000	47.2765
22 Acetonitrile	41	9.056	9.056	(0.729)	23925	50.0000	47.1191
23 Methyl acetate	43	9.086	9.086	(0.731)	17532	50.0000	48.7648
24 Methylene Chloride	84	9.313	9.313	(0.749)	16969	50.0000	49.2293
25 Acrylonitrile	53	9.766	9.766	(0.786)	49690	500.000	495.530
26 Methyl-tert-butyl ether	73	9.707	9.707	(0.781)	36703	50.0000	50.2886
28 trans-1,2-Dichloroethene	96	9.727	9.727	(0.783)	15740	50.0000	49.9613
29 trans-1,2-DCE (part of total)	96	9.727	9.727	(0.783)	15740	50.0000	49.9613
31 Isopropyl ether	45	10.427	10.427	(0.839)	60223	50.0000	48.5974
32 1,1-Dichloroethane	63	10.417	10.417	(0.838)	31735	50.0000	48.3170
33 Vinyl acetate	43	10.437	10.437	(0.840)	42983	50.0000	48.9018(M)
34 Chloroprene	53	10.516	10.516	(0.846)	23393	50.0000	49.5010
35 2-butanone	43	11.186	11.186	(0.900)	20930	125.000	112.053
36 2,2-Dichloropropane	77	11.176	11.176	(0.899)	22256	50.0000	49.4357
37 cis-1,2-Dichloroethene	96	11.196	11.196	(0.901)	17857	50.0000	49.0721
38 cis-1,2-DCE (part of total)	96	11.196	11.196	(0.901)	17857	50.0000	49.0721
39 Propionitrile	54	11.305	11.305	(0.910)	101032	2500.00	2488.11
40 Methacrylonitrile	41	11.462	11.462	(0.922)	112469	500.000	476.431
41 Bromochloromethane	128	11.482	11.482	(0.924)	8193	50.0000	50.1888
180 Tetrahydrofuran	42	11.502	11.502	(0.925)	22655	200.000	187.776
42 Chloroform	83	11.541	11.541	(0.929)	30009	50.0000	49.1599
43 1,1,1-Trichloroethane	97	11.758	11.758	(0.946)	22785	50.0000	48.8689
44 Cyclohexane	56	11.788	11.788	(0.948)	24480	50.0000	49.7182
46 1,1-dichloropropene	75	11.926	11.926	(0.960)	22320	50.0000	50.1543
47 Isobutyl alcohol	43	11.985	11.985	(0.964)	40711	2500.00	2389.35
48 Carbon Tetrachloride	117	11.916	11.916	(0.959)	19575	50.0000	48.8880
49 Benzene	78	12.143	12.143	(0.977)	66306	50.0000	50.1684
50 1,2-Dichloroethane	62	12.192	12.192	(0.981)	22460	50.0000	49.5455
51 Trichloroethene	130	12.774	12.774	(1.028)	17245	50.0000	50.1148
52 Methylcyclohexane	83	12.932	12.932	(1.040)	21997	50.0000	49.4805
53 Methylmethacrylate	100	13.011	13.011	(1.047)	38653	500.000	512.329
54 1,2-Dichloropropane	63	13.849	13.849	(1.114)	5418	50.0000	49.1918
55 1,4-dioxane	88	13.080	13.080	(1.052)	7424	2500.00	2429.78
56 Dibromomethane	174	13.119	13.119	(1.056)	10758	50.0000	50.6301
57 Bromodichloromethane	83	13.228	13.228	(1.064)	21695	50.0000	50.5715
58 cis-1,3-Dichloropropene	75	13.592	13.592	(1.094)	26146	50.0000	51.1282
59 4-Methyl-2-pentanone	43	13.661	13.661	(0.917)	49146	125.000	126.983
60 Toluene	92	13.849	13.849	(0.930)	37369	50.0000	52.9967
61 Ethylmethacrylate	99	13.997	13.997	(0.940)	31592	500.000	517.543
62 trans-1,3-Dichloropropene	75	14.026	14.026	(0.942)	23720	50.0000	53.5330
63 1,1,2-Trichloroethane	97	14.174	14.174	(0.952)	13470	50.0000	52.0438

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Report Date: 30-Dec-2015 07:22

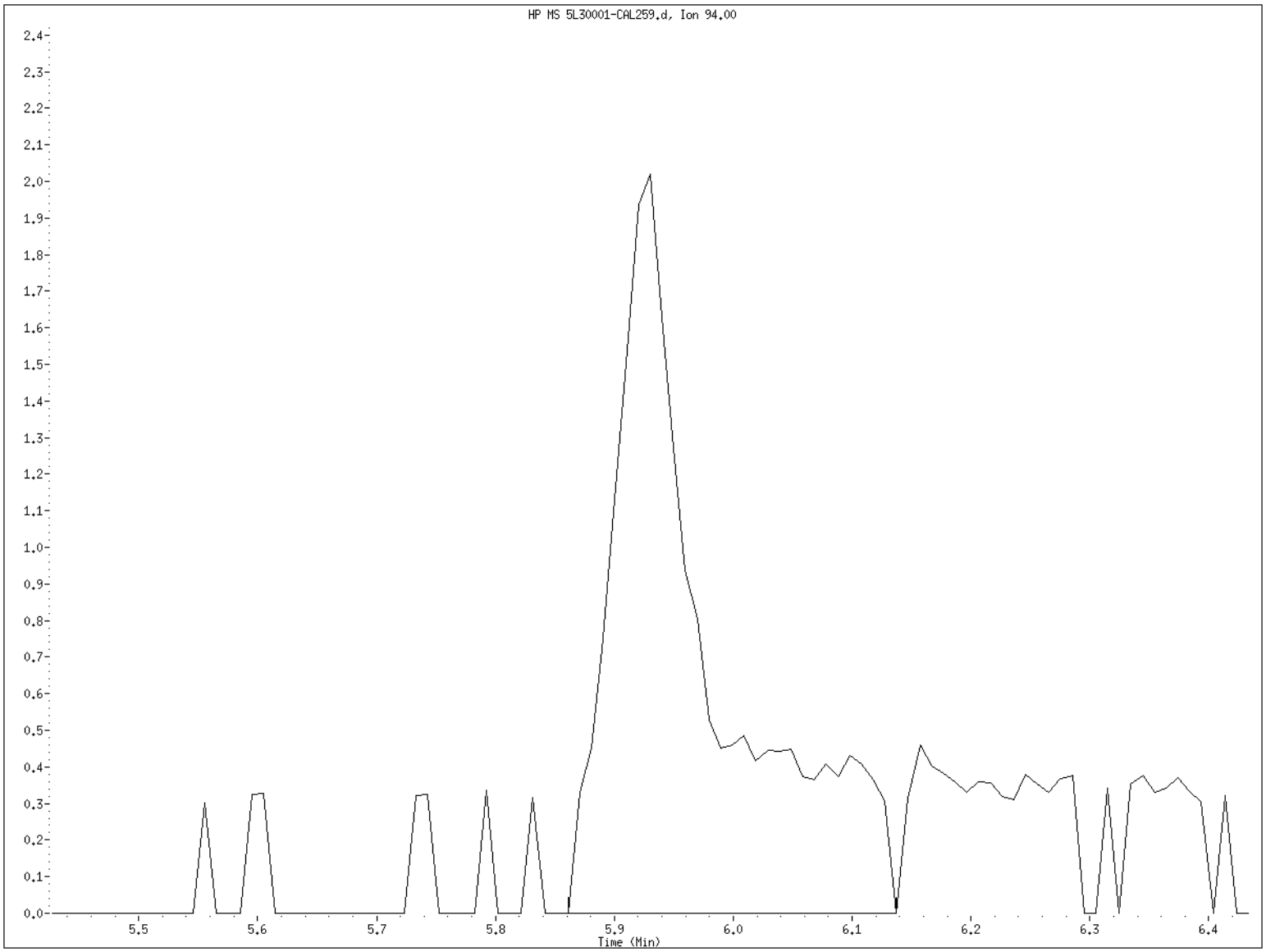
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.283	14.283	(0.959)	32844	125.000	128.550
65 2-chloroethyl vinyl ether	63	13.435	13.435	(1.081)	8345	50.0000	50.9243
66 1,3-Dichloropropane	76	14.302	14.302	(0.960)	22790	50.0000	50.1698
67 Tetrachloroethene	164	14.273	14.273	(0.958)	13497	50.0000	51.2747
68 Dibromochloromethane	129	14.480	14.480	(0.972)	17201	50.0000	52.9282
69 1,2-Dibromoethane	107	14.598	14.598	(0.980)	14329	50.0000	50.7747
70 1-Chlorohexane	55	14.815	14.815	(0.995)	16400	50.0000	51.0119
71 Chlorobenzene	112	14.924	14.924	(1.002)	43384	50.0000	52.1054
72 Ethylbenzene	106	14.943	14.943	(1.003)	20336	50.0000	52.2101
73 1,1,1,2-Tetrachloroethane	131	14.963	14.963	(1.005)	16448	50.0000	52.1157
74 m,p-Xylene	106	15.022	15.022	(1.009)	50225	100.000	102.231
75 m,p-Xylene (part of total)	106	15.022	15.022	(1.009)	50225	100.000	102.231
76 o-Xylene	106	15.318	15.318	(1.028)	24587	50.0000	52.8829
77 o-Xylene (part of total)	106	15.318	15.318	(1.028)	24587	50.0000	52.8829
78 Styrene	104	15.328	15.328	(1.029)	39213	50.0000	52.7467
79 Bromoform	173	15.525	15.525	(0.935)	10228	50.0000	50.2967
80 Isopropyl Benzene	105	15.555	15.555	(1.044)	60973	50.0000	52.5366
81 1,1,2,2-Tetrachloroethane	83	15.782	15.782	(0.950)	19529	50.0000	49.8841
82 trans-1,4-dichloro-2-butene	53	15.811	15.811	(1.062)	19749	200.000	213.139
83 1,2,3-Trichloropropane	110	15.851	15.851	(1.064)	4371	50.0000	51.4798
84 Bromobenzene	156	15.870	15.870	(1.066)	17264	50.0000	52.8109
85 n-Propyl Benzene	91	15.851	15.851	(0.954)	81024	50.0000	50.9732
86 1,3,5-Trimethyl Benzene	105	15.949	15.949	(0.960)	51264	50.0000	52.4220
87 2-Chlorotoluene	91	15.979	15.979	(0.962)	49683	50.0000	49.4482
88 4-Chlorotoluene	91	16.058	16.058	(0.967)	47856	50.0000	50.3982
89 tert-Butyl Benzene	119	16.215	16.215	(0.976)	49745	50.0000	50.3306
90 1,2,4-Trimethyl Benzene	105	16.255	16.255	(0.979)	52030	50.0000	52.1863
91 Pentachloroethane	167	16.304	16.304	(0.982)	10620	50.0000	50.2429
92 sec-Butyl Benzene	105	16.383	16.383	(0.986)	67243	50.0000	50.3253
93 p-Isopropyl Toluene	119	16.462	16.462	(0.991)	53351	50.0000	51.1507
94 1,3-Dichlorobenzene	146	16.561	16.561	(0.997)	31328	50.0000	52.7720
95 1,4-Dichlorobenzene	146	16.630	16.630	(1.001)	33741	50.0000	49.3666
96 n-Butyl Benzene	91	16.797	16.797	(1.011)	52600	50.0000	52.0729
97 1,2-Dichlorobenzene	146	16.965	16.965	(1.021)	28539	50.0000	50.4313
98 1,2-Dibromo-3-Chloropropane	157	17.655	17.655	(1.063)	3061	50.0000	56.5126
99 1,2,4-Trichlorobenzene	180	18.503	18.503	(1.114)	17550	50.0000	49.4512
100 Hexachlorobutadiene	225	18.592	18.592	(1.119)	9309	50.0000	49.8214
101 Naphthalene	128	18.839	18.839	(1.134)	33547	50.0000	47.8619
102 1,2,3-Trichlorobenzene	180	19.134	19.134	(1.152)	15723	50.0000	48.9279
M 103 1,2-Dichloroethene (total)	96				33597	100.000	98.9694
M 104 Xylene (total)	106				74812	150.000	155.114

QC Flag Legend

M - Compound response manually integrated.

12/30/2015

Bromomethane CAS Number 74-83-9 Area = 11563 Manually integrated



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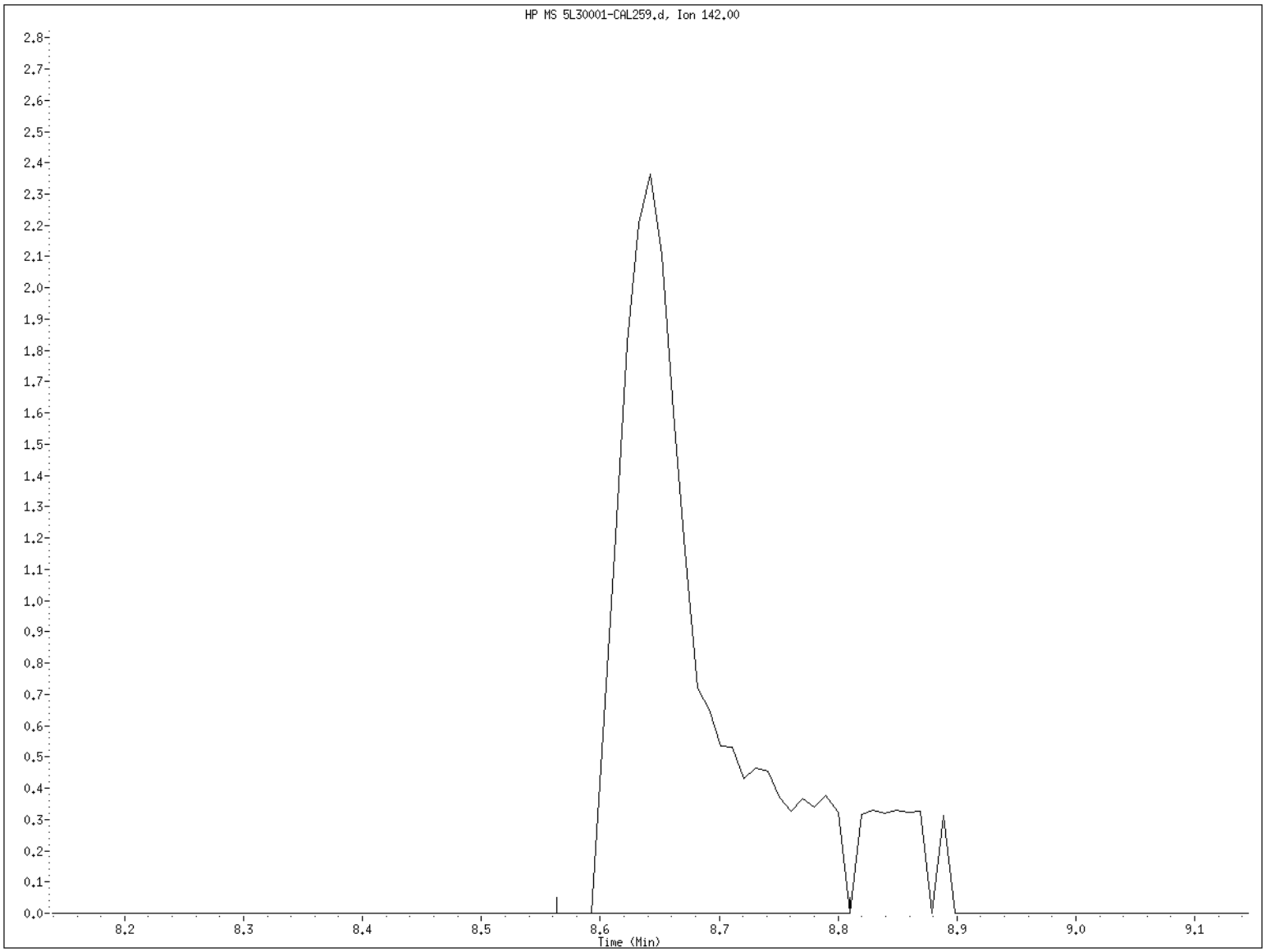
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 5.93
Operator ID: JAO

Iodomethane CAS Number 74-88-4 Area = 11195 Manually integrated



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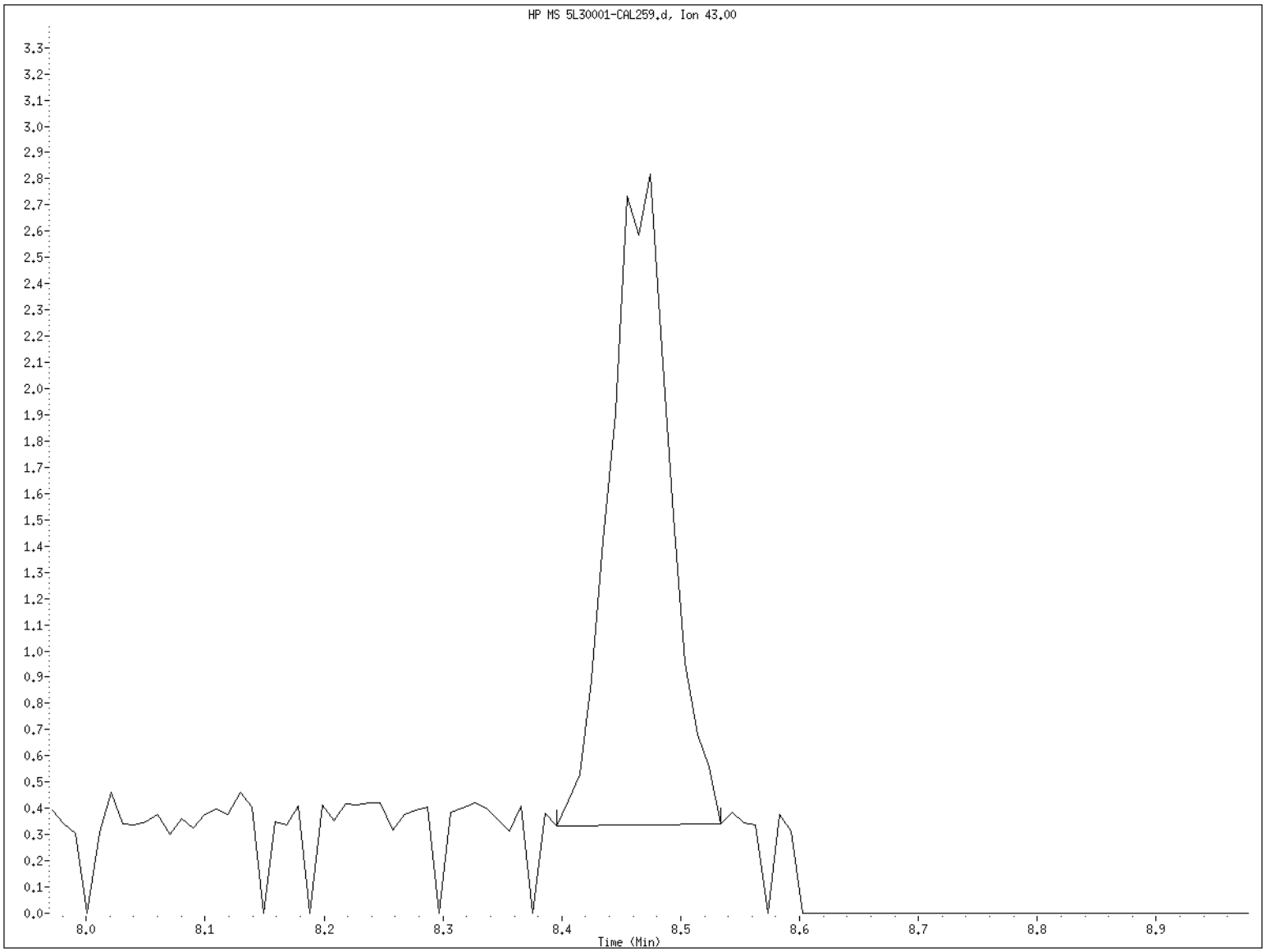
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 8.64
Operator ID: JAO

Acetone CAS Number 67-64-1 Area = 8746 Manually integrated



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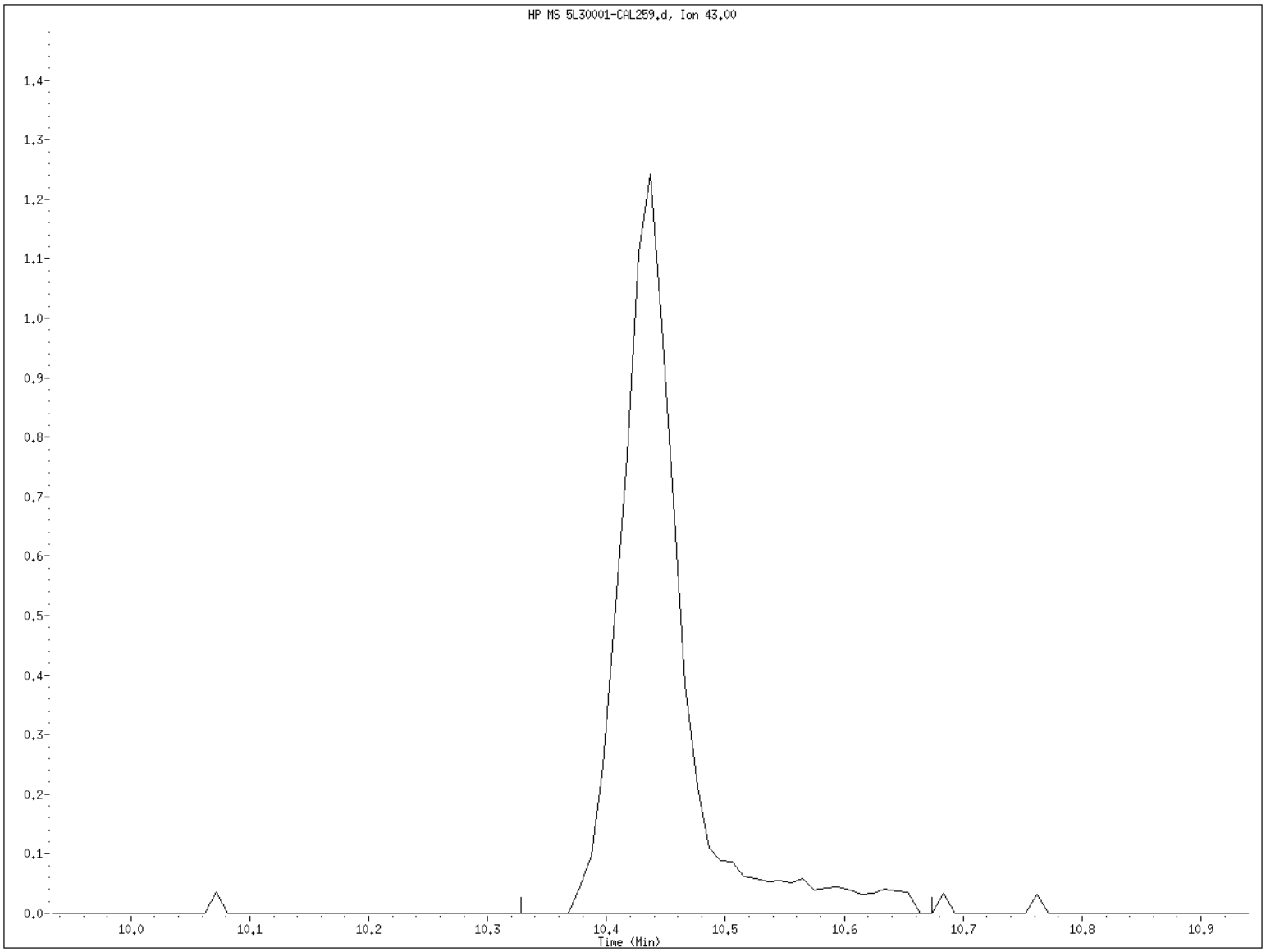
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 8.47
Operator ID: JAO

Vinyl acetate CAS Number 108-05-4 Area = 42983 Manually integrated



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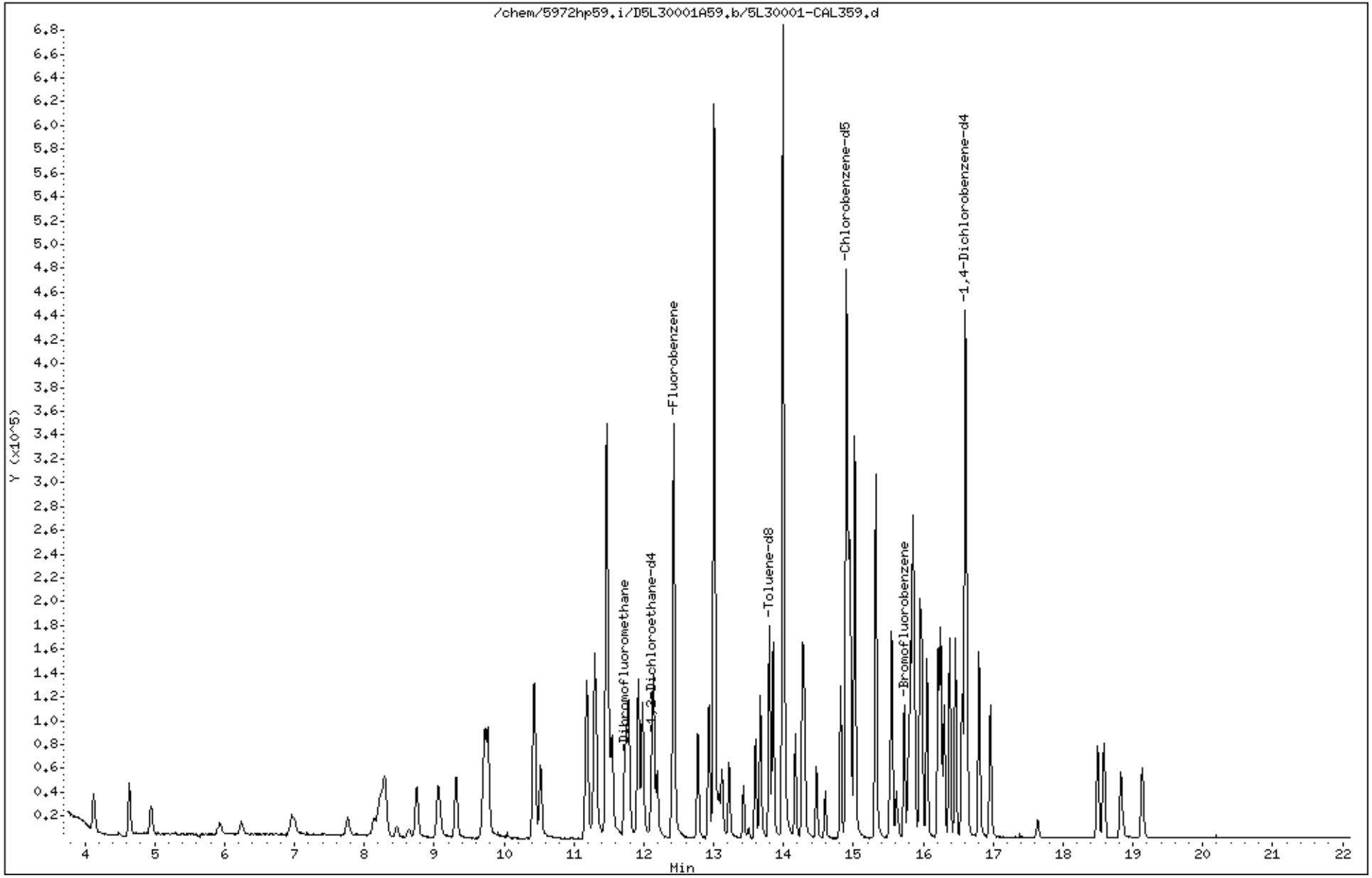
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 10.44
Operator ID: JAO

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Date : 29-DEC-2015 18:32
Client ID: VSTD020AB
Sample Info: 5L30001-CAL3:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Lab Smp Id: 5L30001-CAL3 Client Smp ID: VSTD020AB
Inj Date : 29-DEC-2015 18:32
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL3:JAO
Misc Info : VSTD020AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 18:32 Cal File: 5L30001-CAL359.d
Als bottle: 25 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	12.423	12.423	(1.000)	369118	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.898	(1.000)	273652	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.604	(1.000)	132701	250.000	
$ 4 Dibromofluoromethane	113	11.723	11.723	(0.944)	43074	100.000	105.252
$ 5 1,2-Dichloroethane-d4	65	12.117	12.117	(0.975)	40042	100.000	103.565
$ 6 Toluene-d8	98	13.794	13.794	(0.926)	127494	100.000	106.145
$ 7 Bromofluorobenzene	95	15.726	15.726	(0.947)	41482	100.000	103.700
8 Dichlorodifluoromethane	85	4.120	4.120	(0.332)	47591	100.000	108.156
9 Chloromethane	50	4.642	4.642	(0.374)	65253	100.000	104.200
10 Vinyl Chloride	62	4.938	4.938	(0.397)	43034	100.000	106.862
11 Bromomethane	94	5.924	5.924	(0.477)	20041	100.000	96.7704(M)
12 Chloroethane	64	6.240	6.240	(0.502)	19131	100.000	100.638
13 Trichlorofluoromethane	101	6.970	6.970	(0.561)	36400	100.000	108.903
178 Diethyl ether	45	7.768	7.768	(0.625)	13741	100.000	92.7127
14 Acrolein	56	8.133	8.133	(0.655)	20020	1000.00	865.294

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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.212	8.212	(0.661)	13720	100.000	118.808
16 1,1,2-trichloro-1,2,2-trifluo	101	8.261	8.261	(0.665)	33868	100.000	118.776
17 1,1-Dichloroethene	96	8.301	8.301	(0.668)	25165	100.000	114.701
18 Acetone	43	8.469	8.469	(0.682)	22013	250.000	292.866
19 Iodomethane	142	8.636	8.636	(0.695)	21441	100.000	99.3653(M)
20 Carbon disulfide	76	8.754	8.754	(0.705)	106723	100.000	107.329
21 3-Chloropropene	76	9.060	9.060	(0.729)	13185	100.000	95.4740
22 Acetonitrile	41	9.060	9.060	(0.729)	50003	100.000	104.312
23 Methyl acetate	43	9.090	9.090	(0.732)	34997	100.000	103.525
24 Methylene Chloride	84	9.317	9.317	(0.750)	33925	100.000	104.272
25 Acrylonitrile	53	9.770	9.770	(0.786)	102884	1000.00	1071.19
26 Methyl-tert-butyl ether	73	9.711	9.711	(0.782)	73979	100.000	106.284
28 trans-1,2-Dichloroethene	96	9.731	9.731	(0.783)	32390	100.000	107.260
29 trans-1,2-DCE (part of total)	96	9.731	9.731	(0.783)	32390	100.000	107.260
31 Isopropyl ether	45	10.431	10.431	(0.840)	122618	100.000	104.636
32 1,1-Dichloroethane	63	10.421	10.421	(0.839)	65778	100.000	105.459
33 Vinyl acetate	43	10.431	10.431	(0.840)	77553	100.000	96.9668
34 Chloroprene	53	10.520	10.520	(0.847)	50315	100.000	109.682
35 2-butanone	43	11.180	11.180	(0.900)	44989	250.000	257.064
36 2,2-Dichloropropane	77	11.180	11.180	(0.900)	44849	100.000	105.098
37 cis-1,2-Dichloroethene	96	11.200	11.200	(0.902)	38684	100.000	109.575
38 cis-1,2-DCE (part of total)	96	11.200	11.200	(0.902)	38684	100.000	109.575
39 Propionitrile	54	11.309	11.309	(0.910)	216148	5000.00	5483.83
40 Methacrylonitrile	41	11.466	11.466	(0.923)	255958	1000.00	1109.52
41 Bromochloromethane	128	11.486	11.486	(0.925)	16255	100.000	105.067
180 Tetrahydrofuran	42	11.506	11.506	(0.926)	49885	400.000	430.532
42 Chloroform	83	11.545	11.545	(0.929)	64190	100.000	108.818
43 1,1,1-Trichloroethane	97	11.752	11.752	(0.946)	45700	100.000	103.992
44 Cyclohexane	56	11.782	11.782	(0.948)	54922	100.000	112.942
46 1,1-dichloropropene	75	11.930	11.930	(0.960)	48509	100.000	111.323
47 Isobutyl alcohol	43	11.979	11.979	(0.964)	88969	5000.00	5417.07
48 Carbon Tetrachloride	117	11.920	11.920	(0.960)	42819	100.000	109.988
49 Benzene	78	12.147	12.147	(0.978)	136050	100.000	107.346
50 1,2-Dichloroethane	62	12.196	12.196	(0.982)	49071	100.000	110.837
51 Trichloroethene	130	12.778	12.778	(1.029)	36797	100.000	109.985
52 Methylcyclohexane	83	12.936	12.936	(1.041)	47620	100.000	110.104
53 Methylmethacrylate	100	13.015	13.015	(1.048)	83913	1000.00	1127.39
54 1,2-Dichloropropane	63	13.853	13.853	(1.115)	11075	100.000	105.735
55 1,4-dioxane	88	13.084	13.084	(1.053)	16248	5000.00	5480.35
56 Dibromomethane	174	13.123	13.123	(1.056)	22658	100.000	109.790
57 Bromodichloromethane	83	13.222	13.222	(1.064)	45212	100.000	108.974
58 cis-1,3-Dichloropropene	75	13.596	13.596	(1.094)	51435	100.000	105.754
59 4-Methyl-2-pentanone	43	13.665	13.665	(0.917)	106424	250.000	273.746
60 Toluene	92	13.853	13.853	(0.930)	76574	100.000	108.613
61 Ethylmethacrylate	99	13.991	13.991	(0.939)	61407	1000.00	1033.69
62 trans-1,3-Dichloropropene	75	14.020	14.020	(0.941)	48746	100.000	109.513
63 1,1,2-Trichloroethane	97	14.168	14.168	(0.951)	27495	100.000	107.092

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Report Date: 30-Dec-2015 07:22

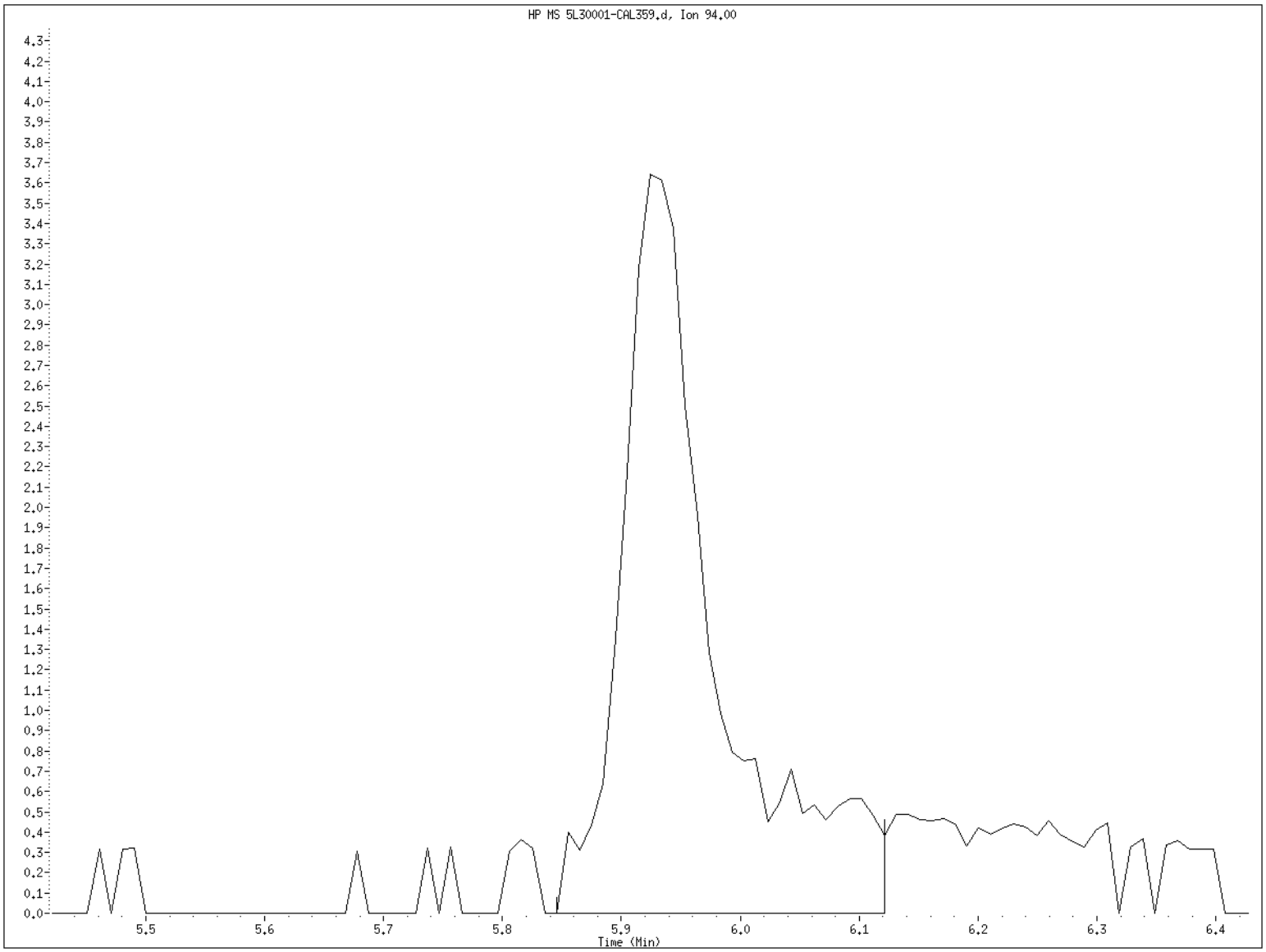
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.287	14.287	(0.959)	70458	250.000	274.246
65 2-chloroethyl vinyl ether	63	13.429	13.429	(1.081)	17996	100.000	111.845
66 1,3-Dichloropropane	76	14.306	14.306	(0.960)	48831	100.000	107.908
67 Tetrachloroethene	164	14.277	14.277	(0.958)	28664	100.000	108.802
68 Dibromochloromethane	129	14.474	14.474	(0.972)	36233	100.000	110.442
69 1,2-Dibromoethane	107	14.592	14.592	(0.979)	30460	100.000	108.190
70 1-Chlorohexane	55	14.809	14.809	(0.994)	33967	100.000	106.717
71 Chlorobenzene	112	14.918	14.918	(1.001)	89270	100.000	107.728
72 Ethylbenzene	106	14.947	14.947	(1.003)	40943	100.000	106.366
73 1,1,1,2-Tetrachloroethane	131	14.957	14.957	(1.004)	32866	100.000	105.724
74 m,p-Xylene	106	15.016	15.016	(1.008)	107628	200.000	218.422
75 m,p-Xylene (part of total)	106	15.016	15.016	(1.008)	107628	200.000	218.422
76 o-Xylene	106	15.322	15.322	(1.028)	53039	100.000	112.048
77 o-Xylene (part of total)	106	15.322	15.322	(1.028)	53039	100.000	112.048
78 Styrene	104	15.332	15.332	(1.029)	85093	100.000	112.283
79 Bromoform	173	15.529	15.529	(0.935)	21946	100.000	104.785
80 Isopropyl Benzene	105	15.549	15.549	(1.044)	133788	100.000	112.782
81 1,1,2,2-Tetrachloroethane	83	15.786	15.786	(0.951)	38263	100.000	98.1317
82 trans-1,4-dichloro-2-butene	53	15.815	15.815	(1.062)	41648	400.000	443.964
83 1,2,3-Trichloropropane	110	15.845	15.845	(1.064)	9208	100.000	108.518
84 Bromobenzene	156	15.874	15.874	(1.066)	36112	100.000	109.799
85 n-Propyl Benzene	91	15.845	15.845	(0.954)	174001	100.000	105.756
86 1,3,5-Trimethyl Benzene	105	15.953	15.953	(0.961)	109349	100.000	107.217
87 2-Chlorotoluene	91	15.973	15.973	(0.962)	103312	100.000	101.510
88 4-Chlorotoluene	91	16.052	16.052	(0.967)	99608	100.000	102.857
89 tert-Butyl Benzene	119	16.219	16.219	(0.977)	106892	100.000	104.930
90 1,2,4-Trimethyl Benzene	105	16.249	16.249	(0.979)	110872	100.000	106.838
91 Pentachloroethane	167	16.298	16.298	(0.982)	22563	100.000	104.039
92 sec-Butyl Benzene	105	16.377	16.377	(0.986)	147126	100.000	106.158
93 p-Isopropyl Toluene	119	16.466	16.466	(0.992)	116809	100.000	107.323
94 1,3-Dichlorobenzene	146	16.565	16.565	(0.998)	64428	100.000	105.168
95 1,4-Dichlorobenzene	146	16.624	16.624	(1.001)	67858	100.000	99.1706
96 n-Butyl Benzene	91	16.791	16.791	(1.011)	108849	100.000	104.682
97 1,2-Dichlorobenzene	146	16.959	16.959	(1.021)	61054	100.000	104.764
98 1,2-Dibromo-3-Chloropropane	157	17.639	17.639	(1.062)	6275	100.000	109.669
99 1,2,4-Trichlorobenzene	180	18.497	18.497	(1.114)	38309	100.000	104.800
100 Hexachlorobutadiene	225	18.586	18.586	(1.119)	22892	100.000	113.591
101 Naphthalene	128	18.833	18.833	(1.134)	71878	100.000	101.331
102 1,2,3-Trichlorobenzene	180	19.128	19.128	(1.152)	33664	100.000	102.766
M 103 1,2-Dichloroethene (total)	96				71074	200.000	217.016
M 104 Xylene (total)	106				160667	300.000	330.470

QC Flag Legend

M - Compound response manually integrated.

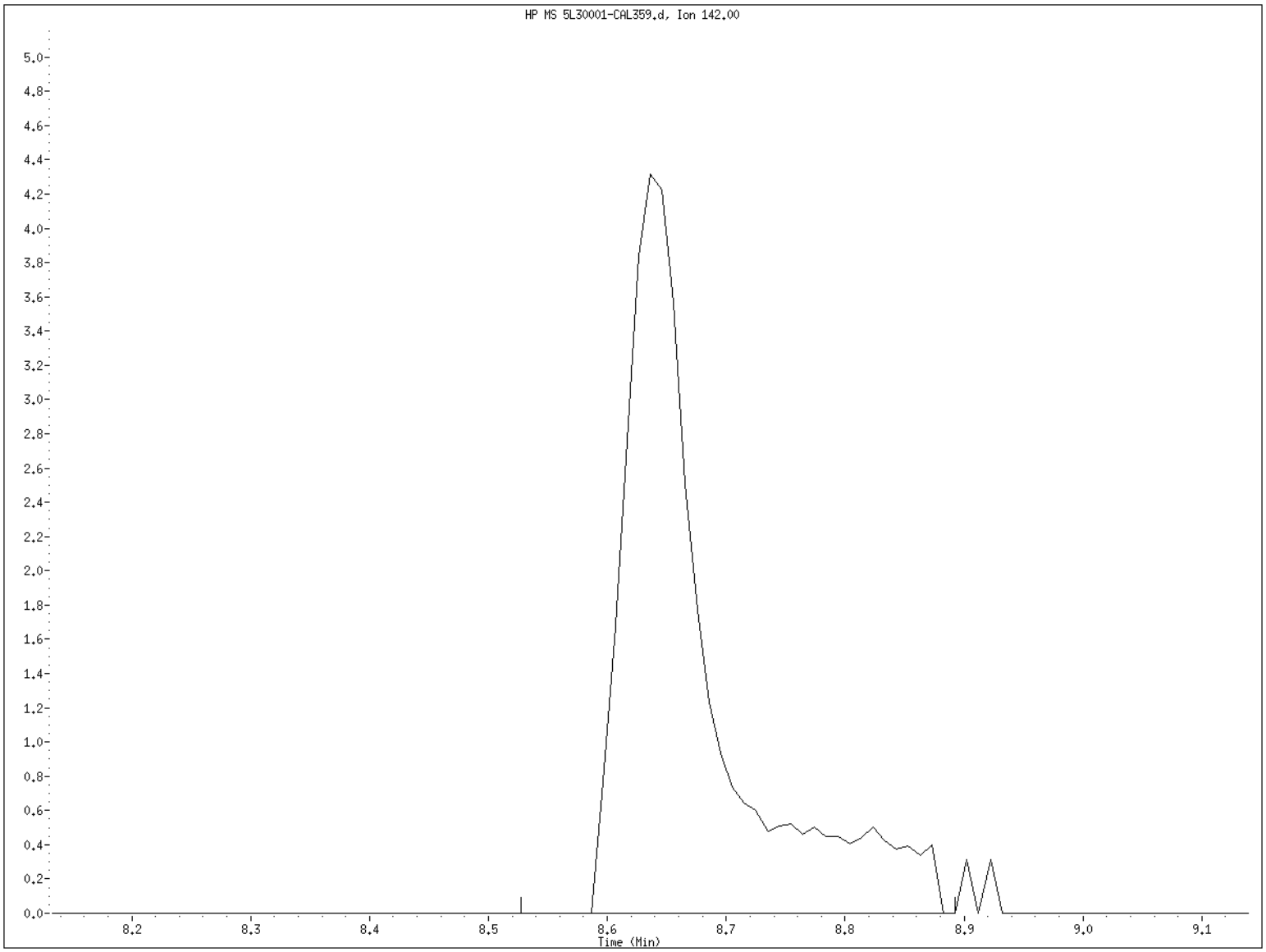
12/30/2015

Bromomethane CAS Number 74-83-9 Area = 20041 Manually integrated



File name: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Client ID: VSTD020AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:32
Retention Time: 5.92
Operator ID: JAO

Iodomethane CAS Number 74-88-4 Area = 21441 Manually integrated

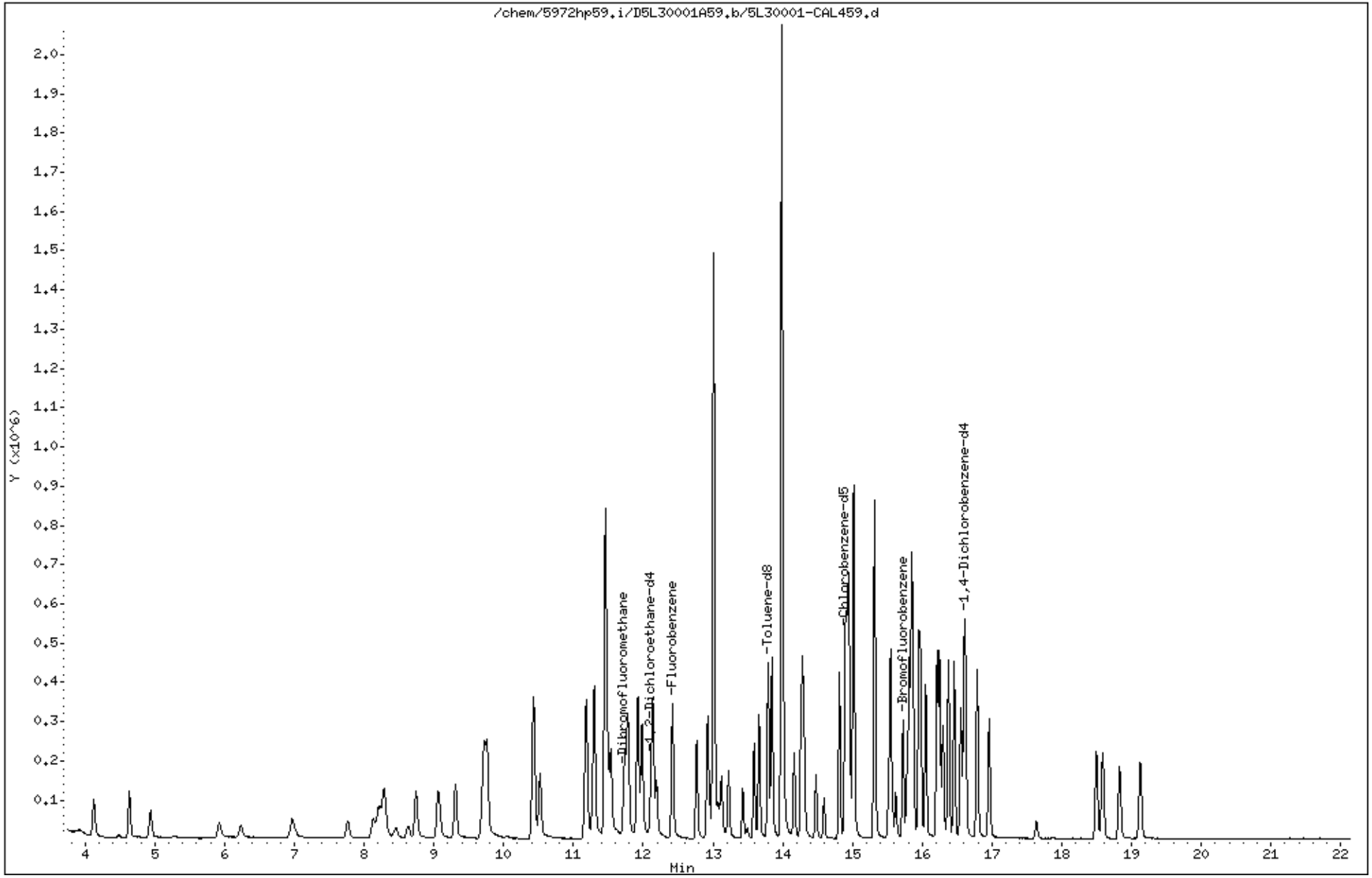


File name: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Client ID: VSTD020AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:32
Retention Time: 8.64
Operator ID: JAO

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Date : 29-DEC-2015 20:07
Client ID: VSTD050AB
Sample Info: 5L30001-CAL4:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Lab Smp Id: 5L30001-CAL4 Client Smp ID: VSTD050AB
Inj Date : 29-DEC-2015 20:07
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL4:JAO
Misc Info : VSTD050AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 28 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.418	12.418	(1.000)	376208	250.000	
* 2 Chlorobenzene-d5	117	14.894	14.894	(1.000)	289175	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.600	16.600	(1.000)	138667	250.000	
$ 4 Dibromofluoromethane	113	11.718	11.718	(0.944)	113301	250.000	261.571
$ 5 1,2-Dichloroethane-d4	65	12.113	12.113	(0.975)	101034	250.000	254.376
$ 6 Toluene-d8	98	13.789	13.789	(0.926)	338616	250.000	259.856
$ 7 Bromofluorobenzene	95	15.722	15.722	(0.947)	109331	250.000	256.176
8 Dichlorodifluoromethane	85	4.125	4.125	(0.332)	135005	250.000	279.600
9 Chloromethane	50	4.638	4.638	(0.373)	162830	250.000	252.024
10 Vinyl Chloride	62	4.944	4.944	(0.398)	113827	250.000	267.807
11 Bromomethane	94	5.920	5.920	(0.477)	58116	250.000	271.547
12 Chloroethane	64	6.235	6.235	(0.502)	52523	250.000	275.283
13 Trichlorofluoromethane	101	6.975	6.975	(0.562)	95975	250.000	272.022
178 Diethyl ether	45	7.764	7.764	(0.625)	36820	250.000	262.192
14 Acrolein	56	8.129	8.129	(0.655)	72092	2500.00	2776.96

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.198	8.198	(0.660)	34856	250.000	271.903
16 1,1,2-trichloro-1,2,2-trifluo	101	8.257	8.257	(0.665)	80429	250.000	255.838
17 1,1-Dichloroethene	96	8.296	8.296	(0.668)	61406	250.000	256.380
18 Acetone	43	8.464	8.464	(0.682)	47978	625.000	628.426
19 Iodomethane	142	8.632	8.632	(0.695)	69016	250.000	283.589
20 Carbon disulfide	76	8.750	8.750	(0.705)	290493	250.000	271.531
21 3-Chloropropene	76	9.056	9.056	(0.729)	41040	250.000	266.376
22 Acetonitrile	41	9.056	9.056	(0.729)	130680	250.000	267.707
23 Methyl acetate	43	9.085	9.085	(0.732)	82038	250.000	249.402
24 Methylene Chloride	84	9.312	9.312	(0.750)	92582	250.000	270.076
25 Acrylonitrile	53	9.766	9.766	(0.786)	266467	2500.00	2670.18
26 Methyl-tert-butyl ether	73	9.707	9.707	(0.782)	202569	250.000	268.667
28 trans-1,2-Dichloroethene	96	9.726	9.726	(0.783)	89356	250.000	268.211
29 trans-1,2-DCE (part of total)	96	9.726	9.726	(0.783)	89356	250.000	268.211
31 Isopropyl ether	45	10.426	10.426	(0.840)	345271	250.000	269.793
32 1,1-Dichloroethane	63	10.417	10.417	(0.839)	190442	250.000	278.569
33 Vinyl acetate	43	10.436	10.436	(0.840)	223450	250.000	262.577
34 Chloroprene	53	10.515	10.515	(0.847)	136243	250.000	274.073
35 2-butanone	43	11.176	11.176	(0.900)	109422	625.000	615.938
36 2,2-Dichloropropane	77	11.176	11.176	(0.900)	126610	250.000	273.658
37 cis-1,2-Dichloroethene	96	11.196	11.196	(0.902)	108182	250.000	278.547
38 cis-1,2-DCE (part of total)	96	11.196	11.196	(0.902)	108182	250.000	278.547
39 Propionitrile	54	11.304	11.304	(0.910)	537888	12500.0	13221.6
40 Methacrylonitrile	41	11.462	11.462	(0.923)	606437	2500.00	2589.91
41 Bromochloromethane	128	11.482	11.482	(0.925)	43254	250.000	268.333
180 Tetrahydrofuran	42	11.501	11.501	(0.926)	123682	1000.00	1054.13
42 Chloroform	83	11.541	11.541	(0.929)	178752	250.000	281.293
43 1,1,1-Trichloroethane	97	11.748	11.748	(0.946)	132096	250.000	275.207
44 Cyclohexane	56	11.777	11.777	(0.948)	157662	250.000	287.115
46 1,1-dichloropropene	75	11.925	11.925	(0.960)	136064	250.000	280.563
47 Isobutyl alcohol	43	11.985	11.985	(0.965)	225716	12500.0	13191.5
48 Carbon Tetrachloride	117	11.915	11.915	(0.959)	116503	250.000	271.092
49 Benzene	78	12.142	12.142	(0.978)	359402	250.000	266.855
50 1,2-Dichloroethane	62	12.192	12.192	(0.982)	120399	250.000	259.828
51 Trichloroethene	130	12.773	12.773	(1.029)	103218	250.000	277.105
52 Methylcyclohexane	83	12.931	12.931	(1.041)	134494	250.000	278.982
53 Methylmethacrylate	100	13.010	13.010	(1.048)	216719	2500.00	2659.57
54 1,2-Dichloropropane	63	13.848	13.848	(1.115)	31680	250.000	279.036
55 1,4-dioxane	88	13.079	13.079	(1.053)	42112	12500.0	13456.3
56 Dibromomethane	174	13.119	13.119	(1.056)	62608	250.000	276.897
57 Bromodichloromethane	83	13.217	13.217	(1.064)	123115	250.000	275.522
58 cis-1,3-Dichloropropene	75	13.592	13.592	(1.094)	149558	250.000	276.127
59 4-Methyl-2-pentanone	43	13.661	13.661	(0.917)	264978	625.000	645.922
60 Toluene	92	13.848	13.848	(0.930)	210706	250.000	270.385
61 Ethylmethacrylate	99	13.986	13.986	(0.939)	198660	2500.00	2846.04
62 trans-1,3-Dichloropropene	75	14.016	14.016	(0.941)	127514	250.000	260.200
63 1,1,2-Trichloroethane	97	14.174	14.174	(0.952)	73400	250.000	263.372

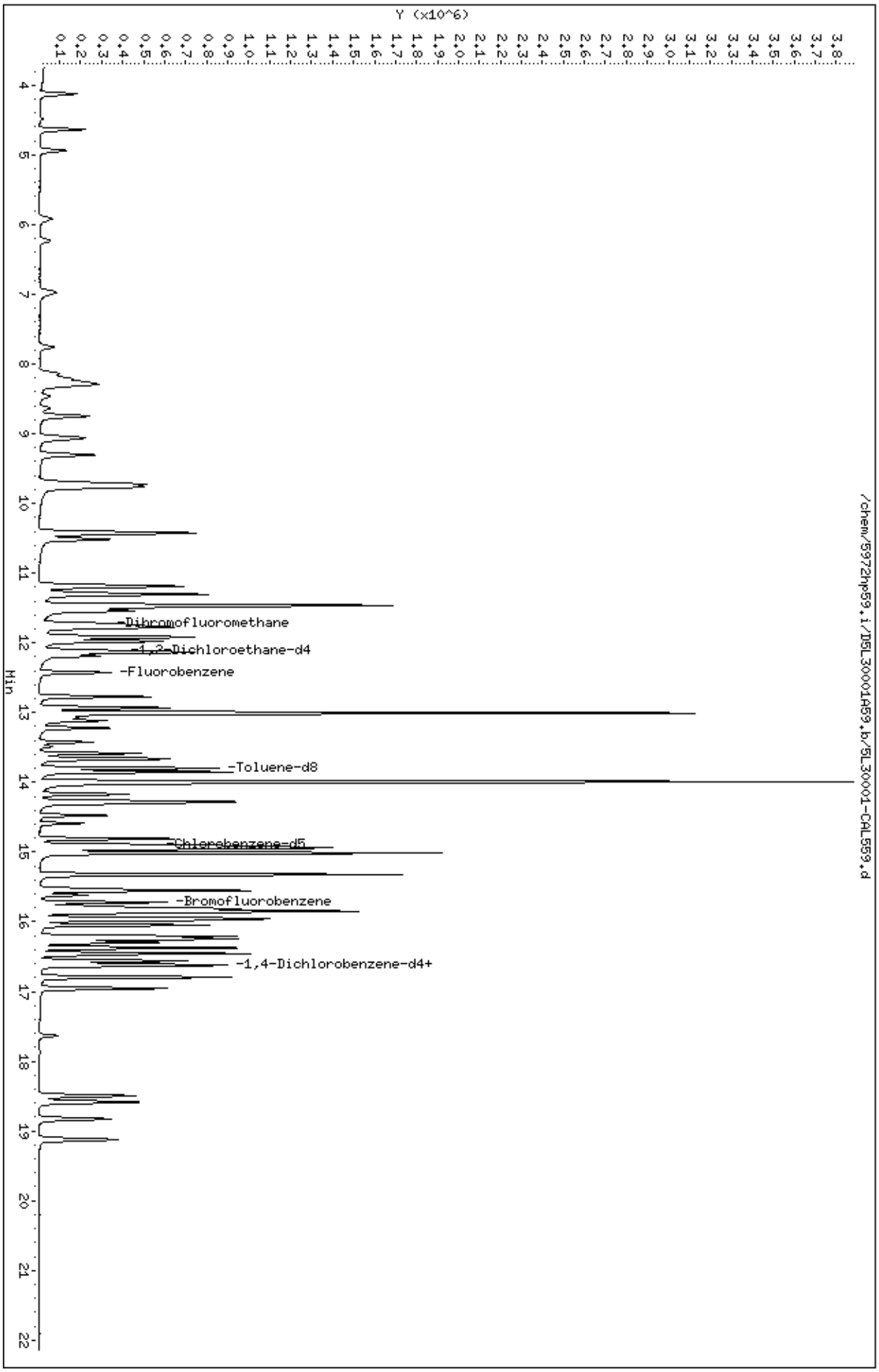
Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.282	14.282	(0.959)	184119	625.000	661.300
65 2-chloroethyl vinyl ether	63	13.424	13.424	(1.081)	51194	250.000	279.411
66 1,3-Dichloropropane	76	14.302	14.302	(0.960)	128983	250.000	262.287
67 Tetrachloroethene	164	14.272	14.272	(0.958)	80500	250.000	272.259
68 Dibromochloromethane	129	14.479	14.479	(0.972)	96129	250.000	264.327
69 1,2-Dibromoethane	107	14.588	14.588	(0.979)	80101	250.000	260.788
70 1-Chlorohexane	55	14.815	14.815	(0.995)	101936	250.000	291.052
71 Chlorobenzene	112	14.923	14.923	(1.002)	244415	250.000	268.938
72 Ethylbenzene	106	14.943	14.943	(1.003)	115365	250.000	267.264
73 1,1,1,2-Tetrachloroethane	131	14.963	14.963	(1.005)	90825	250.000	262.530
74 m,p-Xylene	106	15.022	15.022	(1.009)	302711	500.000	538.986
75 m,p-Xylene (part of total)	106	15.022	15.022	(1.009)	302711	500.000	538.986
76 o-Xylene	106	15.318	15.318	(1.028)	146091	250.000	272.309
77 o-Xylene (part of total)	106	15.318	15.318	(1.028)	146091	250.000	272.309
78 Styrene	104	15.327	15.327	(1.029)	236208	250.000	270.843
79 Bromoform	173	15.525	15.525	(0.935)	60814	250.000	265.922
80 Isopropyl Benzene	105	15.554	15.554	(1.044)	369834	250.000	275.821
81 1,1,2,2-Tetrachloroethane	83	15.781	15.781	(0.951)	101187	250.000	251.834
82 trans-1,4-dichloro-2-butene	53	15.811	15.811	(1.062)	107999	1000.00	1049.57
83 1,2,3-Trichloropropane	110	15.850	15.850	(1.064)	24797	250.000	262.496
84 Bromobenzene	156	15.870	15.870	(1.066)	101317	250.000	271.576
85 n-Propyl Benzene	91	15.850	15.850	(0.955)	471019	250.000	262.346
86 1,3,5-Trimethyl Benzene	105	15.949	15.949	(0.961)	296298	250.000	267.383
87 2-Chlorotoluene	91	15.978	15.978	(0.963)	289951	250.000	267.753
88 4-Chlorotoluene	91	16.047	16.047	(0.967)	266337	250.000	261.245
89 tert-Butyl Benzene	119	16.215	16.215	(0.977)	308670	250.000	277.563
90 1,2,4-Trimethyl Benzene	105	16.245	16.245	(0.979)	299394	250.000	266.173
91 Pentachloroethane	167	16.304	16.304	(0.982)	63076	250.000	268.272
92 sec-Butyl Benzene	105	16.383	16.383	(0.987)	413163	250.000	270.209
93 p-Isopropyl Toluene	119	16.462	16.462	(0.992)	317627	250.000	263.429
94 1,3-Dichlorobenzene	146	16.560	16.560	(0.998)	175448	250.000	264.753
95 1,4-Dichlorobenzene	146	16.629	16.629	(1.002)	187496	250.000	260.869
96 n-Butyl Benzene	91	16.797	16.797	(1.012)	314016	250.000	270.096
97 1,2-Dichlorobenzene	146	16.955	16.955	(1.021)	163805	250.000	263.372
98 1,2-Dibromo-3-Chloropropane	157	17.645	17.645	(1.063)	17975	250.000	279.099
99 1,2,4-Trichlorobenzene	180	18.493	18.493	(1.114)	112206	250.000	275.202
100 Hexachlorobutadiene	225	18.582	18.582	(1.119)	65658	250.000	279.586
101 Naphthalene	128	18.828	18.828	(1.134)	238500	250.000	298.723
102 1,2,3-Trichlorobenzene	180	19.134	19.134	(1.153)	105616	250.000	286.520
M 103 1,2-Dichloroethene (total)	96				197538	500.000	547.549
M 104 Xylene (total)	106				448802	750.000	811.295

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Date : 29-DEC-2015 19:36
Client ID: WSTD100AB
Sample Info: 5L30001-CAL5:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Rakesh Hari 12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Lab Smp Id: 5L30001-CAL5 Client Smp ID: VSTD100AB
Inj Date : 29-DEC-2015 19:36
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL5:JAO
Misc Info : VSTD100AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 19:36 Cal File: 5L30001-CAL559.d
Als bottle: 27 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.418	12.418	(1.000)	383888	250.000	
* 2 Chlorobenzene-d5	117	14.893	14.893	(1.000)	293187	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.609	16.609	(1.000)	139715	250.000	
$ 4 Dibromofluoromethane	113	11.718	11.718	(0.944)	225181	500.000	514.220
$ 5 1,2-Dichloroethane-d4	65	12.112	12.112	(0.975)	202334	500.000	500.984
$ 6 Toluene-d8	98	13.798	13.798	(0.927)	657050	500.000	501.276
$ 7 Bromofluorobenzene	95	15.721	15.721	(0.947)	221459	500.000	517.570
8 Dichlorodifluoromethane	85	4.125	4.125	(0.332)	271636	500.000	564.684
9 Chloromethane	50	4.637	4.637	(0.373)	353044	500.000	536.370
10 Vinyl Chloride	62	4.943	4.943	(0.398)	222737	500.000	520.983
11 Bromomethane	94	5.919	5.919	(0.477)	102973	500.000	479.785
12 Chloroethane	64	6.235	6.235	(0.502)	92468	500.000	484.752
13 Trichlorofluoromethane	101	6.974	6.974	(0.562)	189091	500.000	534.639
178 Diethyl ether	45	7.763	7.763	(0.625)	63777	500.000	449.448
14 Acrolein	56	8.128	8.128	(0.655)	142924	5000.00	5517.49

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.197	8.197	(0.660)	72227	500.000	562.000
16 1,1,2-trichloro-1,2,2-trifluo	101	8.256	8.256	(0.665)	185132	500.000	579.815
17 1,1-Dichloroethene	96	8.296	8.296	(0.668)	141757	500.000	582.994
18 Acetone	43	8.463	8.463	(0.682)	97366	1250.00	1251.18
19 Iodomethane	142	8.631	8.631	(0.695)	120153	500.000	487.165
20 Carbon disulfide	76	8.749	8.749	(0.705)	601796	500.000	560.922
21 3-Chloropropene	76	9.055	9.055	(0.729)	84140	500.000	542.301
22 Acetonitrile	41	9.055	9.055	(0.729)	247150	500.000	503.303
23 Methyl acetate	43	9.085	9.085	(0.732)	155302	500.000	462.465
24 Methylene Chloride	84	9.312	9.312	(0.750)	181196	500.000	526.459
25 Acrylonitrile	53	9.765	9.765	(0.786)	525563	5000.00	5232.37
26 Methyl-tert-butyl ether	73	9.706	9.706	(0.782)	413782	500.000	545.973
28 trans-1,2-Dichloroethene	96	9.726	9.726	(0.783)	190463	500.000	568.541
29 trans-1,2-DCE (part of total)	96	9.726	9.726	(0.783)	190463	500.000	568.541
31 Isopropyl ether	45	10.426	10.426	(0.840)	720783	500.000	560.829
32 1,1-Dichloroethane	63	10.416	10.416	(0.839)	388367	500.000	569.741
33 Vinyl acetate	43	10.436	10.436	(0.840)	471984	500.000	549.058
34 Chloroprene	53	10.515	10.515	(0.847)	284108	500.000	571.090
35 2-butanone	43	11.175	11.175	(0.900)	232355	1250.00	1278.06
36 2,2-Dichloropropane	77	11.175	11.175	(0.900)	260591	500.000	562.627
37 cis-1,2-Dichloroethene	96	11.195	11.195	(0.902)	219529	500.000	566.881
38 cis-1,2-DCE (part of total)	96	11.195	11.195	(0.902)	219529	500.000	566.881
39 Propionitrile	54	11.304	11.304	(0.910)	1061479	25000.0	25868.4
40 Methacrylonitrile	41	11.461	11.461	(0.923)	1212223	5000.00	5110.22
41 Bromochloromethane	128	11.481	11.481	(0.925)	83674	500.000	516.272
180 Tetrahydrofuran	42	11.501	11.501	(0.926)	239186	2000.00	2019.64
42 Chloroform	83	11.540	11.540	(0.929)	348698	500.000	551.558
43 1,1,1-Trichloroethane	97	11.757	11.757	(0.947)	275092	500.000	573.217
44 Cyclohexane	56	11.777	11.777	(0.948)	321755	500.000	591.792
46 1,1-dichloropropene	75	11.925	11.925	(0.960)	276379	500.000	572.489
47 Isobutyl alcohol	43	11.984	11.984	(0.965)	445294	25000.0	25789.0
48 Carbon Tetrachloride	117	11.915	11.915	(0.959)	250161	500.000	580.248
49 Benzene	78	12.142	12.142	(0.978)	745273	500.000	549.705
50 1,2-Dichloroethane	62	12.191	12.191	(0.982)	248647	500.000	530.027
51 Trichloroethene	130	12.773	12.773	(1.029)	215615	500.000	579.844
52 Methylcyclohexane	83	12.931	12.931	(1.041)	273964	500.000	570.136
53 Methylmethacrylate	100	13.010	13.010	(1.048)	454819	5000.00	5540.58
54 1,2-Dichloropropane	63	13.848	13.848	(1.115)	63229	500.000	558.755
55 1,4-dioxane	88	13.079	13.079	(1.053)	83448	25000.0	26537.2
56 Dibromomethane	174	13.118	13.118	(1.056)	124876	500.000	553.143
57 Bromodichloromethane	83	13.226	13.226	(1.065)	241333	500.000	540.312
58 cis-1,3-Dichloropropene	75	13.591	13.591	(1.094)	306548	500.000	566.493
59 4-Methyl-2-pentanone	43	13.660	13.660	(0.917)	526587	1250.00	1274.60
60 Toluene	92	13.848	13.848	(0.930)	422875	500.000	544.094
61 Ethylmethacrylate	99	13.986	13.986	(0.939)	393929	5000.00	5724.76
62 trans-1,3-Dichloropropene	75	14.015	14.015	(0.941)	267988	500.000	543.801
63 1,1,2-Trichloroethane	97	14.173	14.173	(0.952)	148257	500.000	530.366

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.282	14.282	(0.959)	359470	1250.00	1288.41
65 2-chloroethyl vinyl ether	63	13.424	13.424	(1.081)	103817	500.000	568.665
66 1,3-Dichloropropane	76	14.301	14.301	(0.960)	261163	500.000	529.008
67 Tetrachloroethene	164	14.272	14.272	(0.958)	163015	500.000	553.646
68 Dibromochloromethane	129	14.479	14.479	(0.972)	198469	500.000	544.505
69 1,2-Dibromoethane	107	14.587	14.587	(0.979)	164836	500.000	533.926
70 1-Chlorohexane	55	14.804	14.804	(0.994)	172135	500.000	501.223
71 Chlorobenzene	112	14.923	14.923	(1.002)	489396	500.000	539.300
72 Ethylbenzene	106	14.942	14.942	(1.003)	243664	500.000	564.565
73 1,1,1,2-Tetrachloroethane	131	14.962	14.962	(1.005)	190325	500.000	548.101
74 m,p-Xylene	106	15.021	15.021	(1.009)	638342	1000.00	1138.79
75 m,p-Xylene (part of total)	106	15.021	15.021	(1.009)	638342	1000.00	1138.79
76 o-Xylene	106	15.317	15.317	(1.028)	295365	500.000	552.885
77 o-Xylene (part of total)	106	15.317	15.317	(1.028)	295365	500.000	552.885
78 Styrene	104	15.327	15.327	(1.029)	490718	500.000	564.382
79 Bromoform	173	15.524	15.524	(0.935)	124305	500.000	546.432
80 Isopropyl Benzene	105	15.554	15.554	(1.044)	761510	500.000	571.974
81 1,1,2,2-Tetrachloroethane	83	15.781	15.781	(0.950)	207890	500.000	514.270
82 trans-1,4-dichloro-2-butene	53	15.810	15.810	(1.062)	221149	2000.00	2141.03
83 1,2,3-Trichloropropane	110	15.850	15.850	(1.064)	50373	500.000	531.253
84 Bromobenzene	156	15.869	15.869	(1.066)	205605	500.000	553.122
85 n-Propyl Benzene	91	15.850	15.850	(0.954)	1002095	500.000	559.481
86 1,3,5-Trimethyl Benzene	105	15.948	15.948	(0.960)	616525	500.000	559.974
87 2-Chlorotoluene	91	15.978	15.978	(0.962)	582661	500.000	541.712
88 4-Chlorotoluene	91	16.047	16.047	(0.966)	541900	500.000	532.341
89 tert-Butyl Benzene	119	16.214	16.214	(0.976)	610379	500.000	557.032
90 1,2,4-Trimethyl Benzene	105	16.254	16.254	(0.979)	619349	500.000	553.659
91 Pentachloroethane	167	16.303	16.303	(0.982)	128135	500.000	548.914
92 sec-Butyl Benzene	105	16.382	16.382	(0.986)	866989	500.000	572.005
93 p-Isopropyl Toluene	119	16.461	16.461	(0.991)	698620	500.000	581.310
94 1,3-Dichlorobenzene	146	16.560	16.560	(0.997)	366074	500.000	554.814
95 1,4-Dichlorobenzene	146	16.629	16.629	(1.001)	385095	500.000	536.441
96 n-Butyl Benzene	91	16.796	16.796	(1.011)	666452	500.000	578.235
97 1,2-Dichlorobenzene	146	16.954	16.954	(1.021)	331858	500.000	535.297
98 1,2-Dibromo-3-Chloropropane	157	17.644	17.644	(1.062)	36406	500.000	574.410
99 1,2,4-Trichlorobenzene	180	18.492	18.492	(1.113)	232362	500.000	577.266
100 Hexachlorobutadiene	225	18.591	18.591	(1.119)	139922	500.000	605.686
101 Naphthalene	128	18.828	18.828	(1.134)	451788	500.000	584.402
102 1,2,3-Trichlorobenzene	180	19.133	19.133	(1.152)	213847	500.000	593.110
M 103 1,2-Dichloroethene (total)	96				409992	1000.00	1135.30
M 104 Xylene (total)	106				933707	1500.00	1691.68

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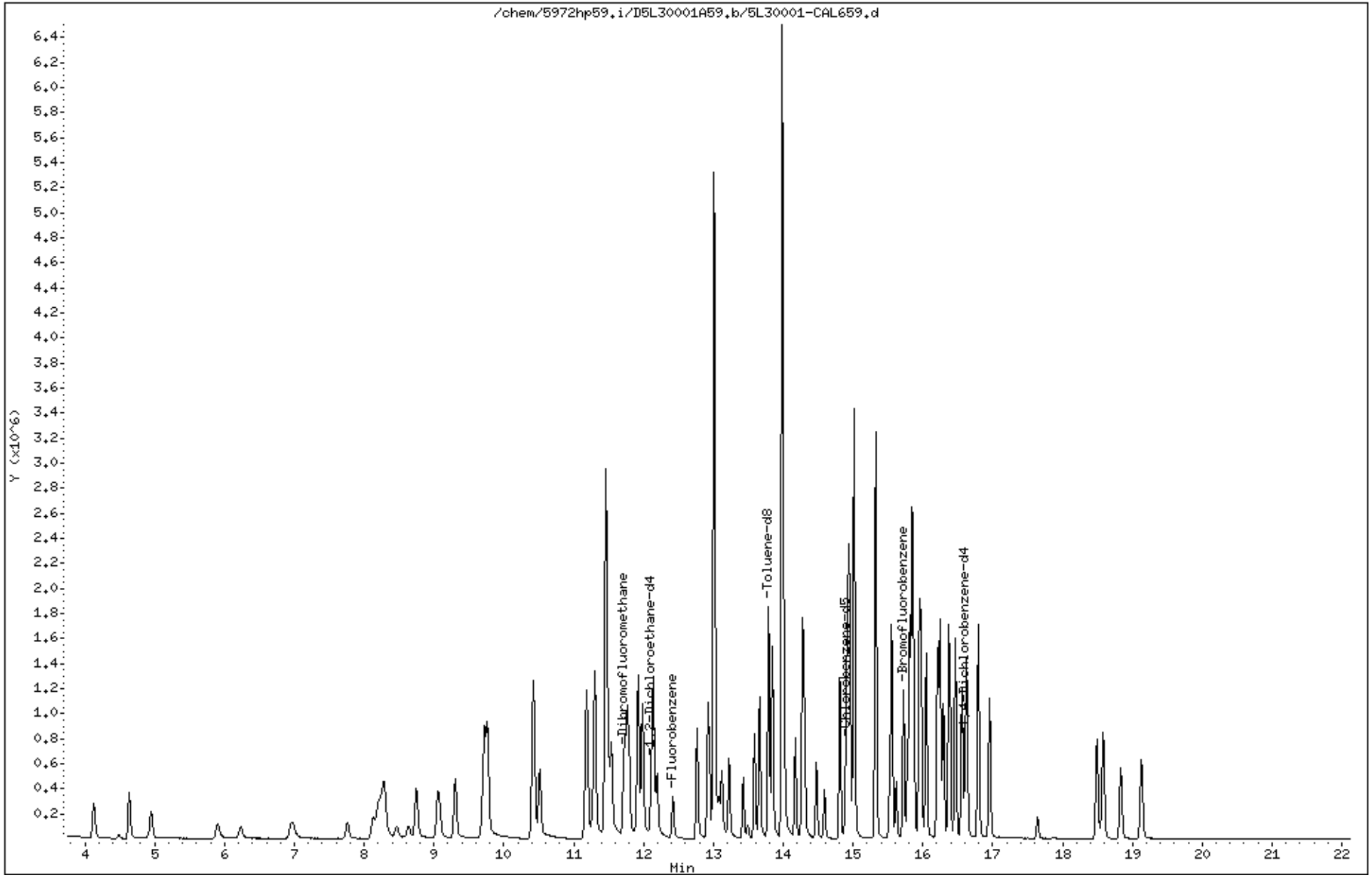
Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Date : 29-DEC-2015 19:04
Client ID: VSTD200AB
Sample Info: 5L30001-CAL6:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Lab Smp Id: 5L30001-CAL6 Client Smp ID: VSTD200AB
Inj Date : 29-DEC-2015 19:04
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL6:JAO
Misc Info : VSTD200AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 19:04 Cal File: 5L30001-CAL659.d
Als bottle: 26 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.422	12.422	(1.000)	363530	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.898	(1.000)	279888	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.604	(1.000)	140874	250.000	
$ 4 Dibromofluoromethane	113	11.722	11.722	(0.944)	437793	1000.00	1063.28(A)
$ 5 1,2-Dichloroethane-d4	65	12.107	12.107	(0.975)	386722	1000.00	1011.65(A)
$ 6 Toluene-d8	98	13.793	13.793	(0.926)	1316487	1000.00	1052.77(A)
$ 7 Bromofluorobenzene	95	15.726	15.726	(0.947)	436596	1000.00	1020.94(A)
8 Dichlorodifluoromethane	85	4.129	4.129	(0.332)	463107	1000.00	1050.61(A)
9 Chloromethane	50	4.642	4.642	(0.374)	597628	1000.00	976.565
10 Vinyl Chloride	62	4.948	4.948	(0.398)	412623	1000.00	1029.98(A)
11 Bromomethane	94	5.904	5.904	(0.475)	209293	1000.00	1019.47(A)
12 Chloroethane	64	6.230	6.230	(0.501)	166399	1000.00	914.207
13 Trichlorofluoromethane	101	6.969	6.969	(0.561)	328950	1000.00	999.474
178 Diethyl ether	45	7.768	7.768	(0.625)	113188	1000.00	821.560
14 Acrolein	56	8.133	8.133	(0.655)	272224	10000.0	11392.3(A)

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.202	8.202	(0.660)	130523	1000.00	1106.79(A)
16 1,1,2-trichloro-1,2,2-trifluo	101	8.261	8.261	(0.665)	318706	1000.00	1097.87(A)
17 1,1-Dichloroethene	96	8.300	8.300	(0.668)	234588	1000.00	1062.91(A)
18 Acetone	43	8.468	8.468	(0.682)	181556	2500.00	2464.27
19 Iodomethane	142	8.636	8.636	(0.695)	237933	1000.00	1000.13(A)
20 Carbon disulfide	76	8.744	8.744	(0.704)	1002192	1000.00	1017.43(A)
21 3-Chloropropene	76	9.060	9.060	(0.729)	167244	1000.00	1162.88(A)
22 Acetonitrile	41	9.060	9.060	(0.729)	440678	1000.00	949.233
23 Methyl acetate	43	9.079	9.079	(0.731)	297081	1000.00	916.992
24 Methylene Chloride	84	9.306	9.306	(0.749)	325186	1000.00	1011.10(A)
25 Acrylonitrile	53	9.760	9.760	(0.786)	922741	10000.0	9815.06
26 Methyl-tert-butyl ether	73	9.701	9.701	(0.781)	748235	1000.00	1067.09(A)
28 trans-1,2-Dichloroethene	96	9.730	9.730	(0.783)	333253	1000.00	1087.76(A)
29 trans-1,2-DCE (part of total)	96	9.730	9.730	(0.783)	333253	1000.00	1087.76(A)
31 Isopropyl ether	45	10.430	10.430	(0.840)	1257799	1000.00	1065.90(A)
32 1,1-Dichloroethane	63	10.421	10.421	(0.839)	649120	1000.00	1041.93(A)
33 Vinyl acetate	43	10.430	10.430	(0.840)	813234	1000.00	1024.13(A)
34 Chloroprene	53	10.519	10.519	(0.847)	462051	1000.00	1016.94(A)
35 2-butanone	43	11.180	11.180	(0.900)	419248	2500.00	2448.93
36 2,2-Dichloropropane	77	11.180	11.180	(0.900)	438657	1000.00	1032.45(A)
37 cis-1,2-Dichloroethene	96	11.190	11.190	(0.901)	374754	1000.00	1057.26(A)
38 cis-1,2-DCE (part of total)	96	11.190	11.190	(0.901)	374754	1000.00	1057.26(A)
39 Propionitrile	54	11.308	11.308	(0.910)	1881233	50000.0	48837.5
40 Methacrylonitrile	41	11.466	11.466	(0.923)	2119923	10000.0	9489.46
41 Bromochloromethane	128	11.486	11.486	(0.925)	151813	1000.00	997.261
180 Tetrahydrofuran	42	11.495	11.495	(0.925)	420619	4000.00	3759.75
42 Chloroform	83	11.545	11.545	(0.929)	590125	1000.00	1011.80(A)
43 1,1,1-Trichloroethane	97	11.752	11.752	(0.946)	452880	1000.00	1034.39(A)
44 Cyclohexane	56	11.781	11.781	(0.948)	528165	1000.00	1075.18(A)
46 1,1-dichloropropene	75	11.919	11.919	(0.959)	474924	1000.00	1077.91(A)
47 Isobutyl alcohol	43	11.979	11.979	(0.964)	818147	50000.0	50434.0(A)
48 Carbon Tetrachloride	117	11.910	11.910	(0.959)	417300	1000.00	1064.86(A)
49 Benzene	78	12.136	12.136	(0.977)	1263208	1000.00	1008.98(A)
50 1,2-Dichloroethane	62	12.196	12.196	(0.982)	442209	1000.00	1010.59(A)
51 Trichloroethene	130	12.768	12.768	(1.028)	363791	1000.00	1076.07(A)
52 Methylcyclohexane	83	12.935	12.935	(1.041)	478483	1000.00	1089.73(A)
53 Methylmethacrylate	100	13.004	13.004	(1.047)	826231	10000.0	10924.0(A)
54 1,2-Dichloropropane	63	13.852	13.852	(1.115)	106575	1000.00	1024.65(A)
55 1,4-dioxane	88	13.083	13.083	(1.053)	148423	50000.0	50621.2(A)
56 Dibromomethane	174	13.123	13.123	(1.056)	222662	1000.00	1069.95(A)
57 Bromodichloromethane	83	13.221	13.221	(1.064)	431949	1000.00	1042.24(A)
58 cis-1,3-Dichloropropene	75	13.586	13.586	(1.094)	544589	1000.00	1099.29(A)
59 4-Methyl-2-pentanone	43	13.665	13.665	(0.917)	942374	2500.00	2401.21
60 Toluene	92	13.852	13.852	(0.930)	739150	1000.00	1018.68(A)
61 Ethylmethacrylate	99	13.990	13.990	(0.939)	709608	10000.0	11208.5(A)
62 trans-1,3-Dichloropropene	75	14.020	14.020	(0.941)	474812	1000.00	1031.87(A)
63 1,1,2-Trichloroethane	97	14.168	14.168	(0.951)	263445	1000.00	1002.43(A)

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.286	14.286	(0.959)	672249	2500.00	2543.49(A)
65 2-chloroethyl vinyl ether	63	13.428	13.428	(1.081)	192389	1000.00	1152.40(A)
66 1,3-Dichloropropane	76	14.306	14.306	(0.960)	469313	1000.00	1010.46(A)
67 Tetrachloroethene	164	14.276	14.276	(0.958)	285813	1000.00	1044.85(A)
68 Dibromochloromethane	129	14.473	14.473	(0.972)	354222	1000.00	1041.16(A)
69 1,2-Dibromoethane	107	14.592	14.592	(0.979)	295010	1000.00	1018.25(A)
70 1-Chlorohexane	55	14.809	14.809	(0.994)	333972	1000.00	1019.29(A)
71 Chlorobenzene	112	14.917	14.917	(1.001)	854481	1000.00	1006.12(A)
72 Ethylbenzene	106	14.947	14.947	(1.003)	413778	1000.00	1037.77(A)
73 1,1,1,2-Tetrachloroethane	131	14.957	14.957	(1.004)	340233	1000.00	1051.66(A)
74 m,p-Xylene	106	15.016	15.016	(1.008)	1108499	2000.00	2145.97(A)
75 m,p-Xylene (part of total)	106	15.016	15.016	(1.008)	1108499	2000.00	2145.97(A)
76 o-Xylene	106	15.322	15.322	(1.028)	533589	1000.00	1074.69(A)
77 o-Xylene (part of total)	106	15.322	15.322	(1.028)	533589	1000.00	1074.69(A)
78 Styrene	104	15.322	15.322	(1.028)	887942	1000.00	1105.34(A)
79 Bromoform	173	15.529	15.529	(0.935)	229172	1000.00	1022.88(A)
80 Isopropyl Benzene	105	15.548	15.548	(1.044)	1261121	1000.00	1029.28(A)
81 1,1,2,2-Tetrachloroethane	83	15.785	15.785	(0.951)	376965	1000.00	931.494
82 trans-1,4-dichloro-2-butene	53	15.815	15.815	(1.062)	398514	4000.00	4114.01(A)
83 1,2,3-Trichloropropane	110	15.844	15.844	(1.064)	96057	1000.00	1078.04(A)
84 Bromobenzene	156	15.874	15.874	(1.066)	372563	1000.00	1078.55(A)
85 n-Propyl Benzene	91	15.844	15.844	(0.954)	1769150	1000.00	1009.64(A)
86 1,3,5-Trimethyl Benzene	105	15.953	15.953	(0.961)	1059235	1000.00	983.658
87 2-Chlorotoluene	91	15.972	15.972	(0.962)	1006290	1000.00	947.636
88 4-Chlorotoluene	91	16.051	16.051	(0.967)	955042	1000.00	945.771
89 tert-Butyl Benzene	119	16.219	16.219	(0.977)	1049090	1000.00	977.394
90 1,2,4-Trimethyl Benzene	105	16.248	16.248	(0.979)	1085635	1000.00	989.041
91 Pentachloroethane	167	16.298	16.298	(0.982)	227773	1000.00	991.983
92 sec-Butyl Benzene	105	16.377	16.377	(0.986)	1479213	1000.00	1004.05(A)
93 p-Isopropyl Toluene	119	16.465	16.465	(0.992)	1183780	1000.00	1018.30(A)
94 1,3-Dichlorobenzene	146	16.554	16.554	(0.997)	637167	1000.00	984.721
95 1,4-Dichlorobenzene	146	16.623	16.623	(1.001)	663354	1000.00	933.464
96 n-Butyl Benzene	91	16.791	16.791	(1.011)	1155112	1000.00	1034.43(A)
97 1,2-Dichlorobenzene	146	16.959	16.959	(1.021)	600245	1000.00	977.500
98 1,2-Dibromo-3-Chloropropane	157	17.639	17.639	(1.062)	63887	1000.00	1038.34(A)
99 1,2,4-Trichlorobenzene	180	18.497	18.497	(1.114)	396550	1000.00	1016.32(A)
100 Hexachlorobutadiene	225	18.586	18.586	(1.119)	240660	1000.00	1090.83(A)
101 Naphthalene	128	18.832	18.832	(1.134)	727300	1000.00	974.155
102 1,2,3-Trichlorobenzene	180	19.128	19.128	(1.152)	343205	1000.00	990.154
M 103 1,2-Dichloroethene (total)	96				708007	2000.00	2142.80(A)
M 104 Xylene (total)	106				1642088	3000.00	3220.66

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

12/30/2015

Second Source Calibration Verification

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Dichlorodifluoromethane	50.00	65.48	31.0 *	20.00
Chloromethane	50.00	58.86	17.7	20.00
Vinyl chloride	50.00	53.22	6.4	20.00
Bromomethane	50.00	59.06	18.1	20.00
Chloroethane	50.00	51.26	2.5	20.00
Trichlorofluoromethane	50.00	55.71	11.4	20.00
Acrolein	500.0	510.4	2.1	20.00
1,1-Dichloroethene	50.00	54.04	8.1	20.00
1,1,1-Trichloro-2,2,2-trifluoroethane	50.00	54.94	9.9	20.00
Acetone	125.0	123.8	-1.0	20.00
Iodomethane	50.00	61.69	23.4 *	20.00
1,1,2-Trichloro-1,2,2-trifluoroethane	50.00	56.80	13.6	20.00
Carbon disulfide	50.00	56.69	13.4	20.00
3-Chloropropene	50.00	57.41	14.8	20.00
Acetonitrile	50.00	61.75	23.5 *	20.00
Methyl acetate	50.00	50.74	1.5	20.00
Methylene chloride	50.00	50.64	1.3	20.00
Acrylonitrile	500.0	546.1	9.2	20.00
trans-1,2-Dichloroethene	50.00	54.47	8.9	20.00
Methyl tert-butyl ether	50.00	53.18	6.4	20.00
1,1-Dichloroethane	50.00	53.02	6.0	20.00

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chloroprene	50.00	56.56	13.1	20.00
Vinyl acetate	50.00	57.11	14.2	20.00
Isopropyl Ether	50.00	52.26	4.5	20.00
cis-1,2-Dichloroethene	50.00	51.56	3.1	20.00
2,2-Dichloropropane	50.00	59.04	18.1	20.00
Propionitrile	2500	2794	11.7	20.00
2-Butanone	125.0	114.7	-8.3	20.00
Methacrylonitrile	500.0	553.4	10.7	20.00
Bromochloromethane	50.00	54.92	9.8	20.00
Chloroform	50.00	55.93	11.9	20.00
1,1,1-Trichloroethane	50.00	56.47	12.9	20.00
Cyclohexane	50.00	50.03	0.05	20.00
1,1-Dichloropropene	50.00	57.01	14.0	20.00
Carbon tetrachloride	50.00	55.38	10.8	20.00
1,2-Dichloroethane	50.00	54.66	9.3	20.00
Isobutyl alcohol	2500	2822	12.9	20.00
Benzene	50.00	54.30	8.6	20.00
Trichloroethene	50.00	55.41	10.8	20.00
Methylcyclohexane	50.00	46.57	-6.9	20.00
1,2-Dichloropropane	50.00	56.69	13.4	20.00
Dibromomethane	50.00	55.25	10.5	20.00

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
1,4-Dioxane	2500	2846	13.8	20.00
Methyl Methacrylate	500.0	551.7	10.3	20.00
Bromodichloromethane	50.00	58.56	17.1	20.00
2-Chloroethylvinyl ether	50.00	56.82	13.6	20.00
cis-1,3-Dichloropropene	50.00	57.28	14.6	20.00
4-Methyl-2-pentanone	125.0	123.3	-1.4	20.00
Toluene	50.00	57.24	14.5	20.00
trans-1,3-Dichloropropene	50.00	59.00	18.0	20.00
1,1,2-Trichloroethane	50.00	56.58	13.2	20.00
Ethyl Methacrylate	500.0	617.5	23.5 *	20.00
1,3-Dichloropropane	50.00	56.15	12.3	20.00
Tetrachloroethene	50.00	56.77	13.5	20.00
2-Hexanone	125.0	133.3	6.7	20.00
1-Chlorohexane	50.00	51.37	2.7	20.00
Dibromochloromethane	50.00	58.01	16.0	20.00
1,2-Dibromoethane	50.00	56.02	12.0	20.00
Chlorobenzene	50.00	55.67	11.3	20.00
1,1,1,2-Tetrachloroethane	50.00	54.71	9.4	20.00
Ethylbenzene	50.00	56.64	13.3	20.00
m,p-Xylene	100.0	112.6	12.6	20.00
o-Xylene	50.00	58.23	16.5	20.00

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Styrene	50.00	58.02	16.0	20.00
Bromoform	50.00	54.94	9.9	20.00
Isopropylbenzene	50.00	57.78	15.6	20.00
1,1,2,2-Tetrachloroethane	50.00	51.78	3.6	20.00
1,2,3-Trichloropropane	50.00	55.04	10.1	20.00
Bromobenzene	50.00	55.75	11.5	20.00
trans-1,4-Dichloro-2-butene	200.0	230.3	15.1	20.00
n-Propylbenzene	50.00	52.29	4.6	20.00
2-Chlorotoluene	50.00	51.57	3.1	20.00
4-Chlorotoluene	50.00	51.72	3.4	20.00
1,3,5-Trimethylbenzene	50.00	52.87	5.7	20.00
Pentachloroethane	50.00	51.91	3.8	20.00
tert-Butylbenzene	50.00	51.29	2.6	20.00
1,2,4-Trimethylbenzene	50.00	52.61	5.2	20.00
sec-Butylbenzene	50.00	51.53	3.1	20.00
1,3-Dichlorobenzene	50.00	54.52	9.0	20.00
p-Isopropyltoluene	50.00	52.65	5.3	20.00
1,4-Dichlorobenzene	50.00	52.04	4.1	20.00
1,2-Dichlorobenzene	50.00	53.60	7.2	20.00
n-Butylbenzene	50.00	53.73	7.5	20.00
1,2-Dibromo-3-chloropropane	50.00	52.82	5.6	20.00

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
1,2,4-Trichlorobenzene	50.00	51.72	3.4	20.00
Hexachlorobutadiene	50.00	46.99	-6.0	20.00
Naphthalene	50.00	51.50	3.0	20.00
1,2,3-Trichlorobenzene	50.00	50.80	1.6	20.00
Diethyl ether	50.00	51.61	3.2	20.00
Tetrahydrofuran	200.0	226.1	13.1	20.00
Dibromofluoromethane	50.00	52.45	4.9	20.00
1,2-Dichloroethane-d4	50.00	49.42	-1.2	20.00
Toluene-d8	50.00	53.31	6.6	20.00
Bromofluorobenzene	50.00	51.61	3.2	20.00

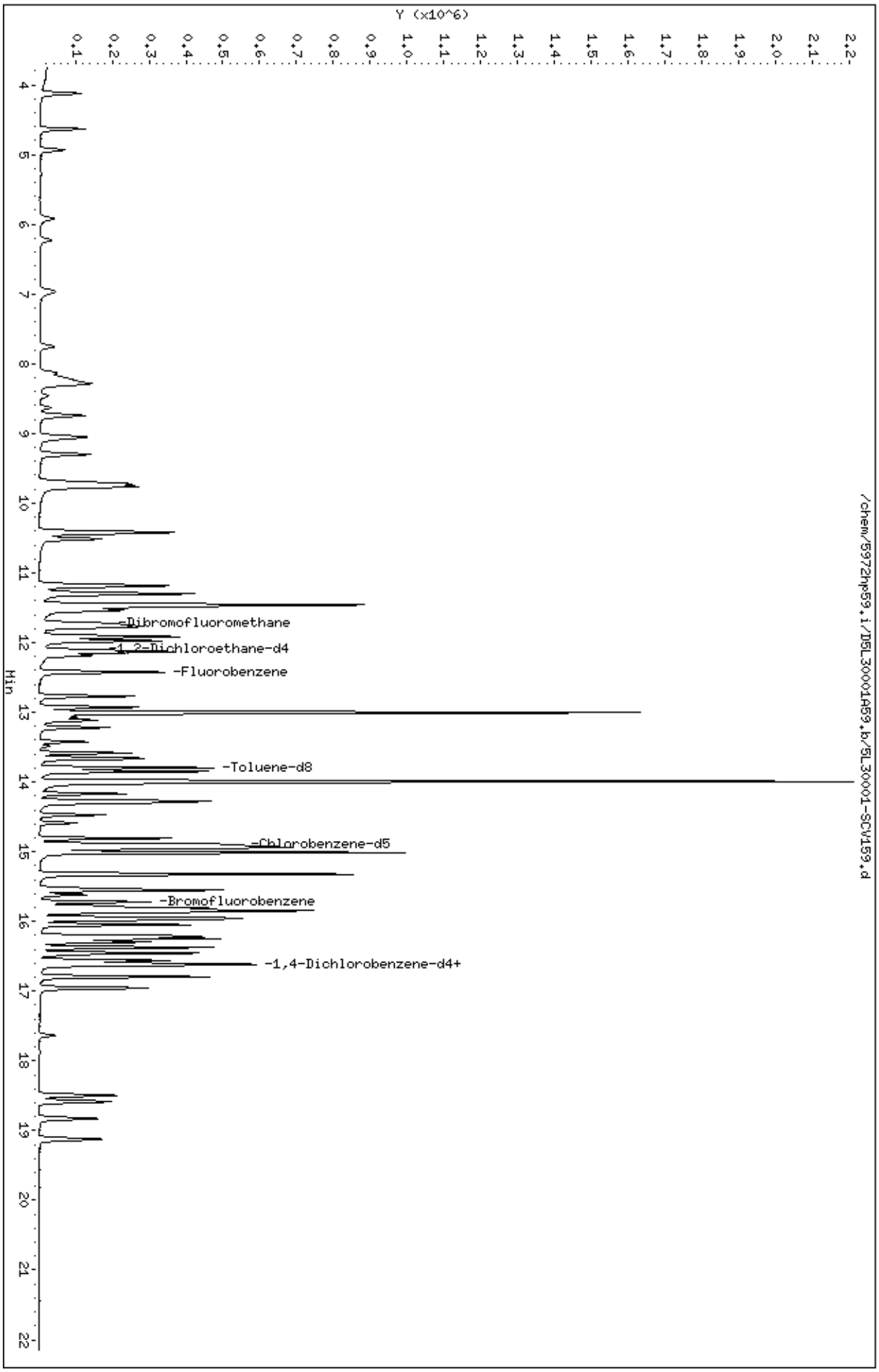
* Values outside of QC limits

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Date : 29-DEC-2015 21:11
Client ID: VSTD050AB
Sample Info: 5L30001-SCV1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Report Date: 30-Dec-2015 07:23

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Lab Smp Id: 5L30001-SCV1 Client Smp ID: VSTD050AB
Inj Date : 29-DEC-2015 21:11
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-SCV1:JAO
Misc Info : VSTD050AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:23 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 30 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.423	12.418	(1.000)	374232	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.894	(1.000)	279223	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.600	(1.000)	141207	250.000	
$ 4 Dibromofluoromethane	113	11.723	11.718	(0.944)	113009	262.274	52.4548
$ 5 1,2-Dichloroethane-d4	65	12.107	12.113	(0.975)	97638	247.124	49.4248
$ 6 Toluene-d8	98	13.793	13.789	(0.926)	335399	266.561	53.3122
$ 7 Bromofluorobenzene	95	15.716	15.722	(0.947)	112154	258.063	51.6127
8 Dichlorodifluoromethane	85	4.120	4.125	(0.332)	157258	327.406	65.4812(R)
9 Chloromethane	50	4.632	4.638	(0.373)	189145	294.300	58.8600
10 Vinyl Chloride	62	4.938	4.944	(0.397)	112514	266.116	53.2231
11 Bromomethane	94	5.924	5.920	(0.477)	62867	295.297	59.0593
12 Chloroethane	64	6.230	6.235	(0.501)	48646	256.309	51.2619
13 Trichlorofluoromethane	101	6.969	6.975	(0.561)	97769	278.570	55.7141
14 Acrolein	56	8.123	8.129	(0.654)	65899	2551.81	510.362
178 Diethyl ether	45	7.768	7.764	(0.625)	36047	258.043	51.6085

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Report Date: 30-Dec-2015 07:23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.212	8.198	(0.661)	35029	274.695	54.9390
16 1,1,2-trichloro-1,2,2-trifluo	101	8.251	8.257	(0.664)	88810	283.988	56.7977
17 1,1-Dichloroethene	96	8.291	8.296	(0.667)	64372	270.183	54.0366
18 Acetone	43	8.458	8.464	(0.681)	46994	618.787	123.757
19 Iodomethane	142	8.636	8.632	(0.695)	74761	308.432	61.6863(R)
20 Carbon disulfide	76	8.744	8.750	(0.704)	301632	283.432	56.6863
21 3-Chloropropene	76	9.050	9.056	(0.729)	43992	287.044	57.4087
22 Acetonitrile	41	9.050	9.056	(0.729)	149928	308.759	61.7518(R)
23 Methyl acetate	43	9.080	9.085	(0.731)	83016	253.708	50.7416
24 Methylene Chloride	84	9.307	9.312	(0.749)	86333	253.177	50.6354
25 Acrylonitrile	53	9.760	9.766	(0.786)	271069	2730.64	546.127
26 Methyl-tert-butyl ether	73	9.701	9.707	(0.781)	199432	265.903	53.1807
28 trans-1,2-Dichloroethene	96	9.721	9.726	(0.782)	90258	272.349	54.4699
29 trans-1,2-DCE (part of total)	96	9.721	9.726	(0.782)	90258	272.349	54.4699
31 Isopropyl ether	45	10.421	10.426	(0.839)	332615	261.276	52.2552
32 1,1-Dichloroethane	63	10.421	10.417	(0.839)	180279	265.096	53.0192
33 Vinyl acetate	43	10.431	10.436	(0.840)	241712	285.536	57.1073
34 Chloroprene	53	10.519	10.515	(0.847)	139835	282.784	56.5569
35 2-butanone	43	11.180	11.176	(0.900)	101333	573.417	114.683
36 2,2-Dichloropropane	77	11.170	11.176	(0.899)	135869	295.221	59.0442
37 cis-1,2-Dichloroethene	96	11.190	11.196	(0.901)	99604	257.814	51.5629
38 cis-1,2-DCE (part of total)	96	11.190	11.196	(0.901)	99604	257.814	51.5629
39 Propionitrile	54	11.298	11.304	(0.909)	565282	13968.3	2793.66
40 Methacrylonitrile	41	11.456	11.462	(0.922)	644517	2767.07	553.414
41 Bromochloromethane	128	11.476	11.482	(0.924)	44033	274.608	54.9216
180 Tetrahydrofuran	42	11.496	11.501	(0.925)	131963	1130.65	226.129
42 Chloroform	83	11.535	11.541	(0.929)	176760	279.627	55.9254
43 1,1,1-Trichloroethane	97	11.752	11.748	(0.946)	134818	282.361	56.4723
44 Cyclohexane	56	11.782	11.777	(0.948)	136631	250.130	50.0260
46 1,1-dichloropropene	75	11.920	11.925	(0.959)	137524	285.071	57.0142
47 Isobutyl alcohol	43	11.979	11.985	(0.964)	240186	14111.3	2822.26
48 Carbon Tetrachloride	117	11.910	11.915	(0.959)	118379	276.912	55.3824
49 Benzene	78	12.137	12.142	(0.977)	363718	271.486	54.2971
50 1,2-Dichloroethane	62	12.196	12.192	(0.982)	125968	273.282	54.6563
51 Trichloroethene	130	12.768	12.773	(1.028)	102647	277.027	55.4053
52 Methylcyclohexane	83	12.926	12.931	(1.040)	111656	232.832	46.5664
53 Methylmethacrylate	100	13.004	13.010	(1.047)	223614	2758.67	551.734
54 1,2-Dichloropropane	63	13.843	13.848	(1.114)	32012	283.449	56.6897
55 1,4-dioxane	88	13.073	13.079	(1.052)	44300	14230.2	2846.03
56 Dibromomethane	174	13.123	13.119	(1.056)	62138	276.269	55.2538
57 Bromodichloromethane	83	13.221	13.217	(1.064)	130157	292.819	58.5639
58 cis-1,3-Dichloropropene	75	13.586	13.592	(1.094)	154314	286.412	57.2824
59 4-Methyl-2-pentanone	43	13.665	13.661	(0.917)	244106	616.252	123.250
60 Toluene	92	13.843	13.848	(0.929)	215360	286.207	57.2413
61 Ethylmethacrylate	99	13.991	13.986	(0.939)	208083	3087.29	617.458(R)
62 trans-1,3-Dichloropropene	75	14.020	14.016	(0.941)	139582	294.978	58.9955
63 1,1,2-Trichloroethane	97	14.168	14.174	(0.951)	76128	282.897	56.5793

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Report Date: 30-Dec-2015 07:23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
64 2-hexanone	43	14.286	14.282	(0.959)	179232	666.691	133.338
65 2-chloroethyl vinyl ether	63	13.428	13.424	(1.081)	51783	284.118	56.8235
66 1,3-Dichloropropane	76	14.306	14.302	(0.960)	133318	280.765	56.1530
67 Tetrachloroethene	164	14.267	14.272	(0.958)	81034	283.833	56.7665
68 Dibromochloromethane	129	14.474	14.479	(0.972)	101854	290.051	58.0102
69 1,2-Dibromoethane	107	14.592	14.588	(0.979)	83065	280.076	56.0153
70 1-Chlorohexane	55	14.809	14.815	(0.994)	86855	256.831	51.3662
71 Chlorobenzene	112	14.918	14.923	(1.001)	244263	278.350	55.6700
72 Ethylbenzene	106	14.937	14.943	(1.003)	118043	283.215	56.6431
73 1,1,1,2-Tetrachloroethane	131	14.957	14.963	(1.004)	91378	273.542	54.7085
74 m,p-Xylene	106	15.016	15.022	(1.008)	305413	563.179	112.636
75 m,p-Xylene (part of total)	106	15.016	15.022	(1.008)	305413	563.179	112.636
76 o-Xylene	106	15.312	15.318	(1.028)	150830	291.163	58.2326
77 o-Xylene (part of total)	106	15.312	15.318	(1.028)	150830	291.163	58.2326
78 Styrene	104	15.322	15.327	(1.028)	244291	290.094	58.0189
79 Bromoform	173	15.519	15.525	(0.935)	63967	274.678	54.9355
80 Isopropyl Benzene	105	15.549	15.554	(1.044)	374052	288.909	57.7818
81 1,1,2,2-Tetrachloroethane	83	15.775	15.781	(0.950)	105936	258.911	51.7821
82 trans-1,4-dichloro-2-butene	53	15.815	15.811	(1.062)	114389	1151.30	230.259
83 1,2,3-Trichloropropane	110	15.844	15.850	(1.064)	25104	275.218	55.0436
84 Bromobenzene	156	15.874	15.870	(1.066)	100419	278.763	55.7526
85 n-Propyl Benzene	91	15.844	15.850	(0.954)	477966	261.426	52.2853
86 1,3,5-Trimethyl Benzene	105	15.953	15.949	(0.961)	298289	264.338	52.8676
87 2-Chlorotoluene	91	15.973	15.978	(0.962)	284334	257.843	51.5687
88 4-Chlorotoluene	91	16.052	16.047	(0.967)	268452	258.583	51.7166
89 tert-Butyl Benzene	119	16.209	16.215	(0.976)	290433	256.466	51.2932
90 1,2,4-Trimethyl Benzene	105	16.249	16.245	(0.979)	301281	263.033	52.6066
91 Pentachloroethane	167	16.298	16.304	(0.982)	62141	259.541	51.9082
92 sec-Butyl Benzene	105	16.377	16.383	(0.986)	401175	257.649	51.5298
93 p-Isopropyl Toluene	119	16.456	16.462	(0.991)	323227	263.251	52.6502
94 1,3-Dichlorobenzene	146	16.555	16.560	(0.997)	183940	272.575	54.5149
95 1,4-Dichlorobenzene	146	16.624	16.629	(1.001)	190426	260.180	52.0360
96 n-Butyl Benzene	91	16.791	16.797	(1.011)	318051	268.646	53.7292
97 1,2-Dichlorobenzene	146	16.959	16.955	(1.021)	169722	267.977	53.5953
98 1,2-Dibromo-3-Chloropropane	157	17.639	17.645	(1.062)	17321	264.107	52.8213
99 1,2,4-Trichlorobenzene	180	18.497	18.493	(1.114)	107367	258.597	51.7193
100 Hexachlorobutadiene	225	18.586	18.582	(1.119)	56181	234.928	46.9856
101 Naphthalene	128	18.832	18.828	(1.134)	209349	257.494	51.4989
102 1,2,3-Trichlorobenzene	180	19.128	19.134	(1.152)	95344	254.001	50.8002
M 103 1,2-Dichloroethene (total)	96				189862	529.051	105.810
M 104 Xylene (total)	106				456243	854.342	170.868

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

12/30/2015

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Lab Smp Id: 5L30001-SCV1 Client Smp ID: VSTD050AB
Inj Date : 29-DEC-2015 21:11
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-SCV1:JAO
Misc Info : VSTD050AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:23 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 30 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

M. Continuing Calibration Data

(CONTINUING CALIBRATION CHECK)

If more than one instrument is used, forms shall be arranged in order by instrument. If multiple continuing calibrations from the same instrument are used, they shall be in chronological order.

RICs and Quantitation reports for all continuing (12-hour) calibrations. Spectra not required.

EICPs displaying each manual integration.

CONTINUING CALIBRATION CHECK

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601025

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument ID: 5972hp59 Calibration: 5123005

Lab File ID: 6A12005-ICV159.d Calibration Date: 12/29/15 17:04

Sequence: 6A12005 Injection Date: 01/12/16

Lab Sample ID: 6A12005-ICV1 Injection Time: 14:13

COMPOUND	TYPE	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
Chloromethane	Avg	50.00	47.38	0.4293425	0.4068279	0.1	-5.2	90
Vinyl chloride	Avg	50.00	52.45	0.2824459	0.2962696	0.001	4.9	20
Bromomethane	Avg	50.00	42.64	0.1422208	0.1212773	0.001	-14.7	90
Chloroethane	Avg	50.00	53.44	0.1267891	0.1355123	0.001	6.9	90
Trichlorofluoromethane	Avg	50.00	53.18	0.2344582	0.2493851	0.001	6.4	90
1,1-Dichloroethene	Avg	50.00	48.42	0.1591616	0.1541258	0.001	-3.2	20
Acetone	Avg	125.0	124.4	5.073413E-02	5.047663E-02	0.001	-0.5	90
Iodomethane	Lin	50.00	48.23	0.1489162	0.15557	0.001	-3.5	90
Carbon disulfide	Avg	50.00	45.36	0.710932	0.6449684	0.001	-9.3	90
Methylene chloride	Avg	50.00	43.97	0.227799	0.2003343	0.001	-12.1	90
Acrylonitrile	Avg	500.0	467.8	0.0663155	6.204659E-02	0.001	-6.4	90
trans-1,2-Dichloroethene	Avg	50.00	45.98	0.2213903	0.2036079	0.001	-8.0	90
1,1-Dichloroethane	Avg	50.00	46.19	0.4542984	0.4196545	0.1	-7.6	90
Vinyl acetate	Avg	50.00	44.18	0.5655043	0.4997142	0.001	-11.6	90
cis-1,2-Dichloroethene	Avg	50.00	48.98	0.2580886	0.2528348	0.001	-2.0	90
2-Butanone	Avg	125.0	115.9	0.1180537	0.1094448	0.001	-7.3	90
Bromochloromethane	Avg	50.00	49.26	0.1071185	0.1055419	0.001	-1.5	90
Chloroform	Avg	50.00	49.41	0.4222834	0.4172663	0.001	-1.2	20
1,1,1-Trichloroethane	Avg	50.00	50.00	0.3189639	0.3189605	0.001	-0.001	90
Carbon tetrachloride	Avg	50.00	51.05	0.2855829	0.2915672	0.001	2.1	90
1,2-Dichloroethane	Avg	50.00	44.77	0.3079278	0.2756889	0.001	-10.5	90
Benzene	Avg	50.00	48.01	0.8949874	0.8593897	0.001	-4.0	90
Trichloroethene	Avg	50.00	48.11	0.2475276	0.2381506	0.001	-3.8	90

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

CONTINUING CALIBRATION CHECK

SW 8260B

Client:	DRAPER ADEN ASSOCIATES	SDG:	1601025
Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39		
Instrument ID:	5972hp59	Calibration:	5123005
Lab File ID:	6A12005-ICV159.d	Calibration Date:	12/29/15 17:04
Sequence:	6A12005	Injection Date:	01/12/16
Lab Sample ID:	6A12005-ICV1	Injection Time:	14:13

		CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
1,2-Dichloropropane	Avg	50.00	50.13	7.544622E-02	7.563533E-02	0.001	0.3	20
Dibromomethane	Avg	50.00	48.15	0.1502532	0.1446826	0.001	-3.7	90
Bromodichloromethane	Avg	50.00	51.51	0.2969387	0.3058941	0.001	3.0	90
cis-1,3-Dichloropropene	Avg	50.00	48.91	0.3599258	0.352105	0.001	-2.2	90
4-Methyl-2-pentanone	Avg	125.0	115.6	0.3546573	0.3279395	0.001	-7.5	90
Toluene	Avg	50.00	50.51	0.6737121	0.6806434	0.001	1.0	20
trans-1,3-Dichloropropene	Avg	50.00	48.75	0.4236714	0.4131166	0.001	-2.5	90
1,1,2-Trichloroethane	Avg	50.00	51.10	0.2409381	0.246237	0.001	2.2	90
Tetrachloroethene	Avg	50.00	49.41	0.2556193	0.2525971	0.001	-1.2	90
2-Hexanone	Avg	125.0	118.4	0.240702	0.2279646	0.001	-5.3	90
Dibromochloromethane	Avg	50.00	50.46	0.3144072	0.3172866	0.001	0.9	90
1,2-Dibromoethane	Avg	50.00	48.89	0.2655403	0.2596273	0.001	-2.2	90
Chlorobenzene	Avg	50.00	50.50	0.7856977	0.7936197	0.3	1.0	90
1,1,1,2-Tetrachloroethane	Avg	50.00	50.21	0.2990926	0.3003742	0.001	0.4	90
Ethylbenzene	Avg	50.00	48.84	0.3731749	0.3645297	0.001	-2.3	20
Styrene	Avg	50.00	51.59	0.7539749	0.7780058	0.001	3.2	90
Bromoform	Avg	50.00	50.62	0.412303	0.4174187	0.1	1.2	90
1,1,2,2-Tetrachloroethane	Avg	50.00	49.53	0.7243981	0.7176593	0.3	-0.9	90
1,2,3-Trichloropropane	Avg	50.00	50.41	8.166858E-02	0.0823315	0.001	0.8	90
trans-1,4-Dichloro-2-butene	Avg	200.0	192.9	8.895814E-02	8.578642E-02	0.001	-3.6	90
1,4-Dichlorobenzene	Avg	50.00	47.91	1.295794	1.241722	0.001	-4.2	90
1,2-Dichlorobenzene	Avg	50.00	48.36	1.121308	1.084456	0.001	-3.3	90
1,2-Dibromo-3-chloropropane	Avg	50.00	47.76	0.116112	0.1109028	0.001	-4.5	90

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CONTINUING CALIBRATION CHECK

SW 8260B

Client:	DRAPER ADEN ASSOCIATES	SDG:	1601025
Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39		
Instrument ID:	5972hp59	Calibration:	5123005
Lab File ID:	6A12005-ICV159.d	Calibration Date:	12/29/15 17:04
Sequence:	6A12005	Injection Date:	01/12/16
Lab Sample ID:	6A12005-ICV1	Injection Time:	14:13

COMPOUND	TYPE	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
Xylenes (total)	Avg	150.0	150.4	0.4783004	0.4791361	0.001	0.2	90
Dibromofluoromethane	Avg	50.00	47.97	0.2878437	0.2761763	0.001	-4.1	90
1,2-Dichloroethane-d4	Avg	50.00	46.74	0.2639388	0.2467366	0.001	-6.5	90
Toluene-d8	Avg	50.00	49.72	1.12656	1.120261	0.001	-0.6	90
Bromofluorobenzene	Avg	50.00	50.39	0.7694356	0.7754004	0.001	0.8	90

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

CONTINUING CALIBRATION CHECK

Client: SDG:

Project:

Instrument ID: Calibration:

Lab File ID: Calibration Date:

Sequence: Injection Date:

Lab Sample ID: Injection Time:

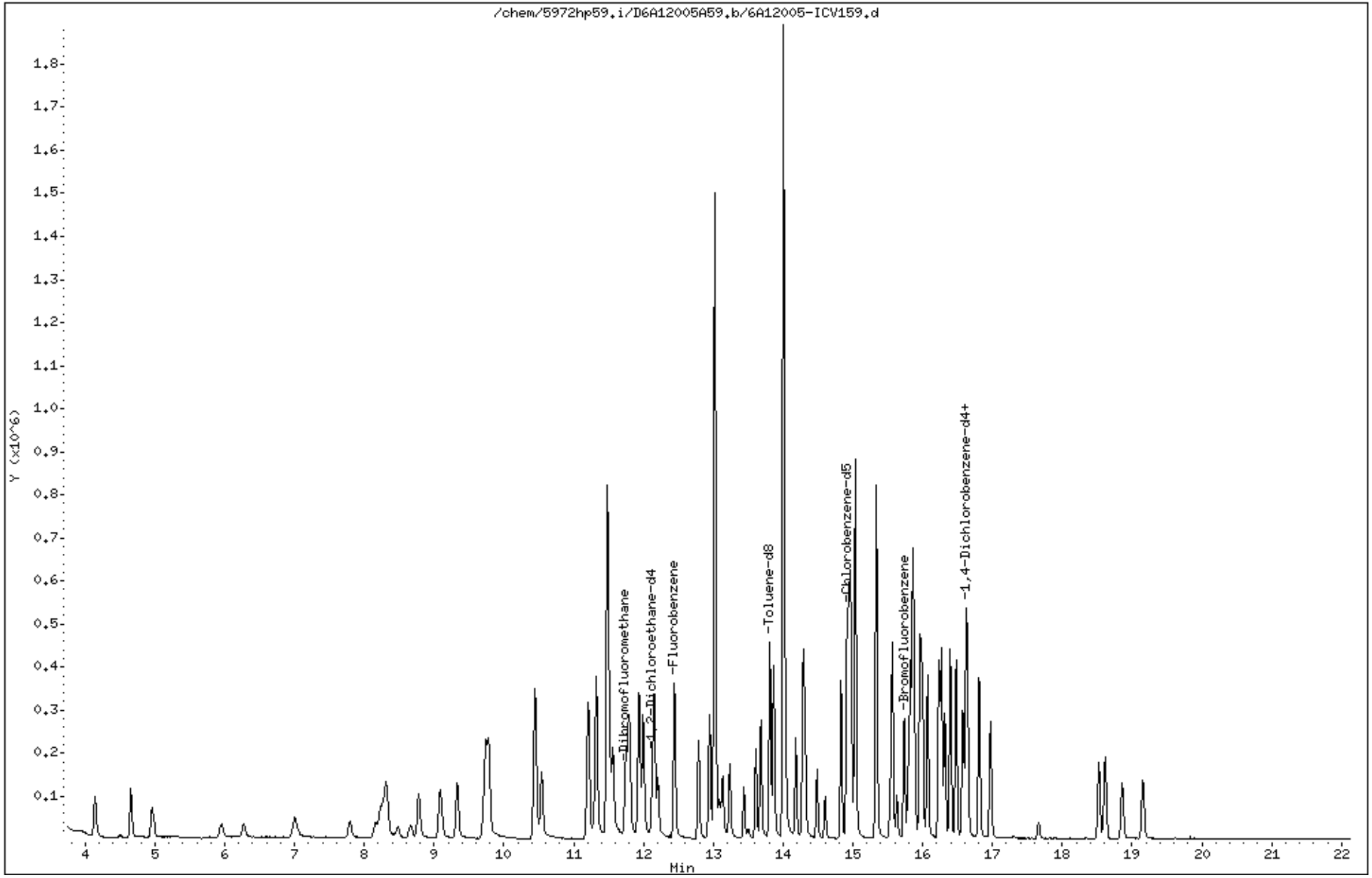
COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Date : 12-JAN-2016 14:13
Client ID: VSTD050BD
Sample Info: 6A12005-ICV1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Lab Smp Id: 6A12005-ICV1 Client Smp ID: VSTD050BD
Inj Date : 12-JAN-2016 14:13
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6A12005-ICV1:JAO
Misc Info : VSTD050BD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.438	12.418	(1.000)	391920	250.000	
* 2 Chlorobenzene-d5	117	14.913	14.894	(1.000)	286476	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.619	16.600	(1.000)	133856	250.000	
$ 4 Dibromofluoromethane	113	11.738	11.718	(0.944)	108239	250.000	239.867
$ 5 1,2-Dichloroethane-d4	65	12.132	12.113	(0.975)	96701	250.000	233.706
$ 6 Toluene-d8	98	13.808	13.789	(0.926)	320928	250.000	248.602
$ 7 Bromofluorobenzene	95	15.731	15.722	(0.947)	103792	250.000	251.938
8 Dichlorodifluoromethane	85	4.135	4.125	(0.332)	133715	250.000	265.826
9 Chloromethane	50	4.657	4.638	(0.374)	159444	250.000	236.890
10 Vinyl Chloride	62	4.963	4.944	(0.399)	116114	250.000	262.236
11 Bromomethane	94	5.959	5.920	(0.479)	47531	250.000	213.185
12 Chloroethane	64	6.274	6.235	(0.504)	53110	250.000	267.200
13 Trichlorofluoromethane	101	7.014	6.975	(0.564)	97739	250.000	265.916
178 Diethyl ether	45	7.793	7.764	(0.627)	34441	250.000	235.419
14 Acrolein	56	8.158	8.129	(0.656)	50649	2500.00	1872.77

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.237	8.198	(0.662)	33445	250.000	250.437
16 1,1,2-trichloro-1,2,2-trifluo	101	8.296	8.257	(0.667)	80893	250.000	246.998
17 1,1-Dichloroethene	96	8.326	8.296	(0.669)	60405	250.000	242.090
18 Acetone	43	8.493	8.464	(0.683)	49457	625.000	621.828
19 Iodomethane	142	8.661	8.632	(0.696)	60971	250.000	241.148
20 Carbon disulfide	76	8.779	8.750	(0.706)	252776	250.000	226.804
21 3-Chloropropene	76	9.085	9.056	(0.730)	35895	250.000	223.641
22 Acetonitrile	41	9.085	9.056	(0.730)	121828	250.000	239.567
23 Methyl acetate	43	9.105	9.085	(0.732)	75833	250.000	221.296
24 Methylene Chloride	84	9.331	9.312	(0.750)	78515	250.000	219.859
25 Acrylonitrile	53	9.785	9.766	(0.787)	243173	2500.00	2339.07
26 Methyl-tert-butyl ether	73	9.726	9.707	(0.782)	187063	250.000	238.155
28 trans-1,2-Dichloroethene	96	9.755	9.726	(0.784)	79798	250.000	229.920
29 trans-1,2-DCE (part of total)	96	9.755	9.726	(0.784)	79798	250.000	229.920
31 Isopropyl ether	45	10.446	10.426	(0.840)	321155	250.000	240.888
32 1,1-Dichloroethane	63	10.446	10.417	(0.840)	164471	250.000	230.935
33 Vinyl acetate	43	10.456	10.436	(0.841)	195848	250.000	220.915
34 Chloroprene	53	10.544	10.515	(0.848)	129715	250.000	250.480
35 2-butanone	43	11.195	11.176	(0.900)	107234	625.000	579.422
36 2,2-Dichloropropane	77	11.195	11.176	(0.900)	110766	250.000	229.814
37 cis-1,2-Dichloroethene	96	11.215	11.196	(0.902)	99091	250.000	244.911
38 cis-1,2-DCE (part of total)	96	11.215	11.196	(0.902)	99091	250.000	244.911
39 Propionitrile	54	11.323	11.304	(0.910)	499467	12500.0	11785.0
40 Methacrylonitrile	41	11.481	11.462	(0.923)	585537	2500.00	2400.40
41 Bromochloromethane	128	11.501	11.482	(0.925)	41364	250.000	246.321
180 Tetrahydrofuran	42	11.521	11.501	(0.926)	114479	1000.00	936.577
42 Chloroform	83	11.560	11.541	(0.929)	163535	250.000	247.030
43 1,1,1-Trichloroethane	97	11.767	11.748	(0.946)	125007	250.000	249.997
44 Cyclohexane	56	11.807	11.777	(0.949)	145101	250.000	253.647
46 1,1-dichloropropene	75	11.945	11.925	(0.960)	125816	250.000	249.031
47 Isobutyl alcohol	43	11.994	11.985	(0.964)	210123	12500.0	11787.9
48 Carbon Tetrachloride	117	11.935	11.915	(0.960)	114271	250.000	255.239
49 Benzene	78	12.162	12.142	(0.978)	336812	250.000	240.056
50 1,2-Dichloroethane	62	12.211	12.192	(0.982)	108048	250.000	223.826
51 Trichloroethene	130	12.793	12.773	(1.029)	93336	250.000	240.529
52 Methylcyclohexane	83	12.950	12.931	(1.041)	125606	250.000	250.100
53 Methylmethacrylate	100	13.019	13.010	(1.047)	203677	2500.00	2399.31
54 1,2-Dichloropropane	63	13.858	13.848	(1.114)	29643	250.000	250.627
55 1,4-dioxane	88	13.098	13.079	(1.053)	38312	12500.0	11751.3
56 Dibromomethane	174	13.138	13.119	(1.056)	56704	250.000	240.731
57 Bromodichloromethane	83	13.236	13.217	(1.064)	119886	250.000	257.540
58 cis-1,3-Dichloropropene	75	13.601	13.592	(1.094)	137997	250.000	244.568
59 4-Methyl-2-pentanone	43	13.680	13.661	(0.917)	234867	625.000	577.916
60 Toluene	92	13.868	13.848	(0.930)	194988	250.000	252.572
61 Ethylmethacrylate	99	14.006	13.986	(0.939)	182149	2500.00	2634.09
62 trans-1,3-Dichloropropene	75	14.035	14.016	(0.941)	118348	250.000	243.772
63 1,1,2-Trichloroethane	97	14.183	14.174	(0.951)	70541	250.000	255.498

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.301	14.282	(0.959)	163266	625.000	591.927
65 2-chloroethyl vinyl ether	63	13.443	13.424	(1.081)	45950	250.000	240.735
66 1,3-Dichloropropane	76	14.321	14.302	(0.960)	122178	250.000	250.790
67 Tetrachloroethene	164	14.282	14.272	(0.958)	72363	250.000	247.044
68 Dibromochloromethane	129	14.489	14.479	(0.972)	90895	250.000	252.290
69 1,2-Dibromoethane	107	14.607	14.588	(0.979)	74377	250.000	244.433
70 1-Chlorohexane	55	14.824	14.815	(0.994)	88516	250.000	255.116
71 Chlorobenzene	112	14.933	14.923	(1.001)	227353	250.000	252.521
72 Ethylbenzene	106	14.952	14.943	(1.003)	104429	250.000	244.208
73 1,1,1,2-Tetrachloroethane	131	14.972	14.963	(1.004)	86050	250.000	251.071
74 m,p-Xylene	106	15.031	15.022	(1.008)	272010	500.000	488.885
75 m,p-Xylene (part of total)	106	15.031	15.022	(1.008)	272010	500.000	488.885
76 o-Xylene	106	15.337	15.318	(1.028)	139773	250.000	262.987
77 o-Xylene (part of total)	106	15.337	15.318	(1.028)	139773	250.000	262.987
78 Styrene	104	15.337	15.327	(1.028)	222880	250.000	257.968
79 Bromoform	173	15.534	15.525	(0.935)	55874	250.000	253.102
80 Isopropyl Benzene	105	15.564	15.554	(1.044)	341829	250.000	257.336
81 1,1,2,2-Tetrachloroethane	83	15.800	15.781	(0.951)	96063	250.000	247.674
82 trans-1,4-dichloro-2-butene	53	15.830	15.811	(1.061)	98303	1000.00	964.346
83 1,2,3-Trichloropropane	110	15.859	15.850	(1.063)	23586	250.000	252.029
84 Bromobenzene	156	15.889	15.870	(1.065)	93713	250.000	253.561
85 n-Propyl Benzene	91	15.859	15.850	(0.954)	441390	250.000	254.679
86 1,3,5-Trimethyl Benzene	105	15.968	15.949	(0.961)	261238	250.000	244.218
87 2-Chlorotoluene	91	15.988	15.978	(0.962)	254807	250.000	243.757
88 4-Chlorotoluene	91	16.067	16.047	(0.967)	243164	250.000	247.088
89 tert-Butyl Benzene	119	16.234	16.215	(0.977)	272161	250.000	253.529
90 1,2,4-Trimethyl Benzene	105	16.264	16.245	(0.979)	269399	250.000	248.115
91 Pentachloroethane	167	16.313	16.304	(0.982)	59930	250.000	264.053
92 sec-Butyl Benzene	105	16.392	16.383	(0.986)	375551	250.000	254.438
93 p-Isopropyl Toluene	119	16.481	16.462	(0.992)	298344	250.000	256.329
94 1,3-Dichlorobenzene	146	16.579	16.560	(0.998)	157548	250.000	246.287
95 1,4-Dichlorobenzene	146	16.639	16.629	(1.001)	166212	250.000	239.568
96 n-Butyl Benzene	91	16.806	16.797	(1.011)	275021	250.000	245.058
97 1,2-Dichlorobenzene	146	16.974	16.955	(1.021)	145161	250.000	241.784
98 1,2-Dibromo-3-Chloropropane	157	17.664	17.645	(1.063)	14845	250.000	238.784
99 1,2,4-Trichlorobenzene	180	18.522	18.493	(1.115)	88033	250.000	223.674
100 Hexachlorobutadiene	225	18.611	18.582	(1.120)	54348	250.000	239.744
101 Naphthalene	128	18.857	18.828	(1.135)	173100	250.000	224.601
102 1,2,3-Trichlorobenzene	180	19.153	19.134	(1.152)	77825	250.000	218.715
M 103 1,2-Dichloroethene (total)	96				178889	500.000	475.978
M 104 Xylene (total)	106				411783	750.000	751.872

1/13/2016

N. BFB / DFTPP or FC-43 Data

For each 12-hour period, per instrument utilized, include:

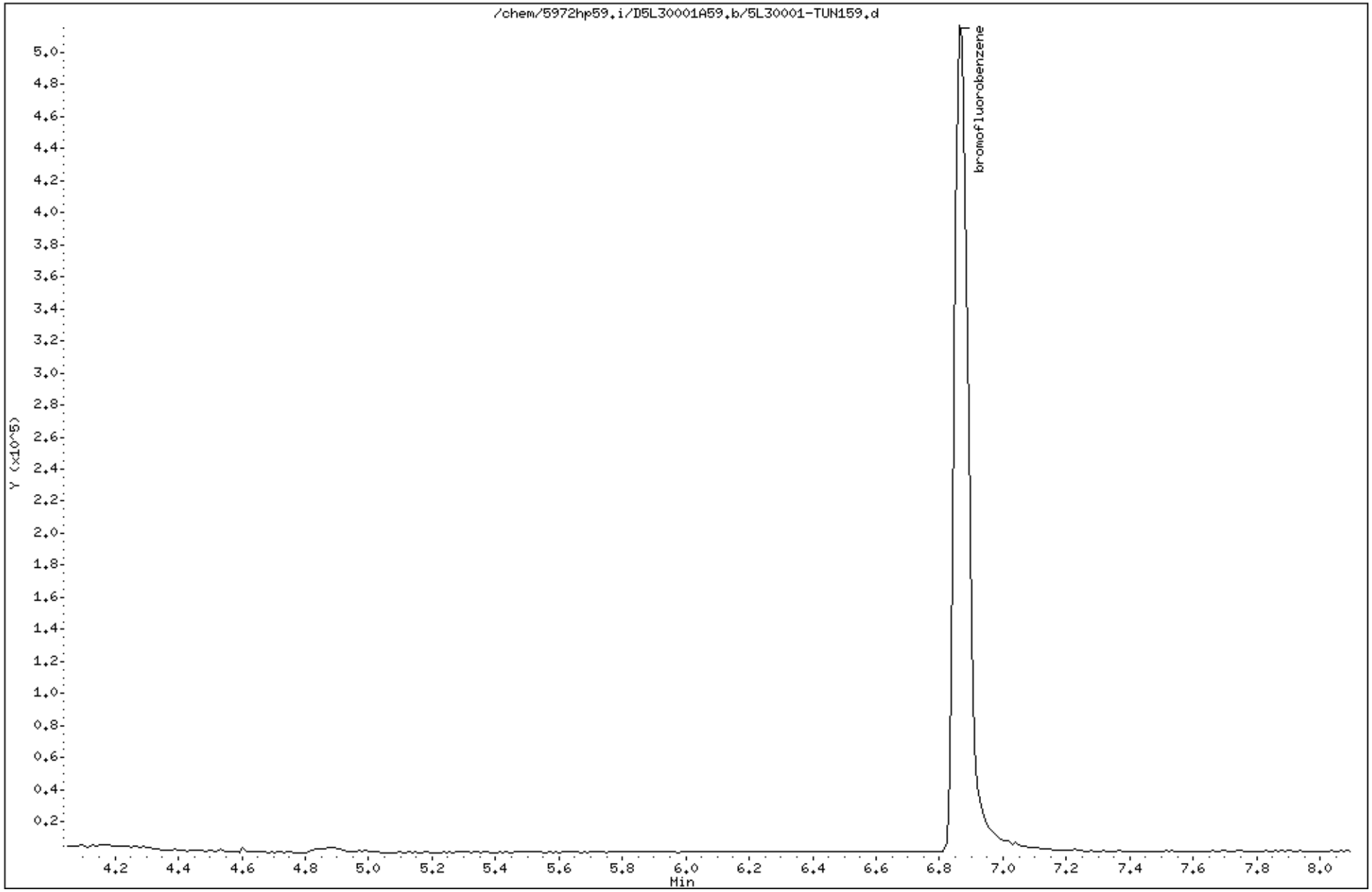
Bar Graph Spectrum and Tabulated Relative Abundances

Mass Listing

RIC

PFTBA (Perfluoro-tri-n-butylamine) scan, showing the relative abundance of the key ions and the Instrument Operating Conditions

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-TUN159.d
Date : 29-DEC-2015 17:04
Client ID: BFBAB
Instrument: 5972hp59.i
Sample Info: 5L30001-TUN1:JAO
Volume Injected (uL): 2.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-TUN159.d

Date : 29-DEC-2015 17:04

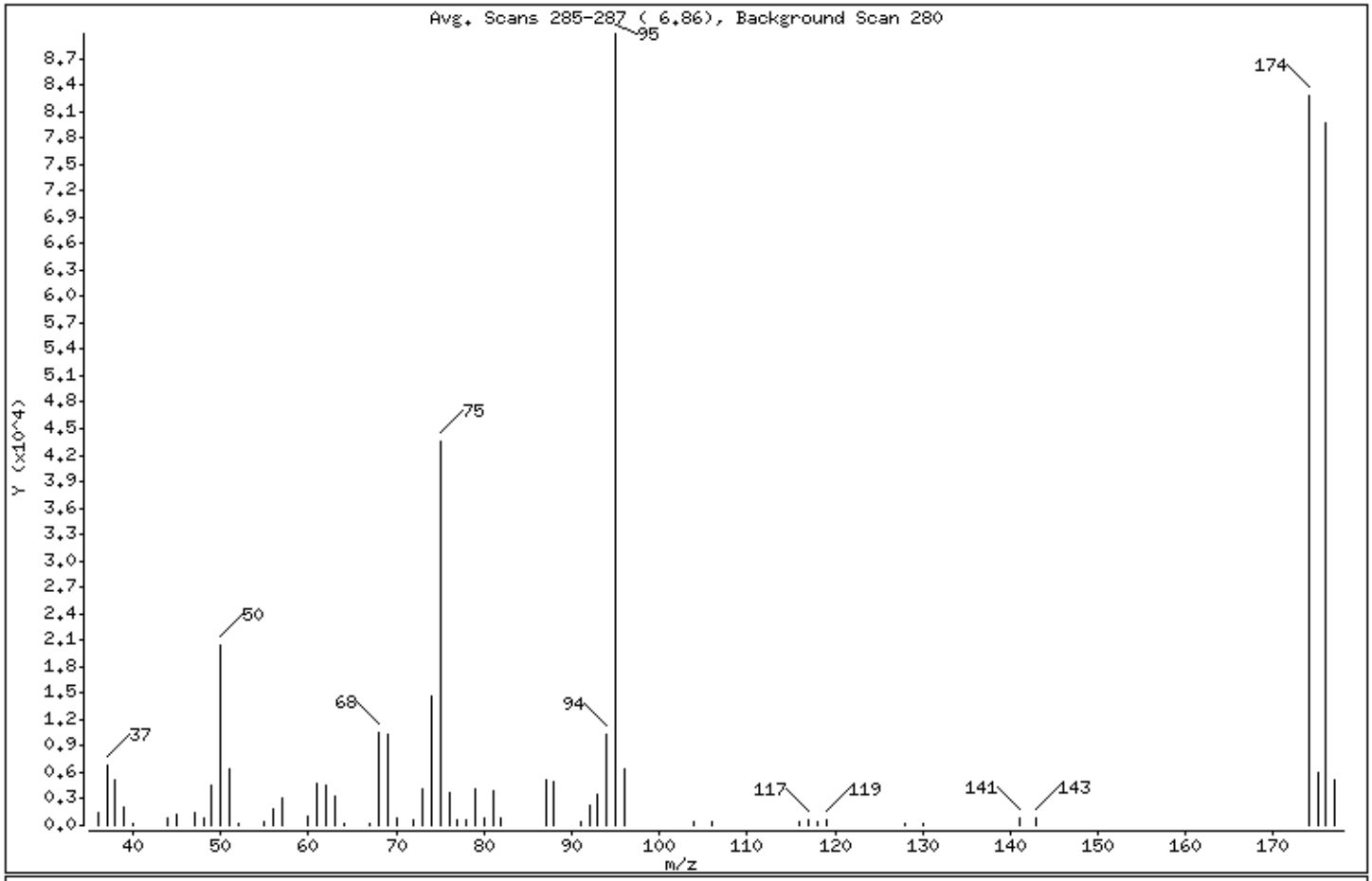
Client ID: BFBAB | Instrument: 5972hp59.i

Sample Info: 5L30001-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

1 bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.81
75	30.00 - 60.00% of mass 95	48.57
96	5.00 - 9.00% of mass 95	7.08
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	92.07
175	5.00 - 9.00% of mass 174	6.77 (7.35)
176	95.00 - 101.00% of mass 174	88.68 (96.32)
177	5.00 - 9.00% of mass 176	5.76 (6.50)

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-TUN159.d

Date : 29-DEC-2015 17:04

Client ID: BFBAB | Instrument: 5972hp59.i

Sample Info: 5L30001-TUN1:JAO

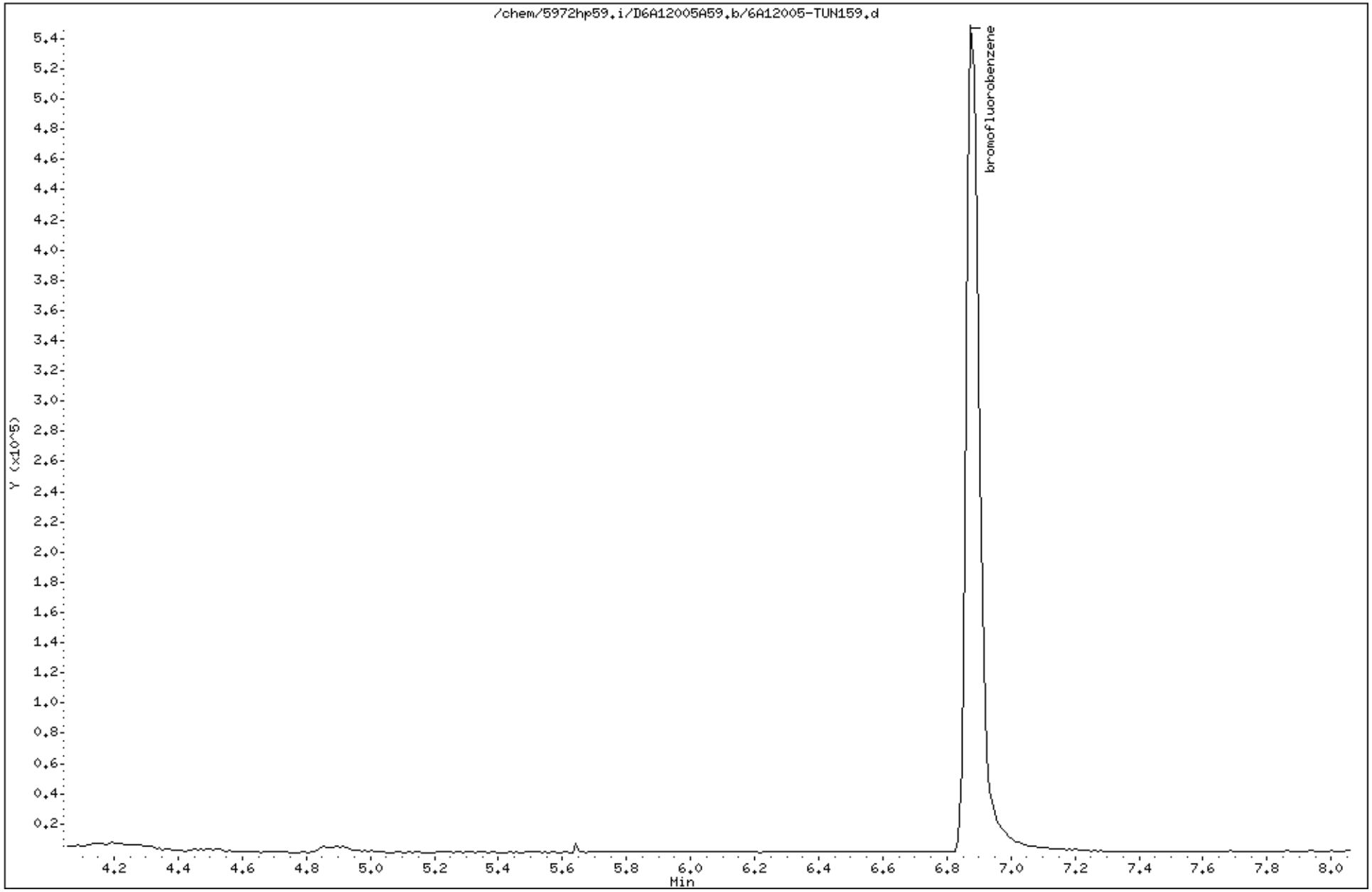
Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

Data File: 5L30001-TUN159.d
Spectrum: Avg. Scans 285-287 (6.86), Background Scan 280
Location of Maximum: 95.00
Number of points: 58

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1346	57.00	3053	77.00	704	106.00	447
37.00	6750	60.00	995	78.00	538	116.00	325
38.00	5214	61.00	4682	79.00	4060	117.00	570
39.00	2146	62.00	4567	80.00	911	118.00	388
40.00	218	63.00	3362	81.00	3980	119.00	544
44.00	858	64.00	263	82.00	786	128.00	271
45.00	1302	67.00	128	87.00	5162	130.00	244
47.00	1534	68.00	10518	88.00	4932	141.00	764
48.00	834	69.00	10345	91.00	440	143.00	725
49.00	4495	70.00	843	92.00	2328	174.00	82680
50.00	20480	72.00	554	93.00	3525	175.00	6076
51.00	6319	73.00	4124	94.00	10297	176.00	79640
52.00	119	74.00	14631	95.00	89800	177.00	5176
55.00	405	75.00	43616	96.00	6360		
56.00	1776	76.00	3757	104.00	455		

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-TUN159.d
Date : 12-JAN-2016 13:48
Client ID: BFBBD
Instrument: 5972hp59.i
Sample Info: 6A12005-TUN1:JAO
Volume Injected (uL): 2.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Robert Hai 1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-TUN159.d

Date : 12-JAN-2016 13:48

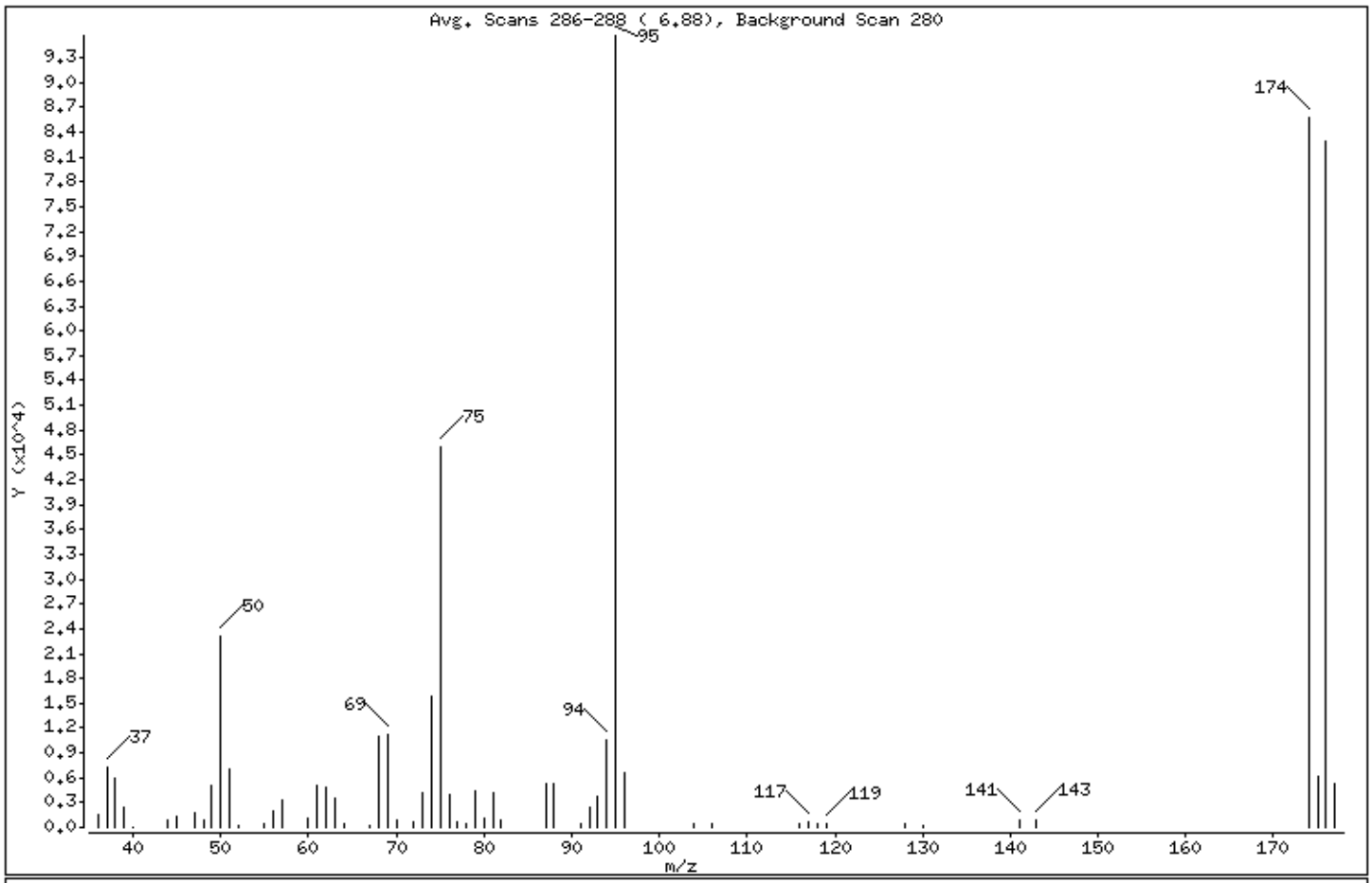
Client ID: BFBBD | Instrument: 5972hp59.i

Sample Info: 6A12005-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

1 bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.13
75	30.00 - 60.00% of mass 95	48.10
96	5.00 - 9.00% of mass 95	6.96
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	89.58
175	5.00 - 9.00% of mass 174	6.53 (7.29)
176	95.00 - 101.00% of mass 174	86.67 (96.75)
177	5.00 - 9.00% of mass 176	5.57 (6.42)

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-TUN159.d

Date : 12-JAN-2016 13:48

Client ID: BFBBD | Instrument: 5972hp59.i

Sample Info: 6A12005-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

Data File: 6A12005-TUN159.d
Spectrum: Avg. Scans 286-288 (6.88), Background Scan 280
Location of Maximum: 95.00
Number of points: 58

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1500	57.00	3272	77.00	616	106.00	462
37.00	7214	60.00	1139	78.00	535	116.00	445
38.00	5882	61.00	5038	79.00	4486	117.00	640
39.00	2328	62.00	4865	80.00	1040	118.00	350
40.00	31	63.00	3476	81.00	4239	119.00	536
44.00	892	64.00	357	82.00	821	128.00	362
45.00	1317	67.00	261	87.00	5284	130.00	246
47.00	1776	68.00	11058	88.00	5179	141.00	840
48.00	858	69.00	11185	91.00	441	143.00	819
49.00	5159	70.00	921	92.00	2419	174.00	85688
50.00	23080	72.00	587	93.00	3743	175.00	6244
51.00	7038	73.00	4236	94.00	10537	176.00	82896
52.00	235	74.00	15735	95.00	95656	177.00	5324
55.00	402	75.00	46008	96.00	6662		
56.00	1911	76.00	4039	104.00	504		

O. Blank Data

Arranged by type of blank (method or instrument where applicable) in chronological order, by instrument.

Tabulated Results and TICs shall be included.
(ANALYSIS DATA SHEET)

RIC and Quantitation reports.

Target compound spectra with lab-generated standard Spectra and GC/MS library search spectra for TICs.

ANALYSIS DATA SHEET

SW 8260B

VBLKBD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-BLK1R59.d QC Type: Blank

Initial/Final: 5g / 5mL Lab ID: 6011205-BLK1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: NA Analyzed: 01/12/16 15:22

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg wet)	MDL	RL	Q
74-87-3	Chloromethane		0.00032	0.0050	U
75-01-4	Vinyl chloride		0.00042	0.0050	U
74-83-9	Bromomethane		0.00058	0.0050	U
75-00-3	Chloroethane		0.00071	0.0050	U
75-69-4	Trichlorofluoromethane		0.00030	0.0050	U
75-35-4	1,1-Dichloroethene		0.0011	0.0050	U
67-64-1	Acetone		0.0050	0.013	U
74-88-4	Iodomethane		0.00032	0.0050	U
75-15-0	Carbon disulfide		0.00014	0.0050	U
75-09-2	Methylene chloride		0.00049	0.0050	U
107-13-1	Acrylonitrile		0.0037	0.050	U
156-60-5	trans-1,2-Dichloroethene		0.0010	0.0050	U
75-34-3	1,1-Dichloroethane		0.00047	0.0050	U
108-05-4	Vinyl acetate		0.00021	0.0050	U
156-59-2	cis-1,2-Dichloroethene		0.00042	0.0050	U
78-93-3	2-Butanone		0.0013	0.013	U
74-97-5	Bromochloromethane		0.00053	0.0050	U
67-66-3	Chloroform		0.00031	0.0050	U
71-55-6	1,1,1-Trichloroethane		0.00050	0.0050	U
56-23-5	Carbon tetrachloride		0.00045	0.0050	U
107-06-2	1,2-Dichloroethane		0.00027	0.0050	U
71-43-2	Benzene		0.00031	0.0050	U
79-01-6	Trichloroethene		0.00032	0.0050	U
78-87-5	1,2-Dichloropropane		0.00063	0.0050	U
74-95-3	Dibromomethane		0.0012	0.0050	U
75-27-4	Bromodichloromethane		0.00038	0.0050	U
10061-01-5	cis-1,3-Dichloropropene		0.00039	0.0050	U
108-10-1	4-Methyl-2-pentanone		0.0013	0.013	U
108-88-3	Toluene		0.00034	0.0050	U
10061-02-6	trans-1,3-Dichloropropene		0.00041	0.0050	U
79-00-5	1,1,2-Trichloroethane		0.00072	0.0050	U
127-18-4	Tetrachloroethene		0.0016	0.0050	U
591-78-6	2-Hexanone		0.0010	0.013	U
124-48-1	Dibromochloromethane		0.00056	0.0050	U

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ANALYSIS DATA SHEET

SW 8260B

VBLKBD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-BLK1R59.d QC Type: Blank

Initial/Final: 5g / 5mL Lab ID: 6011205-BLK1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: NA Analyzed: 01/12/16 15:22

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg wet)	MDL	RL	Q
106-93-4	1,2-Dibromoethane		0.00022	0.0050	U
108-90-7	Chlorobenzene		0.00025	0.0050	U
630-20-6	1,1,1,2-Tetrachloroethane		0.00032	0.0050	U
100-41-4	Ethylbenzene		0.00058	0.0050	U
100-42-5	Styrene		0.000080	0.0050	U
75-25-2	Bromoform		0.0011	0.0050	U
79-34-5	1,1,2,2-Tetrachloroethane		0.00037	0.0050	U
96-18-4	1,2,3-Trichloropropane		0.00091	0.0050	U
110-57-6	trans-1,4-Dichloro-2-butene		0.0018	0.020	U
106-46-7	1,4-Dichlorobenzene		0.00021	0.0050	U
95-50-1	1,2-Dichlorobenzene		0.00036	0.0050	U
96-12-8	1,2-Dibromo-3-chloropropane		0.00065	0.0050	U
1330-20-7	Xylenes (total)		0.00014	0.0050	U

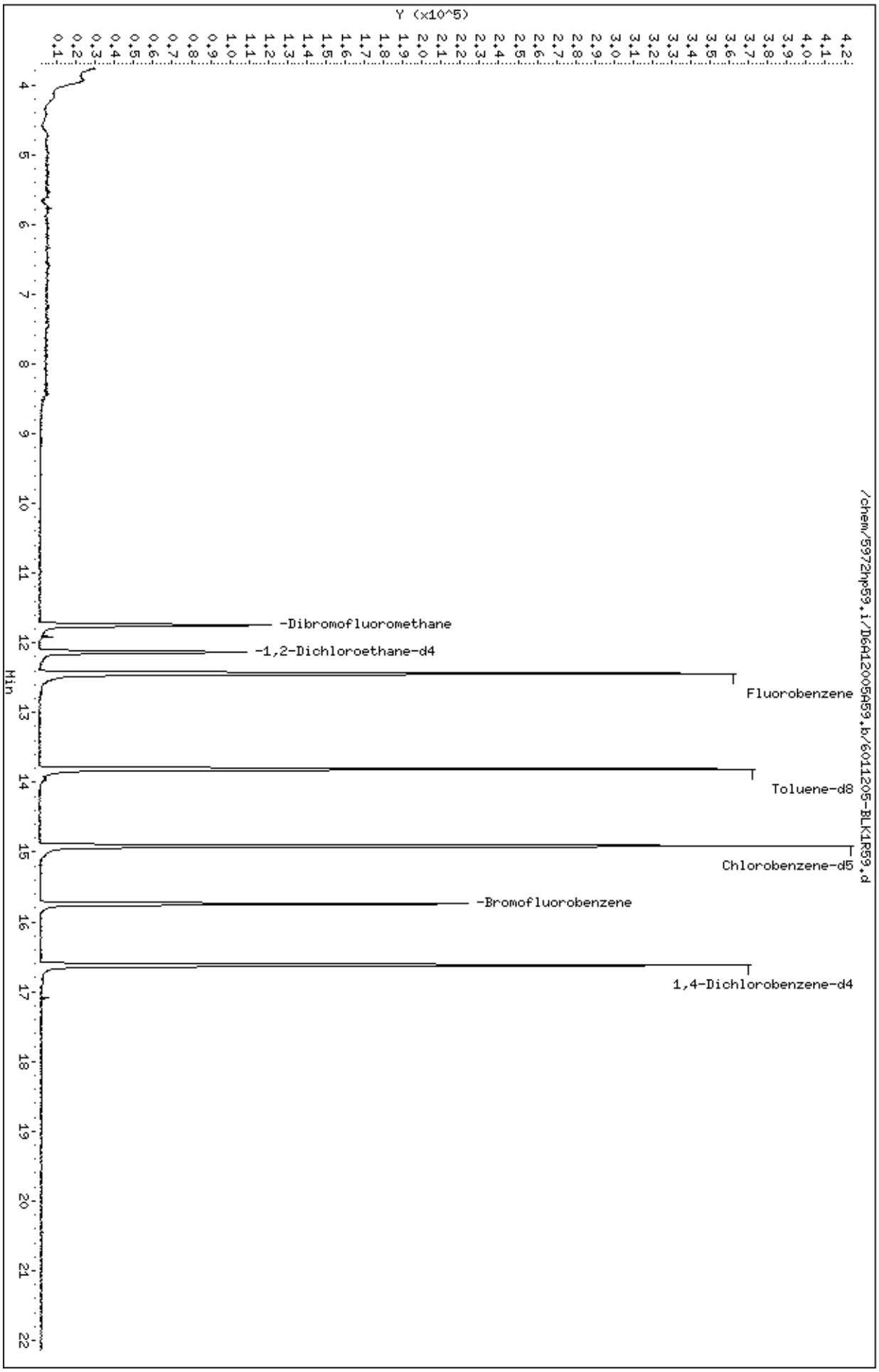
SURROGATE RECOVERY RESULTS	ADDED (mg/kg wet)	CONC (mg/kg wet)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.05000	0.04445	89	71 - 141	
1,2-Dichloroethane-d4	0.05000	0.04787	96	70 - 139	
Toluene-d8	0.05000	0.04329	87	72 - 123	
Bromofluorobenzene	0.05000	0.04603	92	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BLK1R59.d
Date : 12-JAN-2016 15:22
Client ID: VBLKBD
Sample Info: 6011205-BLK1:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BLK1R59.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-BLK1R59.d
Lab Smp Id: 6011205-BLK1 Client Smp ID: VBLKBD
Inj Date : 12-JAN-2016 15:22
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-BLK1:JAO
Misc Info : VBLKBD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 25 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.00000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.443	12.418	(1.000)	369342	250.000	
* 2 Chlorobenzene-d5	117	14.908	14.894	(1.000)	275993	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.624	16.600	(1.000)	121110	250.000	
$ 4 Dibromofluoromethane	113	11.742	11.718	(0.944)	94511	222.248	44.4495
$ 5 1,2-Dichloroethane-d4	65	12.127	12.113	(0.975)	93338	239.368	47.8737
$ 6 Toluene-d8	98	13.813	13.789	(0.927)	269175	216.432	43.2865
$ 7 Bromofluorobenzene	95	15.736	15.722	(0.947)	85778	230.125	46.0250
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BLK1R59.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BLK1R59.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-BLK1R59.d
Lab Smp Id: 6011205-BLK1 Client Smp ID: VBLKBD
Inj Date : 12-JAN-2016 15:22
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-BLK1:JAO
Misc Info : VBLKBD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 25 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

P. Laboratory Control Sample Data

Tabulated Results (ANALYSIS DATA SHEET)

RIC and Quantitation report

ANALYSIS DATA SHEET

SW 8260B

VLCSBD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-BS159.d QC Type: LCS

Initial/Final: 5g / 5mL Lab ID: 6011205-BS1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: NA Analyzed: 01/12/16 15:54

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg wet)	MDL	RL	Q
74-87-3	Chloromethane	0.05058	0.00032	0.0050	
75-01-4	Vinyl chloride	0.05405	0.00042	0.0050	
74-83-9	Bromomethane	0.05250	0.00058	0.0050	
75-00-3	Chloroethane	0.05213	0.00071	0.0050	
75-69-4	Trichlorofluoromethane	0.05459	0.00030	0.0050	
75-35-4	1,1-Dichloroethene	0.04940	0.0011	0.0050	
67-64-1	Acetone	0.1154	0.0050	0.013	
74-88-4	Iodomethane	0.04360	0.00032	0.0050	
75-15-0	Carbon disulfide	0.04529	0.00014	0.0050	
75-09-2	Methylene chloride	0.04705	0.00049	0.0050	
107-13-1	Acrylonitrile	0.4785	0.0037	0.050	
156-60-5	trans-1,2-Dichloroethene	0.04773	0.0010	0.0050	
75-34-3	1,1-Dichloroethane	0.04845	0.00047	0.0050	
108-05-4	Vinyl acetate	0.05114	0.00021	0.0050	
156-59-2	cis-1,2-Dichloroethene	0.05188	0.00042	0.0050	
78-93-3	2-Butanone	0.1183	0.0013	0.013	
74-97-5	Bromochloromethane	0.05199	0.00053	0.0050	
67-66-3	Chloroform	0.05180	0.00031	0.0050	
71-55-6	1,1,1-Trichloroethane	0.05208	0.00050	0.0050	
56-23-5	Carbon tetrachloride	0.05288	0.00045	0.0050	
107-06-2	1,2-Dichloroethane	0.05223	0.00027	0.0050	
71-43-2	Benzene	0.05004	0.00031	0.0050	
79-01-6	Trichloroethene	0.05082	0.00032	0.0050	
78-87-5	1,2-Dichloropropane	0.05177	0.00063	0.0050	
74-95-3	Dibromomethane	0.05073	0.0012	0.0050	
75-27-4	Bromodichloromethane	0.05248	0.00038	0.0050	
10061-01-5	cis-1,3-Dichloropropene	0.05123	0.00039	0.0050	
108-10-1	4-Methyl-2-pentanone	0.1245	0.0013	0.013	
108-88-3	Toluene	0.05187	0.00034	0.0050	
10061-02-6	trans-1,3-Dichloropropene	0.05209	0.00041	0.0050	
79-00-5	1,1,2-Trichloroethane	0.05476	0.00072	0.0050	
127-18-4	Tetrachloroethene	0.05269	0.0016	0.0050	
591-78-6	2-Hexanone	0.1302	0.0010	0.013	
124-48-1	Dibromochloromethane	0.05407	0.00056	0.0050	

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ANALYSIS DATA SHEET

SW 8260B

VLCSBD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-BS159.d QC Type: LCS

Initial/Final: 5g / 5mL Lab ID: 6011205-BS1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: NA Analyzed: 01/12/16 15:54

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg wet)	MDL	RL	Q
106-93-4	1,2-Dibromoethane	0.05298	0.00022	0.0050	
108-90-7	Chlorobenzene	0.05208	0.00025	0.0050	
630-20-6	1,1,1,2-Tetrachloroethane	0.05289	0.00032	0.0050	
100-41-4	Ethylbenzene	0.05342	0.00058	0.0050	
100-42-5	Styrene	0.05294	0.000080	0.0050	
75-25-2	Bromoform	0.05042	0.0011	0.0050	
79-34-5	1,1,2,2-Tetrachloroethane	0.05070	0.00037	0.0050	
96-18-4	1,2,3-Trichloropropane	0.05321	0.00091	0.0050	
110-57-6	trans-1,4-Dichloro-2-butene	0.2024	0.0018	0.020	
106-46-7	1,4-Dichlorobenzene	0.04801	0.00021	0.0050	
95-50-1	1,2-Dichlorobenzene	0.05114	0.00036	0.0050	
96-12-8	1,2-Dibromo-3-chloropropane	0.04907	0.00065	0.0050	
1330-20-7	Xylenes (total)	0.1569	0.00014	0.0050	

SURROGATE RECOVERY RESULTS	ADDED (mg/kg wet)	CONC (mg/kg wet)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.05000	0.04981	100	71 - 141	
1,2-Dichloroethane-d4	0.05000	0.05011	100	70 - 139	
Toluene-d8	0.05000	0.05215	104	72 - 123	
Bromofluorobenzene	0.05000	0.05170	103	65 - 131	

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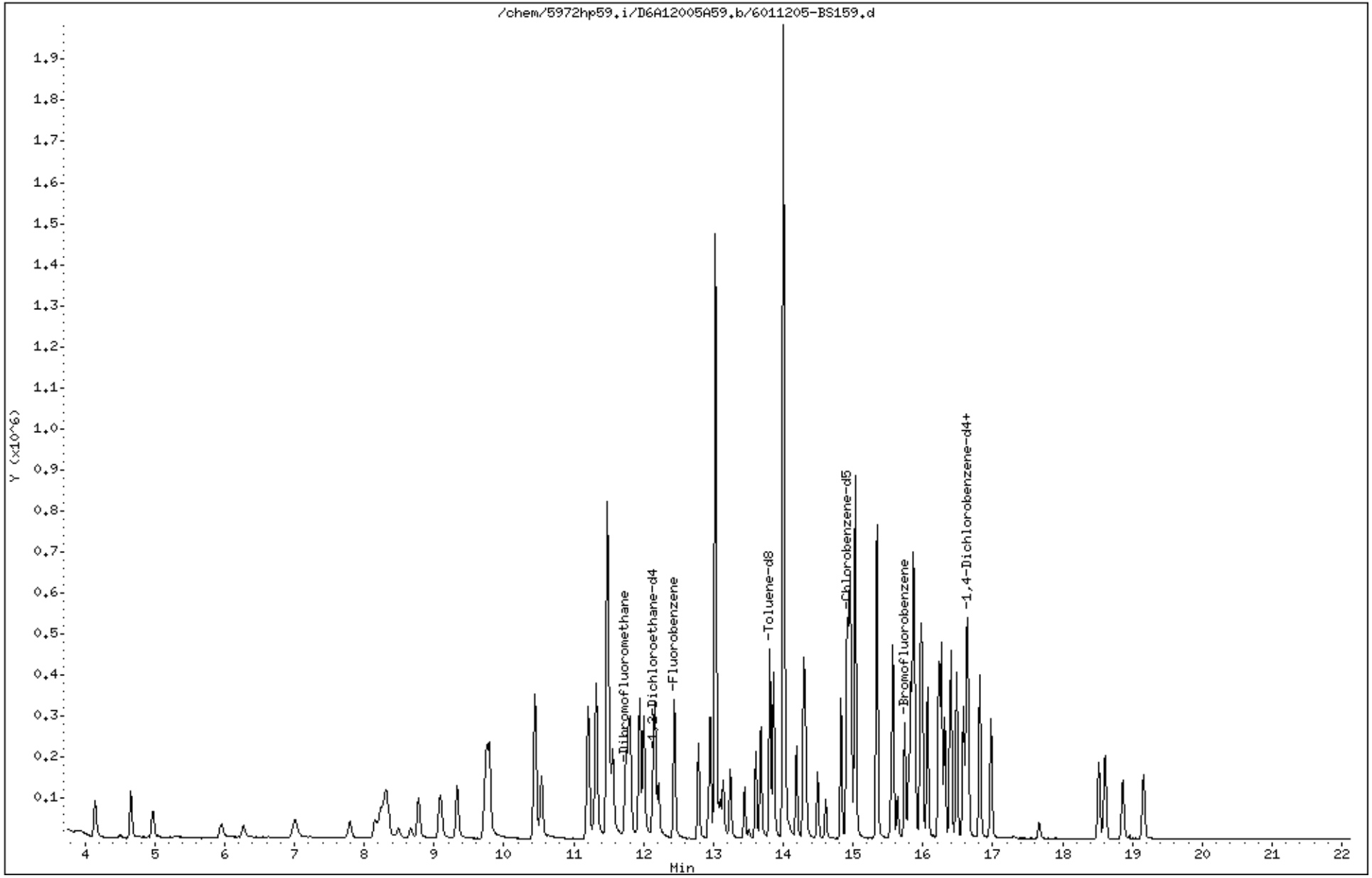
Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BS159.d
Date : 12-JAN-2016 15:54
Client ID: VLCSBD
Sample Info: 6011205-BS1:JAO

Instrument: 5972hp59.i

Operator: JAO

Column phase: SPB-624

Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BS159.d
Report Date: 13-Jan-2016 19:13

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-BS159.d
Lab Smp Id: 6011205-BS1 Client Smp ID: VLCSBD
Inj Date : 12-JAN-2016 15:54
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-BS1:JAO
Misc Info : VLCSBD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 26 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.00000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.440	12.418	(1.000)	369004	250.000	
* 2 Chlorobenzene-d5	117	14.915	14.894	(1.000)	270729	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.621	16.600	(1.000)	133267	250.000	
$ 4 Dibromofluoromethane	113	11.740	11.718	(0.944)	105818	249.064	49.8129
$ 5 1,2-Dichloroethane-d4	65	12.135	12.113	(0.975)	97618	250.574	50.1148
$ 6 Toluene-d8	98	13.811	13.789	(0.926)	318105	260.748	52.1497
$ 7 Bromofluorobenzene	95	15.734	15.722	(0.947)	106031	258.510	51.7021
8 Dichlorodifluoromethane	85	4.147	4.125	(0.333)	128340	270.985	54.1971
9 Chloromethane	50	4.660	4.638	(0.375)	160255	252.881	50.5762
10 Vinyl Chloride	62	4.975	4.944	(0.400)	112659	270.234	54.0467
11 Bromomethane	94	5.962	5.920	(0.479)	55105	262.504	52.5009
12 Chloroethane	64	6.267	6.235	(0.504)	48782	260.667	52.1335
13 Trichlorofluoromethane	101	7.007	6.975	(0.563)	94461	272.958	54.5916
178 Diethyl ether	45	7.796	7.764	(0.627)	35179	255.397	51.0794

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BS159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
14 Acrolein	56	8.161	8.129	(0.656)	72057	2829.80	565.960
15 1,1,1-trichloro-2,2,2-trifluo	117	8.239	8.198	(0.662)	32533	258.736	51.7472
16 1,1,2-trichloro-1,2,2-trifluo	101	8.289	8.257	(0.666)	79589	258.108	51.6216
17 1,1-Dichloroethene	96	8.328	8.296	(0.669)	58028	247.006	49.4013
18 Acetone	43	8.486	8.464	(0.682)	43219	577.143	115.429
19 Iodomethane	142	8.663	8.632	(0.696)	51799	218.018	43.6037
20 Carbon disulfide	76	8.772	8.750	(0.705)	237614	226.440	45.2880
21 3-Chloropropene	76	9.078	9.056	(0.730)	30886	204.383	40.8767
22 Acetonitrile	41	9.088	9.056	(0.730)	115708	241.663	48.3326
23 Methyl acetate	43	9.107	9.085	(0.732)	77532	240.305	48.0611
24 Methylene Chloride	84	9.334	9.312	(0.750)	79104	235.264	47.0528
25 Acrylonitrile	53	9.788	9.766	(0.787)	234177	2392.42	478.485
26 Methyl-tert-butyl ether	73	9.728	9.707	(0.782)	186039	251.561	50.3121
28 trans-1,2-Dichloroethene	96	9.758	9.726	(0.784)	77992	238.671	47.7343
29 trans-1,2-DCE (part of total)	96	9.758	9.726	(0.784)	77992	238.671	47.7343
31 Isopropyl ether	45	10.448	10.426	(0.840)	323154	257.441	51.4881
32 1,1-Dichloroethane	63	10.438	10.417	(0.839)	162447	242.259	48.4517
33 Vinyl acetate	43	10.458	10.436	(0.841)	213451	255.724	51.1448
34 Chloroprene	53	10.537	10.515	(0.847)	129395	265.379	53.0758
35 2-butanone	43	11.198	11.176	(0.900)	103084	591.589	118.318
36 2,2-Dichloropropane	77	11.198	11.176	(0.900)	107074	235.950	47.1901
37 cis-1,2-Dichloroethene	96	11.218	11.196	(0.902)	98809	259.380	51.8760
38 cis-1,2-DCE (part of total)	96	11.218	11.196	(0.902)	98809	259.380	51.8760
39 Propionitrile	54	11.326	11.304	(0.910)	519604	13021.5	2604.30
40 Methacrylonitrile	41	11.484	11.462	(0.923)	596941	2599.12	519.825
41 Bromochloromethane	128	11.504	11.482	(0.925)	41103	259.967	51.9934
180 Tetrahydrofuran	42	11.513	11.501	(0.925)	115933	1007.37	201.475
42 Chloroform	83	11.563	11.541	(0.929)	161433	258.998	51.7997
43 1,1,1-Trichloroethane	97	11.770	11.748	(0.946)	122604	260.419	52.0837
44 Cyclohexane	56	11.799	11.777	(0.948)	150070	278.625	55.7250
46 1,1-dichloropropene	75	11.947	11.925	(0.960)	124201	261.102	52.2203
47 Isobutyl alcohol	43	11.997	11.985	(0.964)	219655	13087.9	2617.58
48 Carbon Tetrachloride	117	11.937	11.915	(0.960)	111456	264.411	52.8823
49 Benzene	78	12.164	12.142	(0.978)	330489	250.178	50.0356
50 1,2-Dichloroethane	62	12.214	12.192	(0.982)	118700	261.162	52.2325
51 Trichloroethene	130	12.785	12.773	(1.028)	92842	254.115	50.8229
52 Methylcyclohexane	83	12.953	12.931	(1.041)	126627	267.791	53.5583
53 Methylmethacrylate	100	13.022	13.010	(1.047)	200426	2507.64	501.528
54 1,2-Dichloropropane	63	13.860	13.848	(1.114)	28828	258.873	51.7745
55 1,4-dioxane	88	13.091	13.079	(1.052)	40851	13308.2	2661.64
56 Dibromomethane	174	13.140	13.119	(1.056)	56258	253.670	50.7340
57 Bromodichloromethane	83	13.239	13.217	(1.064)	115002	262.390	52.4780
58 cis-1,3-Dichloropropene	75	13.604	13.592	(1.094)	136085	256.157	51.2314
59 4-Methyl-2-pentanone	43	13.683	13.661	(0.917)	239030	622.370	124.474
60 Toluene	92	13.860	13.848	(0.929)	189212	259.346	51.8692
61 Ethylmethacrylate	99	14.008	13.986	(0.939)	194473	2975.89	595.177
62 trans-1,3-Dichloropropene	75	14.038	14.016	(0.941)	119495	260.451	52.0902

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-BS159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
63 1,1,2-Trichloroethane	97	14.186	14.174	(0.951)	71440	273.805	54.7610
64 2-hexanone	43	14.294	14.282	(0.958)	169738	651.185	130.237
65 2-chloroethyl vinyl ether	63	13.446	13.424	(1.081)	47211	262.702	52.5405
66 1,3-Dichloropropane	76	14.314	14.302	(0.960)	120847	262.486	52.4973
67 Tetrachloroethene	164	14.284	14.272	(0.958)	72925	263.444	52.6888
68 Dibromochloromethane	129	14.491	14.479	(0.972)	92045	270.342	54.0683
69 1,2-Dibromoethane	107	14.610	14.588	(0.979)	76174	264.900	52.9800
70 1-Chlorohexane	55	14.827	14.815	(0.994)	82226	250.771	50.1543
71 Chlorobenzene	112	14.935	14.923	(1.001)	221552	260.391	52.0781
72 Ethylbenzene	106	14.955	14.943	(1.003)	107932	267.081	53.4162
73 1,1,1,2-Tetrachloroethane	131	14.975	14.963	(1.004)	85660	264.471	52.8941
74 m,p-Xylene	106	15.034	15.022	(1.008)	271221	515.821	103.164
75 m,p-Xylene (part of total)	106	15.034	15.022	(1.008)	271221	515.821	103.164
76 o-Xylene	106	15.330	15.318	(1.028)	134997	268.775	53.7550
77 o-Xylene (part of total)	106	15.330	15.318	(1.028)	134997	268.775	53.7550
78 Styrene	104	15.340	15.327	(1.028)	216130	264.706	52.9412
79 Bromoform	173	15.537	15.525	(0.935)	55412	252.119	50.4237
80 Isopropyl Benzene	105	15.566	15.554	(1.044)	350627	279.313	55.8626
81 1,1,2,2-Tetrachloroethane	83	15.793	15.781	(0.950)	97898	253.521	50.7042
82 trans-1,4-dichloro-2-butene	53	15.833	15.811	(1.061)	97488	1011.98	202.395
83 1,2,3-Trichloropropane	110	15.862	15.850	(1.063)	23531	266.067	53.2133
84 Bromobenzene	156	15.892	15.870	(1.065)	92515	264.879	52.9758
85 n-Propyl Benzene	91	15.862	15.850	(0.954)	448193	259.747	51.9495
86 1,3,5-Trimethyl Benzene	105	15.971	15.949	(0.961)	279929	262.847	52.5695
87 2-Chlorotoluene	91	15.990	15.978	(0.962)	267097	256.643	51.3286
88 4-Chlorotoluene	91	16.069	16.047	(0.967)	240990	245.961	49.1922
89 tert-Butyl Benzene	119	16.237	16.215	(0.977)	291929	273.146	54.6292
90 1,2,4-Trimethyl Benzene	105	16.266	16.245	(0.979)	288677	267.045	53.4089
91 Pentachloroethane	167	16.316	16.304	(0.982)	60390	267.255	53.4511
92 sec-Butyl Benzene	105	16.395	16.383	(0.986)	389514	265.064	53.0129
93 p-Isopropyl Toluene	119	16.483	16.462	(0.992)	305680	263.793	52.7586
94 1,3-Dichlorobenzene	146	16.572	16.560	(0.997)	163747	257.108	51.4217
95 1,4-Dichlorobenzene	146	16.641	16.629	(1.001)	165812	240.048	48.0095
96 n-Butyl Benzene	91	16.809	16.797	(1.011)	284673	254.779	50.9558
97 1,2-Dichlorobenzene	146	16.976	16.955	(1.021)	152851	255.718	51.1435
98 1,2-Dibromo-3-Chloropropane	157	17.657	17.645	(1.062)	15186	245.349	49.0697
99 1,2,4-Trichlorobenzene	180	18.525	18.493	(1.115)	93787	239.347	47.8694
100 Hexachlorobutadiene	225	18.613	18.582	(1.120)	57882	256.462	51.2923
101 Naphthalene	128	18.860	18.828	(1.135)	184905	240.979	48.1958
102 1,2,3-Trichlorobenzene	180	19.156	19.134	(1.152)	85997	242.750	48.5500
M 103 1,2-Dichloroethene (total)	96				176801	499.636	99.9273
M 104 Xylene (total)	106				406218	784.596	156.919

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-BS159.d
Lab Smp Id: 6011205-BS1 Client Smp ID: VLCSBD
Inj Date : 12-JAN-2016 15:54
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-BS1:JAO
Misc Info : VLCSBD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 26 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Q. Matrix Spike Data

Tabulated Results (ANALYSIS DATA SHEET)

RIC and Quantitation report

ANALYSIS DATA SHEET

SW 8260B

WS-4MS

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-MS159.d QC Type: Matrix Spike

Initial/Final: 4.9g / 5mL Lab ID: 6011205-MS1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 32 Analyzed: 01/12/16 16:32

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane	0.06073	0.00048	0.0075	
75-01-4	Vinyl chloride	0.06321	0.00063	0.0075	
74-83-9	Bromomethane	0.06031	0.00087	0.0075	
75-00-3	Chloroethane	0.06060	0.0011	0.0075	
75-69-4	Trichlorofluoromethane	0.05526	0.00045	0.0075	
75-35-4	1,1-Dichloroethene	0.05985	0.0017	0.0075	
67-64-1	Acetone	0.1969	0.0075	0.019	
74-88-4	Iodomethane	0.05518	0.00048	0.0075	
75-15-0	Carbon disulfide	0.05419	0.00021	0.0075	
75-09-2	Methylene chloride	0.06161	0.00074	0.0075	
107-13-1	Acrylonitrile	0.6281	0.0056	0.075	
156-60-5	trans-1,2-Dichloroethene	0.05668	0.0015	0.0075	
75-34-3	1,1-Dichloroethane	0.05912	0.00071	0.0075	
108-05-4	Vinyl acetate	0.06014	0.00032	0.0075	
156-59-2	cis-1,2-Dichloroethene	0.06124	0.00063	0.0075	
78-93-3	2-Butanone	0.1569	0.0020	0.019	
74-97-5	Bromochloromethane	0.06384	0.00080	0.0075	
67-66-3	Chloroform	0.06489	0.00047	0.0075	
71-55-6	1,1,1-Trichloroethane	0.06072	0.00075	0.0075	
56-23-5	Carbon tetrachloride	0.05672	0.00068	0.0075	
107-06-2	1,2-Dichloroethane	0.06363	0.00041	0.0075	
71-43-2	Benzene	0.05909	0.00047	0.0075	
79-01-6	Trichloroethene	0.05488	0.00048	0.0075	
78-87-5	1,2-Dichloropropane	0.06154	0.00095	0.0075	
74-95-3	Dibromomethane	0.06487	0.0018	0.0075	
75-27-4	Bromodichloromethane	0.06336	0.00057	0.0075	
10061-01-5	cis-1,3-Dichloropropene	0.06104	0.00059	0.0075	
108-10-1	4-Methyl-2-pentanone	0.1788	0.0020	0.019	
108-88-3	Toluene	0.06139	0.00051	0.0075	
10061-02-6	trans-1,3-Dichloropropene	0.06480	0.00062	0.0075	
79-00-5	1,1,2-Trichloroethane	0.07136	0.0011	0.0075	
127-18-4	Tetrachloroethene	0.05059	0.0024	0.0075	
591-78-6	2-Hexanone	0.1876	0.0015	0.019	
124-48-1	Dibromochloromethane	0.06818	0.00084	0.0075	

Liberty Analytical

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ANALYSIS DATA SHEET

SW 8260B

WS-4MS

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-MS159.d QC Type: Matrix Spike

Initial/Final: 4.9g / 5mL Lab ID: 6011205-MS1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 32 Analyzed: 01/12/16 16:32

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg dry)	MDL	RL	Q
106-93-4	1,2-Dibromoethane	0.06635	0.00033	0.0075	
108-90-7	Chlorobenzene	0.05980	0.00038	0.0075	
630-20-6	1,1,1,2-Tetrachloroethane	0.06560	0.00048	0.0075	
100-41-4	Ethylbenzene	0.05571	0.00087	0.0075	
100-42-5	Styrene	0.05820	0.00012	0.0075	
75-25-2	Bromoform	0.06702	0.0017	0.0075	
79-34-5	1,1,2,2-Tetrachloroethane	0.06713	0.00056	0.0075	
96-18-4	1,2,3-Trichloropropane	0.06787	0.0014	0.0075	
110-57-6	trans-1,4-Dichloro-2-butene	0.2516	0.0027	0.030	
106-46-7	1,4-Dichlorobenzene	0.05027	0.00032	0.0075	
95-50-1	1,2-Dichlorobenzene	0.05206	0.00054	0.0075	
96-12-8	1,2-Dibromo-3-chloropropane	0.06314	0.00098	0.0075	
1330-20-7	Xylenes (total)	0.1703	0.00021	0.0075	

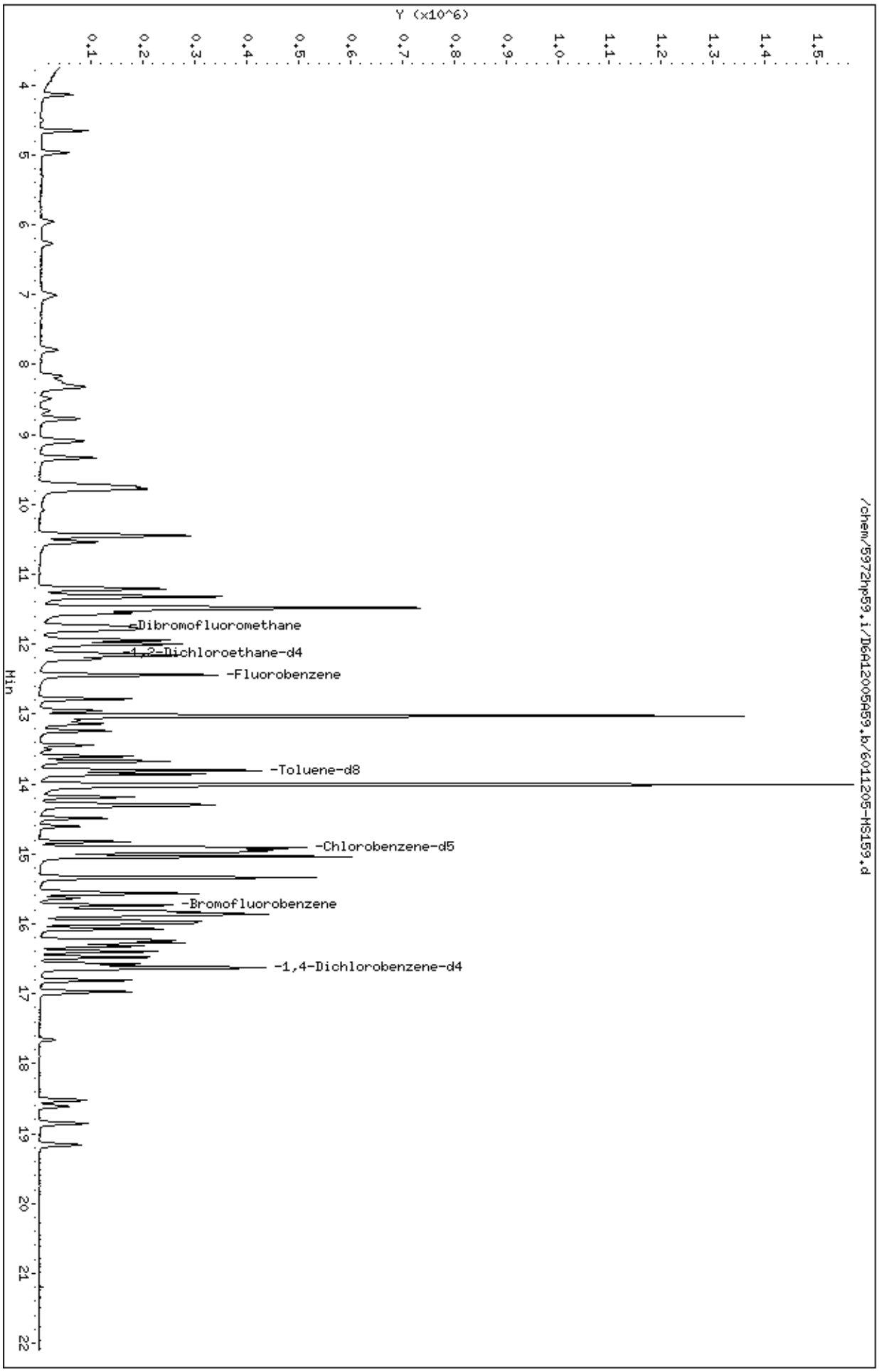
SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.07518	0.07223	96	71 - 141	
1,2-Dichloroethane-d4	0.07518	0.07072	94	70 - 139	
Toluene-d8	0.07518	0.07666	102	72 - 123	
Bromofluorobenzene	0.07518	0.07487	100	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D6A120005A59.b/6011205-MS159.d
Date : 12-JAN-2016 16:32
Client ID: WS-4MS
Sample Info: 6011205-MS1:JAO
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MS159.d
Report Date: 13-Jan-2016 19:13

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-MS159.d
Lab Smp Id: 6011205-MS1 Client Smp ID: WS-4MS
Inj Date : 12-JAN-2016 16:32
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-MS1:JAO
Misc Info : WS-4MS
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 27 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	4.90000	Weight of sample extracted (g)
M	32.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.441	12.418	(1.000)	376393	250.000	
* 2 Chlorobenzene-d5	117	14.916	14.894	(1.000)	262692	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.622	16.600	(1.000)	122515	250.000	
$ 4 Dibromofluoromethane	113	11.741	11.718	(0.944)	104094	240.197	72.0879
$ 5 1,2-Dichloroethane-d4	65	12.125	12.113	(0.975)	93445	235.153	70.5743
$ 6 Toluene-d8	98	13.812	13.789	(0.926)	301742	254.903	76.5014
$ 7 Bromofluorobenzene	95	15.735	15.722	(0.947)	93880	248.973	74.7217
9 Chloromethane	50	4.661	4.638	(0.375)	130530	201.932	60.6038
10 Vinyl Chloride	62	4.966	4.944	(0.399)	89382	210.191	63.0824
11 Bromomethane	94	5.952	5.920	(0.478)	42939	200.534	60.1842
12 Chloroethane	64	6.268	6.235	(0.504)	38469	201.524	60.4815
13 Trichlorofluoromethane	101	7.008	6.975	(0.563)	64860	183.743	55.1449
17 1,1-Dichloroethene	96	8.329	8.296	(0.669)	47690	199.016	59.7286
18 Acetone	43	8.487	8.464	(0.682)	50003	654.628	196.467

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MS159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	8.664	8.632	(0.696)	44297	183.484	55.0673
20 Carbon disulfide	76	8.783	8.750	(0.706)	192885	180.206	54.0834
24 Methylene Chloride	84	9.335	9.312	(0.750)	70263	204.868	61.4849
25 Acrylonitrile	53	9.788	9.766	(0.787)	208527	2088.55	626.817
28 trans-1,2-Dichloroethene	96	9.749	9.726	(0.784)	62822	188.474	56.5649
32 1,1-Dichloroethane	63	10.439	10.417	(0.839)	134461	196.586	58.9995
33 Vinyl acetate	43	10.449	10.436	(0.840)	170270	199.987	60.0200
35 2-butanone	43	11.199	11.176	(0.900)	92715	521.637	156.554
37 cis-1,2-Dichloroethene	96	11.208	11.196	(0.901)	79125	203.631	61.1137
41 Bromochloromethane	128	11.494	11.482	(0.924)	34235	212.278	63.7088
42 Chloroform	83	11.563	11.541	(0.929)	137179	215.766	64.7556
43 1,1,1-Trichloroethane	97	11.770	11.748	(0.946)	96965	201.917	60.5992
48 Carbon Tetrachloride	117	11.938	11.915	(0.960)	81093	188.603	56.6037
49 Benzene	78	12.155	12.142	(0.977)	264751	196.480	58.9677
50 1,2-Dichloroethane	62	12.214	12.192	(0.982)	98088	211.576	63.4981
51 Trichloroethene	130	12.786	12.773	(1.028)	68005	182.480	54.7659
54 1,2-Dichloropropane	63	13.861	13.848	(1.114)	23244	204.631	61.4139
56 Dibromomethane	174	13.141	13.119	(1.056)	48796	215.704	64.7372
57 Bromodichloromethane	83	13.240	13.217	(1.064)	94194	210.695	63.2339
58 cis-1,3-Dichloropropene	75	13.605	13.592	(1.094)	109994	202.981	60.9185(R)
59 4-Methyl-2-pentanone	43	13.674	13.661	(0.917)	221575	594.573	178.443
60 Toluene	92	13.861	13.848	(0.929)	144514	204.140	61.2666
62 trans-1,3-Dichloropropene	75	14.029	14.016	(0.940)	95930	215.486	64.6716
63 1,1,2-Trichloroethane	97	14.186	14.174	(0.951)	60075	237.291	71.2158
64 2-hexanone	43	14.295	14.282	(0.958)	157766	623.774	187.207
67 Tetrachloroethene	164	14.285	14.272	(0.958)	45181	168.211	50.4836(R)
68 Dibromochloromethane	129	14.492	14.479	(0.972)	74896	226.704	68.0384
69 1,2-Dibromoethane	107	14.611	14.588	(0.979)	61557	220.618	66.2118
71 Chlorobenzene	112	14.936	14.923	(1.001)	164172	198.855	59.6804
72 Ethylbenzene	106	14.956	14.943	(1.003)	72642	185.254	55.5986(R)
73 1,1,1,2-Tetrachloroethane	131	14.975	14.963	(1.004)	68554	218.132	65.4659
74 m,p-Xylene	106	15.035	15.022	(1.008)	188274	369.023	110.751(R)
75 m,p-Xylene (part of total)	106	15.035	15.022	(1.008)	188274	369.023	110.751(R)
76 o-Xylene	106	15.330	15.318	(1.028)	96132	197.252	59.1992
77 o-Xylene (part of total)	106	15.330	15.318	(1.028)	96132	197.252	59.1992
78 Styrene	104	15.340	15.327	(1.028)	153335	193.543	58.0862
79 Bromoform	173	15.537	15.525	(0.935)	45033	222.877	66.8898
81 1,1,2,2-Tetrachloroethane	83	15.794	15.781	(0.950)	79248	223.235	66.9972
82 trans-1,4-dichloro-2-butene	53	15.823	15.811	(1.061)	78201	836.604	251.082
83 1,2,3-Trichloropropane	110	15.863	15.850	(1.063)	19368	225.695	67.7357
95 1,4-Dichlorobenzene	146	16.642	16.629	(1.001)	106150	167.161	50.1684(R)
97 1,2-Dichlorobenzene	146	16.977	16.955	(1.021)	95133	173.124	51.9580
98 1,2-Dibromo-3-Chloropropane	157	17.667	17.645	(1.063)	11947	209.958	63.0126
M 104 Xylene (total)	106				284406	566.275	169.950(R)

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MS159.d
Report Date: 13-Jan-2016 19:13

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MS159.d
Report Date: 13-Jan-2016 19:13

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-MS159.d
Lab Smp Id: 6011205-MS1 Client Smp ID: WS-4MS
Inj Date : 12-JAN-2016 16:32
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-MS1:JAO
Misc Info : WS-4MS
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 27 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

ANALYSIS DATA SHEET

SW 8260B

WS-4MSD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-MSD159.d QC Type: Matrix Spike Dup

Initial/Final: 5.03g / 5mL Lab ID: 6011205-MSD1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 32 Analyzed: 01/12/16 17:04

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg dry)	MDL	RL	Q
74-87-3	Chloromethane	0.05954	0.00047	0.0073	
75-01-4	Vinyl chloride	0.05832	0.00062	0.0073	
74-83-9	Bromomethane	0.05953	0.00085	0.0073	
75-00-3	Chloroethane	0.06316	0.0010	0.0073	
75-69-4	Trichlorofluoromethane	0.05548	0.00044	0.0073	
75-35-4	1,1-Dichloroethene	0.05700	0.0016	0.0073	
67-64-1	Acetone	0.2026	0.0073	0.018	
74-88-4	Iodomethane	0.05536	0.00047	0.0073	
75-15-0	Carbon disulfide	0.05081	0.00021	0.0073	
75-09-2	Methylene chloride	0.05938	0.00072	0.0073	
107-13-1	Acrylonitrile	0.6598	0.0054	0.073	
156-60-5	trans-1,2-Dichloroethene	0.05528	0.0015	0.0073	
75-34-3	1,1-Dichloroethane	0.05668	0.00069	0.0073	
108-05-4	Vinyl acetate	0.05347	0.00031	0.0073	
156-59-2	cis-1,2-Dichloroethene	0.05819	0.00062	0.0073	
78-93-3	2-Butanone	0.1760	0.0019	0.018	
74-97-5	Bromochloromethane	0.06444	0.00078	0.0073	
67-66-3	Chloroform	0.06298	0.00045	0.0073	
71-55-6	1,1,1-Trichloroethane	0.05797	0.00073	0.0073	
56-23-5	Carbon tetrachloride	0.05267	0.00066	0.0073	
107-06-2	1,2-Dichloroethane	0.06585	0.00040	0.0073	
71-43-2	Benzene	0.05809	0.00045	0.0073	
79-01-6	Trichloroethene	0.05218	0.00047	0.0073	
78-87-5	1,2-Dichloropropane	0.05691	0.00092	0.0073	
74-95-3	Dibromomethane	0.06291	0.0018	0.0073	
75-27-4	Bromodichloromethane	0.06198	0.00056	0.0073	
10061-01-5	cis-1,3-Dichloropropene	0.05854	0.00057	0.0073	
108-10-1	4-Methyl-2-pentanone	0.1789	0.0019	0.018	
108-88-3	Toluene	0.05790	0.00050	0.0073	
10061-02-6	trans-1,3-Dichloropropene	0.06274	0.00060	0.0073	
79-00-5	1,1,2-Trichloroethane	0.06716	0.0011	0.0073	
127-18-4	Tetrachloroethene	0.04613	0.0023	0.0073	
591-78-6	2-Hexanone	0.1748	0.0015	0.018	
124-48-1	Dibromochloromethane	0.06477	0.00082	0.0073	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

WS-4MSD

Client: DRAPER ADEN ASSOCIATES SDG: 1601025 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Soil Extraction: EPA 5035A File ID: 6011205-MSD159.d QC Type: Matrix Spike Dup

Initial/Final: 5.03g / 5mL Lab ID: 6011205-MSD1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 15:22

% Moisture: 32 Analyzed: 01/12/16 17:04

Batch: 6011205 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(mg/kg dry)	MDL	RL	Q
106-93-4	1,2-Dibromoethane	0.06518	0.00032	0.0073	
108-90-7	Chlorobenzene	0.05502	0.00037	0.0073	
630-20-6	1,1,1,2-Tetrachloroethane	0.06006	0.00047	0.0073	
100-41-4	Ethylbenzene	0.05022	0.00085	0.0073	
100-42-5	Styrene	0.05422	0.00012	0.0073	
75-25-2	Bromoform	0.06436	0.0016	0.0073	
79-34-5	1,1,2,2-Tetrachloroethane	0.06561	0.00054	0.0073	
96-18-4	1,2,3-Trichloropropane	0.06714	0.0013	0.0073	
110-57-6	trans-1,4-Dichloro-2-butene	0.2572	0.0026	0.029	
106-46-7	1,4-Dichlorobenzene	0.04535	0.00031	0.0073	
95-50-1	1,2-Dichlorobenzene	0.04960	0.00053	0.0073	
96-12-8	1,2-Dibromo-3-chloropropane	0.05936	0.00095	0.0073	
1330-20-7	Xylenes (total)	0.1549	0.00021	0.0073	

SURROGATE RECOVERY RESULTS	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC	QC LIMITS	Q
Dibromofluoromethane	0.07324	0.06877	94	71 - 141	
1,2-Dichloroethane-d4	0.07324	0.06901	94	70 - 139	
Toluene-d8	0.07324	0.06844	93	72 - 123	
Bromofluorobenzene	0.07324	0.07034	96	65 - 131	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

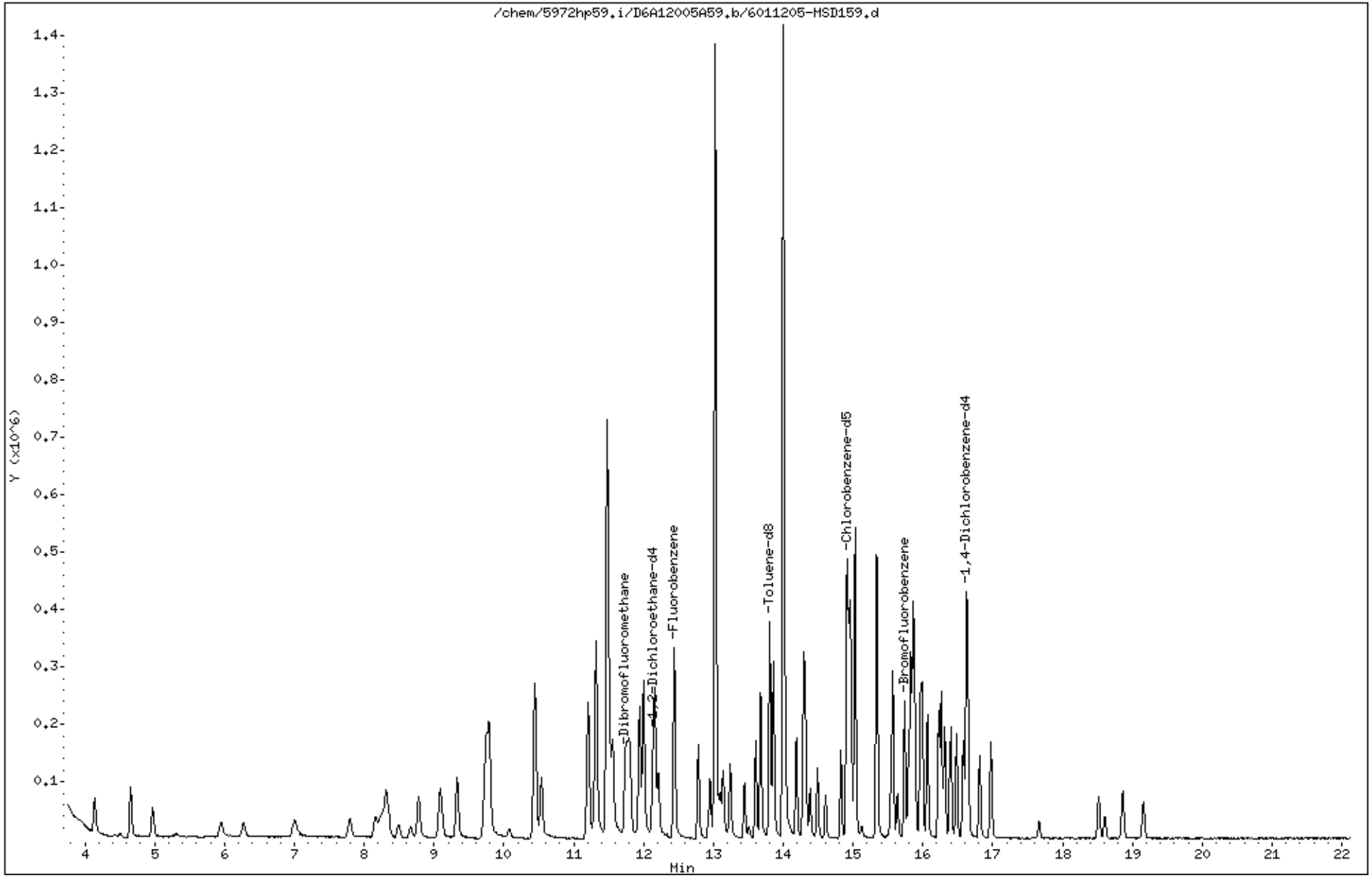
Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MSD159.d
Date : 12-JAN-2016 17:04
Client ID: WS-4MSD
Sample Info: 6011205-MSD1:JAO

Instrument: 5972hp59.i

Operator: JAO

Column phase: SPB-624

Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MSD159.d
Report Date: 13-Jan-2016 19:13

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-MSD159.d
Lab Smp Id: 6011205-MSD1 Client Smp ID: WS-4MSD
Inj Date : 12-JAN-2016 17:04
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-MSD1:JAO
Misc Info : WS-4MSD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 28 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * (1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Ws	5.03000	Weight of sample extracted (g)
M	32.00000	% Moisture (not decanted)
Va	100.00000	

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 1 Fluorobenzene	96	12.442	12.418	(1.000)	360816	250.000	
* 2 Chlorobenzene-d5	117	14.917	14.894	(1.000)	258011	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.623	16.600	(1.000)	119534	250.000	
$ 4 Dibromofluoromethane	113	11.741	11.718	(0.944)	97518	234.737	68.6286
$ 5 1,2-Dichloroethane-d4	65	12.136	12.113	(0.975)	89738	235.574	68.8732
$ 6 Toluene-d8	98	13.812	13.789	(0.926)	271631	233.629	68.3046
$ 7 Bromofluorobenzene	95	15.735	15.722	(0.947)	88336	240.112	70.2000
9 Chloromethane	50	4.661	4.638	(0.375)	125945	203.250	59.4230
10 Vinyl Chloride	62	4.967	4.944	(0.399)	81158	199.090	58.2067
11 Bromomethane	94	5.953	5.920	(0.478)	41711	203.208	59.4107
12 Chloroethane	64	6.268	6.235	(0.504)	39453	215.602	63.0341
13 Trichlorofluoromethane	101	7.008	6.975	(0.563)	64079	189.367	55.3640
17 1,1-Dichloroethene	96	8.329	8.296	(0.669)	44696	194.574	56.8863
18 Acetone	43	8.487	8.464	(0.682)	50640	691.588	202.195

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MSD159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
19 Iodomethane	142	8.665	8.632	(0.696)	43766	188.978	55.2503
20 Carbon disulfide	76	8.783	8.750	(0.706)	177949	173.429	50.7043
24 Methylene Chloride	84	9.335	9.312	(0.750)	66638	202.686	59.2581
25 Acrylonitrile	53	9.789	9.766	(0.787)	215561	2252.21	658.465
28 trans-1,2-Dichloroethene	96	9.749	9.726	(0.784)	60299	188.715	55.1733
32 1,1-Dichloroethane	63	10.440	10.417	(0.839)	126854	193.472	56.5640
33 Vinyl acetate	43	10.450	10.436	(0.840)	148957	182.507	53.3583
35 2-butanone	43	11.199	11.176	(0.900)	102386	600.918	175.686
37 cis-1,2-Dichloroethene	96	11.219	11.196	(0.902)	73987	198.628	58.0716
41 Bromochloromethane	128	11.495	11.482	(0.924)	34005	219.954	64.3066
42 Chloroform	83	11.564	11.541	(0.929)	131033	214.996	62.8570
43 1,1,1-Trichloroethane	97	11.771	11.748	(0.946)	91091	197.874	57.8510
48 Carbon Tetrachloride	117	11.929	11.915	(0.959)	74103	179.787	52.5631
49 Benzene	78	12.156	12.142	(0.977)	256142	198.298	57.9751
50 1,2-Dichloroethane	62	12.215	12.192	(0.982)	99897	224.780	65.7175
51 Trichloroethene	130	12.787	12.773	(1.028)	63630	178.112	52.0734
54 1,2-Dichloropropane	63	13.862	13.848	(1.114)	21153	194.262	56.7952
56 Dibromomethane	174	13.142	13.119	(1.056)	46572	214.761	62.7882
57 Bromodichloromethane	83	13.240	13.217	(1.064)	90677	211.585	61.8597
58 cis-1,3-Dichloropropene	75	13.605	13.592	(1.094)	103804	199.828	58.4223(R)
59 4-Methyl-2-pentanone	43	13.674	13.661	(0.917)	223476	610.554	178.504
60 Toluene	92	13.862	13.848	(0.929)	137431	197.657	57.7877
62 trans-1,3-Dichloropropene	75	14.029	14.016	(0.941)	93639	214.156	62.6113
63 1,1,2-Trichloroethane	97	14.187	14.174	(0.951)	57004	229.246	67.0231
64 2-hexanone	43	14.296	14.282	(0.958)	148193	596.554	174.411
67 Tetrachloroethene	164	14.286	14.272	(0.958)	41542	157.469	46.0382(R)
68 Dibromochloromethane	129	14.493	14.479	(0.972)	71741	221.094	64.6398
69 1,2-Dibromoethane	107	14.611	14.588	(0.979)	60979	222.511	65.0541
71 Chlorobenzene	112	14.936	14.923	(1.001)	152302	187.824	54.9130
72 Ethylbenzene	106	14.956	14.943	(1.003)	66026	171.437	50.1219(R)
73 1,1,1,2-Tetrachloroethane	131	14.976	14.963	(1.004)	63279	205.001	59.9348
74 m,p-Xylene	106	15.035	15.022	(1.008)	170098	339.446	99.2417(R)
75 m,p-Xylene (part of total)	106	15.035	15.022	(1.008)	170098	339.446	99.2417(R)
76 o-Xylene	106	15.331	15.318	(1.028)	90648	189.374	55.3659(R)
77 o-Xylene (part of total)	106	15.331	15.318	(1.028)	90648	189.374	55.3659(R)
78 Styrene	104	15.341	15.327	(1.028)	144013	185.075	54.1090
79 Bromoform	173	15.538	15.525	(0.935)	43308	219.685	64.2278
81 1,1,2,2-Tetrachloroethane	83	15.794	15.781	(0.950)	77572	223.963	65.4786
82 trans-1,4-dichloro-2-butene	53	15.824	15.811	(1.061)	80595	877.858	256.654
83 1,2,3-Trichloropropane	110	15.863	15.850	(1.063)	19316	229.173	67.0019
95 1,4-Dichlorobenzene	146	16.642	16.629	(1.001)	95916	154.812	45.2613(R)
97 1,2-Dichlorobenzene	146	16.978	16.955	(1.021)	90766	169.296	49.4960
98 1,2-Dibromo-3-Chloropropane	157	17.658	17.645	(1.062)	11250	202.639	59.2443
M 104 Xylene (total)	106				260746	528.820	154.608(R)

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MSD159.d
Report Date: 13-Jan-2016 19:13

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011205-MSD159.d
Report Date: 13-Jan-2016 19:13

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011205-MSD159.d
Lab Smp Id: 6011205-MSD1 Client Smp ID: WS-4MSD
Inj Date : 12-JAN-2016 17:04
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011205-MSD1:JAO
Misc Info : WS-4MSD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 28 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGASOIL.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Preparation Information / Manual Integration Summary

Run Logs

COMPUCHEM a Division of Liberty Analytical Corp DATE 1/12/16 INITIAL TIME OF TUNE 1348 SHIFT/S(A) ✓ (B)____ (C)____

GC/MS VOLATILE RUN LOG TIME TUNE EXPIRES 0148 LINKER /METHOD____

COMPUCHEM LOGBOOK 11 NNN 33 (5972hp59) METHOD: (8260B) SOM01.2 (Circle one) or Other: 5 ppb

MAINTENANCE none

	CTKD	FILE NAME	RTKD	pH	Vial	DATE	TIME	Client ID	SDG#	INJ. VOL.*	DF+	CHEMIST	COMMENTS (ETC.)/ DISPOSITION
1		6A12005-TUN1		—	—	1/12/16	1348	BFBBD	—	2uL	—	JAO	LCD=SCD
2		-ICV1		—	—	/ /	1413	VSTD050BD	—	5mL	—		
3		6011205-BLK1		—	—	/ /	1451	VBLKBD	1601025	5.0	—		
4		-BLK1R		—	—	/ /	1522				—		
5		-BS1		—	—	/ /	1554	VLCSBD		5mL	—		
6		-MS1		—	C	/ /	1632	WS-4MS		4.90	—		
7		-MSD1		—	D	/ /	1704	WS-4MSD		5.03	—		
8		6A12005-IBL1		—	—	/ /	1742	VIBLKBD	—	5mL	—		
9		1601025-04		—	A	/ /	1814	WS-4	1601025	4.51	—		
10		-01		—	A	/ /	1846	WS-1		6.13	—		
11		-02		—	A	/ /	1917	WS-2		5.71	—		
12		-03		—	A	/ /	1949	WS-3		5.04	—		
13		-05		—	A	/ /	2021	WS-5		5.44	—		
14		-06		—	A	/ /	2053	WS-6		4.74	—		
15		-07		—	A	/ /	2124	WS-7		5.34	—		
16		-08		—	A	/ /	2156	WS-DUP		5.25	—		
17		6011208-BLK1		—	—	/ /	2228	VBLKBE	1601026	5 mL	—		
18		1601026-01 ~~-BLK~~		2	A	/ /	2306	TRIP BLANK		5mL	—		
19		6011208-BS1		JAO 1-12-16 —	JAO 1-12-16 —	/ /	2344	VLCSBE			—		
20		-BSD1		—	—	1/13/16	0016	VLCSDBE			—		
21						/ /							
22						/ /							
23						/ /							
24						/ /							

JAO 1-13-16

*On-column sample aliquot +Not applicable to soil matrix

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation

Tune (ID #7008) Lot No.: 5L21009 Calibration Group Code / Lot No.: 5K06032

Internal Standard Lot No.: 6A08015 Surrogate Lot No.: 5K05010

REVIEWED BY: [signature] Date 1-13-15

9/19/12: bm

12/30/2015

VOA Internal Chain of Custody Sheet

Dept: PM

Matrix Soil **Batch**: 6010804 **Status:** Batched **Analysis**: VOA-8260B 5PPB

Lab Id	Client Id	Received	Container	Preparation
1601025-01 A	WS-1	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-02 A	WS-2	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-03 A	WS-3	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-04 A	WS-4	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-05 A	WS-5	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-06 A	WS-6	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-07 A	WS-7	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-08 A	WS-DUP	01/08/16	01f_40ml VOA, Frozen	EPA 5035A
1601025-09 A	WS-BG	01/08/16	01f_40ml VOA, Frozen	EPA 5035A

Relinquished By	Date/Time	Received By	Date/Time
f.#6	1-12-16	JKO	1-12-16
JKO	1-12-16	f.#6	1-12-16

COMPUCHEM
a Division of Liberty Analytical

Logbook 11 O (4) 17

EnCore™ Preparation Log
-238 / -243 / -233

SDG: 151231 Prepared By: [illegible] Date: 12-31-15

	Prep Number	Lab ID	Date	Time	Weight of Jar (g) *	Weight of Jar + Sample (g)	Weight of Sample (g)
1	151231-01	1601025-07A	12-31-15	10:41	32.65	37.99	5.34
2	02	-07B			32.64	37.95	5.31
3	03	m -07C			30.75	36.01	5.26
4	04	1601025-03A			32.82	37.86	5.04
5	05	-03B			32.92	39.13	6.21
6	06	m -03C			31.15	36.77	5.62
7	07				32.84		
8	08				32.76		
9	09	m			31.20		
10	10				32.80		
11	11				32.65		
12	12	m			31.16		
13	13	1601025-04A			32.80	37.31	4.51
14	14	-04B			32.95	37.24	4.29
15	15	m -04G			31.50	35.81	4.31
16	16	-04C			32.75	37.69	4.90
17	17	-04D			32.74	37.77	5.03
18	18	m -04H			31.22	35.90	4.68
19	19	-04E			32.80	37.97	5.17
20	20	-04F			32.55	36.89	4.34
21	21	m -04I			31.23	36.30	5.07
22	22				32.87		
23	23				32.82		
24	24	m			31.09		
25	25	1601025-05A			32.85	38.29	5.44

Volume of Methanol Added: 5 mL

Lot Numbers of Preservatives: Sodium Bisulfate: N/A Methanol: SI17005

Reviewed By: Date:

*Weight of Jar for Sodium Bisulfate preserved Encores is the sum of the weights of the vial, preservative and stir bar
*Weight of Jar for Methanol preserved Encores is the sum of the weights of the vial and preservative

Note: The insertion of "N/A" for "Volume of Methanol Added" and "Lot Numbers of Preservatives: Sodium Bisulfate:_____ Methanol:_____" indicates a freezing option was employed, with or without the addition of water.

9/16/10:jad

2458

COMPUCHEM

a Division of Liberty Analytical

Logbook 11 O (4) 17

EnCore™ Preparation Log

-238 / -243 / -233

SDG: 151231 Prepared By: [illegible] Date: 10-31-15

	Prep Number	Lab ID	Date	Time	Weight of Jar (g) *	Weight of Jar + Sample (g)	Weight of Sample (g)
1	151231-26	1601025-05B	10-31-15	10:41	32.88	38.24	5.36
2	27	-05C			31.30	37.31	6.01
3	28				32.85		
4	29				32.76		
5	30				31.07		
6	31	1601025-06A			32.94	37.68	4.74
7	32	-06B			32.69	37.99	5.30
8	33	-06C			31.30	37.42	6.12
9	34				32.66		
10	35				32.64		
11	36				31.06		
12	37	1601025-01A			32.86	38.99	6.13
13	38	-01B			32.88	39.13	6.25
14	39	-01C			31.16	37.28	6.12
15	40	1601025-02A			33.02	38.73	5.71
16	41	-02B			32.69	38.32	5.63
17	42	-02C			31.43	37.94	6.51
18	43	1601025-08A			32.78	38.03	5.25
19	44				32.74	38.19	5.45
20	45				31.03	36.99	5.96
21							
22							
23							
24							
25							

Volume of Methanol Added: 5 mL

Lot Numbers of Preservatives: Sodium Bisulfate: [illegible] Methanol: SI A005

Reviewed By: Date:

*Weight of Jar for Sodium Bisulfate preserved Encores is the sum of the weights of the vial, preservative and stir bar

*Weight of Jar for Methanol preserved Encores is the sum of the weights of the vial and preservative

Note: The insertion of "N/A" for "Volume of Methanol Added" and "Lot Numbers of Preservatives: Sodium Bisulfate:_____ Methanol:_____" indicates a freezing option was employed, with or without the addition of water.

9/16/10:jad

2459

Manual Integration Report

Manual Integration Summary

Client: DRAPER ADEN ASSOCIATES
Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39
Work Order: 1601025
Case:
Sdg: 1601025

Analysis: VOA-8260B 5PPB
Sample Type: Cal Standard
Lab Id: 5L30001-CAL1
Client Id: VSTD005AB
Instrument: 5972hp59

Analyte	Type	M Flag
2-Butanone	TARGET	M
Acetone	TARGET	M
Bromoform	TARGET	M
Bromomethane	TARGET	M
Iodomethane	TARGET	M
Vinyl acetate	TARGET	M

Sample Total: 6

Analysis: VOA-8260B 5PPB
Sample Type: Cal Standard
Lab Id: 5L30001-CAL2
Client Id: VSTD010AB
Instrument: 5972hp59

Analyte	Type	M Flag
Acetone	TARGET	M
Bromomethane	TARGET	M
Iodomethane	TARGET	M
Vinyl acetate	TARGET	M

Sample Total: 4

Analysis: VOA-8260B 5PPB
Sample Type: Cal Standard
Lab Id: 5L30001-CAL3
Client Id: VSTD020AB
Instrument: 5972hp59

Analyte	Type	M Flag
Bromomethane	TARGET	M
Iodomethane	TARGET	M

Sample Total: 2

Total Manual Integrations: 12

1/21/2016

JANET FRAZIER

DRAPER ADEN ASSOCIATES

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

WorkOrder: 1601026

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER ADEN ASSOCIATES **Work:** 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39 **Sdg:** 1601026

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1601026-01	TRIP BLANK	Water	01/07/2016 00:00	01/08/2016 09:06

ANALYSES DATA PACKAGE COVER PAGE

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Laboratory: Liberty Analytical

SDG: 1601026

Client Sample Id:	Analysis:	Lab Sample Id:
TRIP BLANK	SW 8260B	1601026-01

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Ken Grzybowski

Date: 01/20/2016 Title: President

Liberty Analytical

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

ACCREDITED IN ACCORDANCE WITH nelac

Liberty Analytical

I. SAMPLE DATA PACKAGE

GC/MS by SW-846

The Sample Data Package shall contain data for all samples in one Work Order/Sample Delivery Group (SDG), as follows:

A. SDG Narrative

B. Chain of Custody Records

C. Sample Preparation and Analysis Holding Time Data
(HOLDING TIME SUMMARY)

D. Surrogate Recovery Results
(SURROGATE STANDARD RECOVERY)

E. Laboratory Control Sample Results
(LCS/LCS DUPLICATE RECOVERY)

F. Matrix Spike Results
(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

G. Batch Summary
(PREPARATION BATCH SUMMARY)

H. Analysis Sequence Summary
(ANALYSIS SEQUENCE SUMMARY)

I. Instrument Performance Check
(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

J. Internal Standard Results
(INTERNAL STANDARD AREA AND RT SUMMARY)

K. Target Compound Results – Forms and Raw Data
(ANALYSIS DATA SHEET)

L. Initial Calibration Data – Forms and Raw Data
(INITIAL CALIBRATION DATA)

M. Continuing Calibration Data – Forms and Raw Data
(CONTINUING CALIBRATION CHECK)

N. BFB / DFTPP or FC43 - Raw Data

O. Blank Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

P. Laboratory Control Sample Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

Q. Matrix Spike Data – Forms and Raw Data
(ANALYSIS DATA SHEET)

R. GPC Data (if applicable)

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Info / Manual Integration Summary

A. SDG Narrative

Liberty Analytical

501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE

SDG # 1601026
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: TRIP BLANK.

The 1 aqueous sample listed above was received intact, properly refrigerated at 0.3°C, with proper documentation, in sealed shipping containers, on January 08. 2016. The sample was scheduled for the requested analysis of the volatile fraction. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1601026 are included in the sample data sections

Analysis holding time requirements were met for the analysis of all of the sample.

The pH value of the sample is equal to 1.

There were no volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in 1the sample.

All of the system monitoring compounds met recovery criteria in the analysis of the sample.

All of the internal standards met response and retention time criteria in the analysis of the sample.

Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

Manual quantitations were performed on one or more of the process files associated with this SDG.

The associated method blanks met all quality control criteria.

The associated Laboratory Control Samples (LCS) met all accuracy criteria.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Kenneth Grzybowski
President
January 20, 2016

GC and GC/MS Column and Trap Specifications Table

Columns Utilized	Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
	COLUMNS				
	GC Laboratory				
DRO/ORO	Restek	RTX-5	0.53	1.0	30
	Restek	RTX-SMS	0.53	1.0	30
√	Restek	clpest	0.32	0.5	30
√	Restek	clpest2	0.32	0.42	30
	J&W	DB-210	0.53	1.0	30
RSK	J&W	GS-GASPRO	0.32	N/A	30
	GC Volatiles Laboratory				
GRO	Restek	RTX-Volatiles	0.53	2.0	30
	GC/MS Volatiles Laboratory				
	Restek	RTX-VMS	0.18	1.0	20
√	Supelco	SPB-624	0.32	1.8	60
	Supelco	SPB-624	0.53	3.0	75
	Phenomonex	ZB-624	0.32	1.8	60
	GC/MS Semivolatiles Laboratory				
√	Restek	RTX-5Sil MS	0.32	0.25	30
	HPLC Laboratory				
PAH	Supelco	Supelcosil LC-PAH	4.6	5.0	15 cm
PAH	Supelco	Discovery RP Amide C16	4.6	5.0	25 cm
EXP	Restek	Pinnacle Cyano	4.6	5.0	25 cm
EXP	Restek	Allure C18	4.6	5.0	25 cm
	TRAPS				
	GC and GC/MS Volatiles Laboratory				
	Supelco J (BETXTRAP™)	* 7.7 cm Carbopack C			
		* 1.2 cm Carbopack B			
√	Supelco K (Vocarb3000)	* 10 cm of Carbopack B (Graphitized Carbons)			
		* 6 cm of Carboxen 1000 (Carbon molecular sieves)			
		* 1 cm of Carboxen 1001 (Carbon molecular sieves)			

Rev. 30

This table contains the GC columns (and volatile organic trap) used for the analysis of volatiles, semivolatiles, pesticides, and Aroclors by the requested analytical methods. Please see the SDG Narrative(s) for the specific fraction(s) relative to this SDG.
Note: This table also contains HPLC columns.

Liberty Analytical

Liberty Analytical's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is Liberty Analytical's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.). This policy is also applicable to non-CLP data packages.

Revision 7 (01/12/2011)

Liberty Analytical

Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC/HPLC chemists. An Extracted Ion Current Profile (EICP) or a GC/HPLC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC/HPLC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak. The most common reasons for performing manual integrations/editing are: the compound was not found by the automatic integration routine, the compound was incorrectly integrated by the automatic integration routine, and the co-eluting compounds were incorrectly integrated by the automatic integration routine.

H - Denotes that the data reviewer, GC/MS operator, or GC/HPLC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate GC/MS library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

These codes will appear in the GC/MS and GC/HPLC raw data.

Revision 8 (01/29/2011)

Liberty Analytical

ORGANIC DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on the appropriate reporting form for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 µg/L, but a concentration of 3 µg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥ 85%), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the lower of the two values is reported and flagged with a P on the reporting form. When the RPD is equal to or less than 40%, our policy is to also report the lower of the two values, although the choice could be a project specific issue. These SW-846 policies are consistent with Method 8000C. If Method 8000B is required, the higher of the two values is reported. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a concentration greater than the upper level of the calibration range, the sample or extract will be diluted and reanalyzed. All such compounds with a concentration greater than the upper level of the calibration range will have the result flagged with an E on the appropriate reporting form for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration of an analyte exceeds the upper calibration range, the DL suffix is appended to the sample number on the appropriate reporting form for the more diluted sample, and **all** reported concentrations on that form are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate reporting forms are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses <u>are not combined</u> on a single reporting form.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.2 SOW document, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an “S” flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor. The “S” flag is not utilized for non CLP analyses.

* This flag is applied to a target analyte when any QC acceptance criterion has not been met for that analyte. The flag appears on the reporting form of the associated QC analysis.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Chain of Custody Records

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the Work Order/SDG.

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp., Liberty Analytical 501 Madison Ave. Cary, NC 27513 (800) 833 5097 Fax (919) 379-4050 Attn: Cathy Dover

TPK 1/7/16

Client: Watauga County, NC **Attn:** Mr. J.V. Potter **Address:** 336 Landfill Road, Boone, NC 28607 **Phone:** (828) 264-5305 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** Watauga County Landfill **Location:** Watauga County, NC **Event:** 2016 Soil Sampling **DAA JN:** 6520-39 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** ~~BATCH~~ ~~Sample Collection for Project Complete?~~ YES **Carrier:** UPS **Tracking Number:** 1Z2373010197512129

Box 1: Matrix
SW Surface Water, GW Groundwater, L Leachate, S Soil, T Trip Blank, E Equipment Blank, P Product, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (Specify), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, AG Amber Glass, V VOA, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

GENERAL NOTES:
1. See attached Target Analyte Lists for 8260 and Inorganic Parameters.
2. Report soil results based on dry weight.
3. Report LOQ/MDL + estimated results.
4. Report results in mg/kg.
5. Reporting limits to meet NC P5RG limits as specified in e-mail dated 11/27/2015 (attached).

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Inorganics (Total) Methods 6010/6020	VOAs 5035A/8260C (MeOH Preserved)	VOAs 5035A/8260C w/ Ultra Pure Blank Water (DI Water)	% Moisture	8260C - 5 mL purge (See attached TA list)	COD SM5220D	BOD SM 5210B	Total Phosphorous - Method 365.4	Sample Depth	reg. SOIL	TKP	BOD COD SUB
Box 4 - Sample Type					G	G	G	G	G	G	G	G				
Box 3 - Filtered/Unfiltered					-	-	-	-	U	-	-	-				
Required pH of Sample					-	-	-	-	<2	-	-	-				
Box 2 - Preservative					H	G	G	H	A	H	H	H				
Box 5 - Sample Container Type					1-4oz CG	1-40ml V	2-40ml V	1-4oz CG	3-40ml V	1-8 oz CG						
WS-1	1/7	1200	S	5	X	X	X	X					Sample Depth: 1-3"	1601025-01	—	—
WS-2	1/7	1220	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-02	1601030-01	1601031-01
WS-3	1/7	1255	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-03	↓ -02	↓ -02
WS-4	1/7	1320	S	5	X	X	X	X					Sample Depth: 6-9"	-04	—	—
WS-5	1/7	1350	S	6	X	X	X	X					Sample Depth: 2-5"	-05	1601030-03	1601031-03
WS-6	1/7	1410	S	5	X	X	X	X					Sample Depth: 3-6"	-06	—	—
WS-7	1/7	1435	S	5	X	X	X	X					Sample Depth: 2-5"	-07	—	—
~~WS-8~~			~~S~~		~~X~~	~~X~~	~~X~~	~~X~~					~~Sample Depth:~~	—	—	—
WS-DUP	1/7	1230	S	5	X	X	X	X					Sample Depth: 3-6"	-08	—	—
WS-BG	1/7	1130	S	2	X			X					Sample Depth: 2-4"	-09	—	—
Trip Blank	1/7		T	3					X							
WS-4 MS	1/7	1320	S	4	X	X	X							1601025-04		
WS-4 MSD	1/7	1320	S	4	X	X	X							↓ -04		

Laboratory Provided 1601026-01

Clients Special Instructions:

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.3°C Received on Ice ✓ Yes ____ No
Describe problems, if any:

* received 8oz jar for WS-5, but not noted on COC for BOD, COD & Total P — per Karen this sample needs these parameters (08) 1/8/16

Sampler Name (Print): Tyler Emery	Date: 1/7/16	#1 Relinquished by (Signature): Tyler Emery	Date: 1/7/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature): Cathy Dover	Date: 1/8/16	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name: CompuChem / LIBERTY	Time: 0906	Company Name:	Time:	

TK 1/5/2016 page 1 of 4 KW 1-5-16

Watauga '2016 Soil Sampling Event
JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Analyte List

Common name	CAS RN	
Antimony	(Total)	Inorganics Soil only
Arsenic	(Total)	
Barium	(Total)	
Beryllium	(Total)	
Cadmium	(Total)	
Chromium	(Total)	
Cobalt	(Total)	
Copper	(Total)	
Lead	(Total)	
Nickel	(Total)	
Selenium	(Total)	
Silver	(Total)	
Thallium	(Total)	
Vanadium	(Total)	
Zinc	(Total)	
Acetone	67-64-1	8260 Soil and trip blank
Acrylonitrile	107-13-1	
Benzene	71-43-2	
Bromochloromethane	74-97-5	
Bromodichloromethane	75-27-4	
Bromoform; Tribromomethane	75-25-2	
Carbon disulfide	75-15-0	
Carbon tetrachloride	56-23-5	
Chlorobenzene	108-90-7	
Chloroethane; Ethyl chloride	75-00-3	
Chloroform; Trichloromethane	67-66-3	
Dibromochloromethane; Chlorodibromomethane	124-48-1	
1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	
trans-1,4-Dichloro-2-butene	110-57-6	
1,1-Dichloroethane; Ethylidene chloride	75-34-3	
1,2-Dichloroethane; Ethlyene dichloride	107-06-2	
1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	
1,2-Dichlorpropane; Propylene dichloride	78-87-5	
cis-1,3-Dichlorpropene	10061-01-5	
trans-1,3-Dichlorpropene	10061-02-6	
Ethylbenzene	100-41-4	
2-hexanone; Methyl butyl ketone	591-78-6	
Methyl bromide; Bromomethane	74-83-9	
Methyl chloride; Chloromethane	74-87-3	
Methylene bromide Dibromomethane	74-95-3	
Methylene chloride; Dichloromethane	75-09-2	
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	
Methyl iodide; Iodomethane	74-88-4	
4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	
Styrene	100-42-5	
1,1,1,2-Tetrachloroethane	630-20-6	
1,1,2,2-Tetrachloroethane	79-34-5	
Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	
Toluene	108-88-3	
1,1,1-Trochlorethane; Methylchloroform	71-55-6	
1,1,2-Trichloroethane	79-00-5	
Trichloroethylene; Trichlorethene	79-01-6	
Trichlorofluoromethane; CFC-11	75-69-4	
1,2,3-Trichloropropane	96-18-4	
Vinyl acetate	108-05-4	
Vinyl chloride	75-01-4	
Xylenes	1330-20-7	

See page 4 of 4 for reporting limits.

Watauga 2016 Soil Sampling Event
JN 6520-39
1-5-16 KWS

Karen Weber

From: Cathy Dover <cdover@compuchemlabs.com>
Sent: Friday, November 27, 2015 2:27 PM
To: Karen Weber
Cc: Janet Frazier; Kathy Olsen
Subject: RE: Watauga Upcoming Soil Sampling - Special Project
Attachments: APP.I LIST AGAINST PSRG LIMITS.pdf

Hi Karen,

I went through all of our reporting limits for the APP. I VOA compounds and metals elements and there are few we would need to use the MDL to meet the lowest PSRG. We can meet all of the metals by using 6020A for the prep/analysis. There are two VOA compounds (1,2,3-trichloropropane & vinyl chloride) that have extremely low PSRG limits and our MDL is higher...

Chromium (7440-47-3) does not appear on the PSRG limit table.

I have attached the APP.I compound/element list with the RL/MDL info. Let me know if you need anything else.

Have a great weekend!

Cathy

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Karen Weber [mailto:KWeber@daa.com]
Sent: Tuesday, November 24, 2015 1:51 PM
To: Cathy Dover
Cc: Janet Frazier; Kathy Olsen
Subject: Watauga Upcoming Soil Sampling - Special Project

Watauga 2016 Soil Sampling Event JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Lab reporting limits + PSRG review

	Common name	CAS RN	RL mg/kg 6020A	RL mg/kg 6010C (Metals)	mg/kg PSRG/Low	6020A MDL mg/kg
*	Antimony	(Total)	1	3	0.9	0.115
*	Arsenic	(Total)	1	1	0.68	0.269
	Barium	(Total)	5	20		
	Beryllium	(Total)	0.5	0.5		
	Cadmium	(Total)	0.5	0.5		
7440-47-3 ←	Chromium	(Total)	6	1		
	Cobalt	(Total)	0.5	2		
	Copper	(Total)	1	0.5		
	Lead	(Total)	0.5	1		
	Nickel	(Total)	0.5	1		
	Selenium	(Total)	2.5	1		
	Silver	(Total)	0.5	0.5		
7440-28-0 *	Thallium	(Total)	0.5	3	0.28	0.0164
	Vanadium	(Total)	2.5	2		
	Zinc	(Total)	2.5	3		

FOR VOA: RL/PSRG/MDL (in mg/kg) ✓ if RL does not meet

	Common name	CAS RN	RL/PSRG/MDL (mg/kg)
	Acetone	67-64-1	0.0125
	Acrylonitrile	107-13-1	0.050
	Benzene	71-43-2	0.005
	Bromochloromethane	74-97-5	0.005
	Bromodichloromethane	75-27-4	0.005
	Bromoform; Tribromomethane	75-25-2	0.005
	Carbon disulfide	75-15-0	0.005
	Carbon tetrachloride	56-23-5	0.005
	Chlorobenzene	108-90-7	0.005
	Chloroethane; Ethyl chloride	75-00-3	0.005
	Chloroform; Trichloromethane	67-66-3	0.005
	Dibromochloromethane; Chlorodibromomethane	124-48-1	0.005
	1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	0.005
	1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	0.005
	o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	0.005
	p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	0.005
*	trans-1,4-Dichloro-2-butene	110-57-6	0.020 / 0.0084 / MDL → 0.0018
	1,1-Dichloroethane; Ethylidene chloride	75-34-3	0.005
*	1,2-Dichloroethane; Ethlyene dichloride	107-06-2	0.005 / 0.002 / MDL → 0.00027
	1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	0.005
	cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	0.005
	trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	0.005
*	1,2-Dichlorpropane; Propylene dichloride	78-87-5	0.005 / 0.0032 / MDL → 0.00063
*	cis-1,3-Dichlorpropene	10061-01-5	0.005 / 0.0023 / MDL → 0.00039
*	trans-1,3-Dichlorpropene	10061-02-6	0.005 / 0.0023 / MDL → 0.00041
	Ethylbenzene	100-41-4	0.005
	2-hexanone; Methyl butyl ketone	591-78-6	0.0125
	Methyl bromide; Bromomethane	74-83-9	0.005
	Methyl chloride; Chloromethane	74-87-3	0.005
	Methylene bromide Dibromomethane	74-95-3	0.005
	Methylene chloride; Dichloromethane	75-09-2	0.005
	Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	0.0125
	Methyl iodide; Iodomethane	74-88-4	0.005
	4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	0.0125
	Styrene	100-42-5	0.005
	1,1,1,2-Tetrachloroethane	630-20-6	0.005
*	1,1,2,2-Tetrachloroethane	79-34-5	0.005 / 0.0012 / MDL → 0.00037
	Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	0.005
	Toluene	108-88-3	0.005
	1,1,1-Trichlorethane; Methylchloroform	71-55-6	0.005
*	1,1,2-Trichloroethane	79-00-5	0.005 / 0.0032 / MDL → 0.00072
	Trichloroethylene; Trichlorethene	79-01-6	0.005
	Trichlorofluoromethane; CFC-11	75-69-4	0.005
**	1,2,3-Trichloropropane	96-18-4	0.005 / 0.000032 / MDL → 0.00091
	Vinyl acetate	108-05-4	0.005
**	Vinyl chloride	75-01-4	0.005 / 0.00019 / MDL → 0.00042
	Xylenes	1330-20-7	0.005

* meets using MDL
** MDL ↑ than PSRG (lowest)

page 4 of 4

WORK ORDER

Printed: 1/20/2016 2:01:44PM

1601026

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601026** **CASE:**	**Status:**	**Reported**

Report To:

DRAPER ADEN ASSOCIATES
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540) 552-0444
Fax: -

Invoice To:

WATAUGA COUNTY, NC
MR. J.V. POLTER
842 WESTKING STREET/COURTHOUSE, SUITE 1
BOONE, NC 28607
Phone :-
Fax: -

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/08/2016 19:19

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?: **NO** Spike Level: **FULL Spike**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**

LCS/LCSD*VOA TRIP BLANK 8260B=WATAUGASOIL.SUB*NEED LEVEL 2 & LEVEL 4

Analysis	Due	TAT	Expires	Received	Comments
1601026-01 TRIP BLANK [Water] Sampled 01/07/2016 00:00 Eastern					
VOA-8260B 5PPB	01/28/2016 16:00	20	01/21/2016 00:00	01/08/2016 09:06	SubList=VOA - WATAUGASOIL (01-08-16)

C. Sample Preparation and Analysis Holding Time Data

(HOLDING TIME SUMMARY)

Sample collection, receipt, preparation and analysis dates with method holding time requirements.

HOLDING TIME SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
TRIP BLANK	01/07/16	01/08/16	01/12/16	N/A	14	01/12/16	6.0	14	

Liberty Analytical

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D. Surrogate Recovery Results

(SURROGATE STANDARD RECOVERY)

SURROGATE STANDARD RECOVERY

SW 8260B

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

SDG: 1601026 Instrument: 5972hp59

Sequence: 6A12005 Calibration: 5123005

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	Q
Blank (6011208-BLK1) ug/L				
Lab File ID: 6011208-BLK159.d	Analyzed: 01/12/16 22:28			
Dibromofluoromethane	50.00	100	66 - 128	
1,2-Dichloroethane-d4	50.00	112	55 - 147	
Toluene-d8	50.00	103	50 - 150	
Bromofluorobenzene	50.00	122	70 - 132	
TRIP BLANK (1601026-01) ug/L				
Lab File ID: 1601026-0159.d	Analyzed: 01/12/16 23:06			
Dibromofluoromethane	50.00	102	66 - 128	
1,2-Dichloroethane-d4	50.00	114	55 - 147	
Toluene-d8	50.00	104	50 - 150	
Bromofluorobenzene	50.00	114	70 - 132	
LCS (6011208-BS1) ug/L				
Lab File ID: 6011208-BS159.d	Analyzed: 01/12/16 23:44			
Dibromofluoromethane	50.00	100	66 - 128	
1,2-Dichloroethane-d4	50.00	101	55 - 147	
Toluene-d8	50.00	98	50 - 150	
Bromofluorobenzene	50.00	98	70 - 132	
LCS Dup (6011208-BSD1) ug/L				
Lab File ID: 6011208-BSD159.d	Analyzed: 01/13/16 00:16			
Dibromofluoromethane	50.00	105	66 - 128	
1,2-Dichloroethane-d4	50.00	106	55 - 147	
Toluene-d8	50.00	106	50 - 150	
Bromofluorobenzene	50.00	105	70 - 132	

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E. Laboratory Control Sample Results

(LCS/LCS DUPLICATE RECOVERY)

LCS recovery or LCS/LCSD recovery with relative percent difference, and quality control acceptance criteria.

LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011208-BS1 Matrix: Water Client ID: VLCSBE Batch: 6011208

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
Chloromethane	50.00	49.92	100		51 - 150
Vinyl chloride	50.00	56.32	113		54 - 136
Bromomethane	50.00	47.55	95		59 - 150
Chloroethane	50.00	58.28	117		55 - 150
Trichlorofluoromethane	50.00	54.52	109		55 - 150
1,1-Dichloroethene	50.00	53.22	106		72 - 129
Acetone	125.0	136.3	109		50 - 150
Iodomethane	50.00	41.97	84		50 - 150
Carbon disulfide	50.00	43.44	87		66 - 146
Methylene chloride	50.00	46.90	94		72 - 123
Acrylonitrile	500.0	496.0	99		50 - 150
trans-1,2-Dichloroethene	50.00	46.90	94		39 - 130
1,1-Dichloroethane	50.00	46.30	93		70 - 126
Vinyl acetate	50.00	41.06	82		50 - 150
cis-1,2-Dichloroethene	50.00	47.89	96		70 - 131
2-Butanone	125.0	119.3	95		64 - 127
Bromochloromethane	50.00	51.13	102		50 - 150
Chloroform	50.00	51.56	103		65 - 133
1,1,1-Trichloroethane	50.00	49.57	99		69 - 134
Carbon tetrachloride	50.00	50.30	101		70 - 139
1,2-Dichloroethane	50.00	52.37	105		67 - 133
Benzene	50.00	48.33	97		66 - 130
Trichloroethene	50.00	42.19	84		72 - 130
1,2-Dichloropropane	50.00	49.88	100		73 - 123
Dibromomethane	50.00	50.35	101		50 - 150
Bromodichloromethane	50.00	51.50	103		71 - 126
cis-1,3-Dichloropropene	50.00	47.38	95		63 - 136

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011208-BS1 Matrix: Water Client ID: VLCSBE Batch: 6011208

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	Q	QC LIMITS REC.
4-Methyl-2-pentanone	125.0	130.0	104		51 - 141
Toluene	50.00	48.85	98		61 - 131
trans-1,3-Dichloropropene	50.00	49.70	99		60 - 140
1,1,2-Trichloroethane	50.00	54.52	109		63 - 131
Tetrachloroethene	50.00	49.55	99		78 - 136
2-Hexanone	125.0	136.0	109		50 - 143
Dibromochloromethane	50.00	51.82	104		70 - 129
1,2-Dibromoethane	50.00	52.73	105		61 - 137
Chlorobenzene	50.00	50.05	100		76 - 121
1,1,1,2-Tetrachloroethane	50.00	50.45	101		50 - 150
Ethylbenzene	50.00	49.26	99		68 - 131
Styrene	50.00	51.35	103		73 - 127
Bromoform	50.00	50.68	101		66 - 133
1,1,2,2-Tetrachloroethane	50.00	52.54	105		63 - 135
1,2,3-Trichloropropane	50.00	54.44	109		50 - 150
trans-1,4-Dichloro-2-butene	200.0	194.7	97		50 - 150
1,4-Dichlorobenzene	50.00	46.36	93		79 - 116
1,2-Dichlorobenzene	50.00	48.82	98		62 - 143
1,2-Dibromo-3-chloropropane	50.00	49.41	99		57 - 133

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011208-BSD1 Matrix: Water Client ID: VLCSDBE Batch: 6011208

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS		
					RPD	Q	REC.
Chloromethane	50.00	54.36	109	9	25		51 - 150
Vinyl chloride	50.00	57.20	114	2	25		54 - 136
Bromomethane	50.00	51.03	102	7	25		59 - 150
Chloroethane	50.00	53.95	108	8	25		55 - 150
Trichlorofluoromethane	50.00	54.17	108	0.7	25		55 - 150
1,1-Dichloroethene	50.00	51.12	102	4	14		72 - 129
Acetone	125.0	130.7	105	4	25		50 - 150
Iodomethane	50.00	36.64	73	14	25		50 - 150
Carbon disulfide	50.00	46.22	92	6	25		66 - 146
Methylene chloride	50.00	48.85	98	4	25		72 - 123
Acrylonitrile	500.0	494.2	99	0.4	25		50 - 150
trans-1,2-Dichloroethene	50.00	47.70	95	2	25		39 - 130
1,1-Dichloroethane	50.00	49.65	99	7	25		70 - 126
Vinyl acetate	50.00	51.87	104	23	25		50 - 150
cis-1,2-Dichloroethene	50.00	50.91	102	6	25		70 - 131
2-Butanone	125.0	114.5	92	4	25		64 - 127
Bromochloromethane	50.00	49.96	100	2	25		50 - 150
Chloroform	50.00	52.46	105	2	25		65 - 133
1,1,1-Trichloroethane	50.00	51.44	103	4	25		69 - 134
Carbon tetrachloride	50.00	53.10	106	5	25		70 - 139
1,2-Dichloroethane	50.00	53.99	108	3	25		67 - 133
Benzene	50.00	50.90	102	5	14		66 - 130
Trichloroethene	50.00	49.10	98	15 *	14		72 - 130
1,2-Dichloropropane	50.00	54.23	108	8	25		73 - 123
Dibromomethane	50.00	52.11	104	3	25		50 - 150
Bromodichloromethane	50.00	54.33	109	5	25		71 - 126
cis-1,3-Dichloropropene	50.00	49.57	99	5	25		63 - 136

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LCS / LCS DUPLICATE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011208-BSD1 Matrix: Water Client ID: VLCSDBE Batch: 6011208

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS		
					RPD	Q	REC.
4-Methyl-2-pentanone	125.0	129.9	104	0.1	25		51 - 141
Toluene	50.00	53.13	106	8	14		61 - 131
trans-1,3-Dichloropropene	50.00	53.00	106	6	25		60 - 140
1,1,2-Trichloroethane	50.00	57.28	115	5	25		63 - 131
Tetrachloroethene	50.00	51.50	103	4	25		78 - 136
2-Hexanone	125.0	134.3	107	1	25		50 - 143
Dibromochloromethane	50.00	54.67	109	5	25		70 - 129
1,2-Dibromoethane	50.00	54.57	109	3	25		61 - 137
Chlorobenzene	50.00	48.94	98	2	14		76 - 121
1,1,1,2-Tetrachloroethane	50.00	53.62	107	6	25		50 - 150
Ethylbenzene	50.00	46.75	93	5	25		68 - 131
Styrene	50.00	54.59	109	6	25		73 - 127
Bromoform	50.00	51.94	104	2	25		66 - 133
1,1,2,2-Tetrachloroethane	50.00	52.25	104	0.6	25		63 - 135
1,2,3-Trichloropropane	50.00	56.65	113	4	25		50 - 150
trans-1,4-Dichloro-2-butene	200.0	196.1	98	0.7	25		50 - 150
1,4-Dichlorobenzene	50.00	46.20	92	0.3	25		79 - 116
1,2-Dichlorobenzene	50.00	49.25	99	0.9	25		62 - 143
1,2-Dibromo-3-chloropropane	50.00	48.86	98	1	25		57 - 133

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G. Batch Summary

(PREPARATION BATCH SUMMARY)

Client Sample IDs, cross-referenced with Lab Sample IDs, with sample preparation details.

PREPARATION BATCH SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Batch: 6011208 Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (mL)	FINAL VOL/WT (mL)
TRIP BLANK	1601026-01	01/12/16 22:28	5.00	5.00
VBLKBE	6011208-BLK1	01/12/16 22:28	5.00	5.00
VLCSBE	6011208-BS1	01/12/16 22:28	5.00	5.00
VLCSDBE	6011208-BSD1	01/12/16 22:28	5.00	5.00

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H. Analysis Sequence Summary

(ANALYSIS SEQUENCE SUMMARY)

ANALYSIS SEQUENCE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 5L30001 Calibration: 5123005 Instrument: 5972hp59

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
BFBAB	5L30001-TUN1	5L30001-TUN159.d	12/29/15 17:04:00
VSTD010AB	5L30001-CAL2	5L30001-CAL259.d	12/29/15 17:28:00
VSTD005AB	5L30001-CAL1	5L30001-CAL159.d	12/29/15 18:00:00
VSTD020AB	5L30001-CAL3	5L30001-CAL359.d	12/29/15 18:32:00
VSTD200AB	5L30001-CAL6	5L30001-CAL659.d	12/29/15 19:04:00
VSTD100AB	5L30001-CAL5	5L30001-CAL559.d	12/29/15 19:36:00
VSTD050AB	5L30001-CAL4	5L30001-CAL459.d	12/29/15 20:07:00
VSTD050AB	5L30001-SCV1	5L30001-SCV159.d	12/29/15 21:11:00

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ANALYSIS SEQUENCE SUMMARY

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
BFBBD	6A12005-TUN1	6A12005-TUN159.d	01/12/16 13:48:00
VSTD050BD	6A12005-ICV1	6A12005-ICV159.d	01/12/16 14:13:00
VBLKBE	6011208-BLK1	6011208-BLK159.d	01/12/16 22:28:00
TRIP BLANK	1601026-01	1601026-0159.d	01/12/16 23:06:00
VLCSBE	6011208-BS1	6011208-BS159.d	01/12/16 23:44:00
VLCSDBE	6011208-BSD1	6011208-BSD159.d	01/13/16 00:16:00

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I. Instrument Performance Check

(MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK)

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601026
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Lab File ID:	5L30001-TUN159.d	Injection Date:	12/29/15
Instrument ID:	5972hp59	Injection Time:	17:04
Sequence:	5L30001	Lab Sample ID:	5L30001-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	22.8	PASS
75	30 - 60% of 95	48.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.08	PASS
173	Less than 2% of 174	0	PASS
174	(Greater than 50% of 95)	92.1	PASS
175	5 - 9% of 174	7.35	PASS
176	(Greater than 95% but less then 101%)	96.3	PASS
177	5 - 9% of 176	6.5	PASS

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MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601026
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Lab File ID:	6A12005-TUN159.d	Injection Date:	01/12/16
Instrument ID:	5972hp59	Injection Time:	13:48
Sequence:	6A12005	Lab Sample ID:	6A12005-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	24.1	PASS
75	30 - 60% of 95	48.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.96	PASS
173	Less than 2% of 174	0	PASS
174	(Greater than 50% of 95)	89.6	PASS
175	5 - 9% of 174	7.29	PASS
176	(Greater than 95% but less then 101%)	96.7	PASS
177	5 - 9% of 176	6.42	PASS

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J. Internal Standard Results

(INTERNAL STANDARD AREA AND RT SUMMARY)

INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601026
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Sequence:	5L30001	Instrument:	5972hp59
		Calibration:	5123005

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (5L30001-SCV1)			Lab File ID: 5L30001-SCV159.d			Analyzed: 12/29/15 21:11			
Fluorobenzene	374232	12.423	376208	12.418	99	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5	279223	14.898	289175	14.894	97	50 - 200	0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	141207	16.604	138667	16.6	102	50 - 200	0.0040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW 8260B

Laboratory:	Liberty Analytical	SDG:	1601026
Client:	DRAPER ADEN ASSOCIATES	Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-3
Sequence:	6A12005	Instrument:	5972hp59
		Calibration:	5123005

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (6A12005-ICV1)			Lab File ID: 6A12005-ICV159.d			Analyzed: 01/12/16 14:13			
Fluorobenzene	391920	12.438	376208	12.418	104	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	286476	14.913	289175	14.894	99	50 - 200	0.0190	+/-0.50	
1,4-Dichlorobenzene-d4	133856	16.619	138667	16.6	97	50 - 200	0.0190	+/-0.50	
Blank (6011208-BLK1)			Lab File ID: 6011208-BLK159.d			Analyzed: 01/12/16 22:28			
Fluorobenzene	331935	12.436	391920	12.438	85	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5	237643	14.902	286476	14.913	83	50 - 200	-0.0110	+/-0.50	
1,4-Dichlorobenzene-d4	95457	16.617	133856	16.619	71	50 - 200	-0.0020	+/-0.50	
TRIP BLANK (1601026-01)			Lab File ID: 1601026-0159.d			Analyzed: 01/12/16 23:06			
Fluorobenzene	325269	12.428	391920	12.438	83	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5	233168	14.903	286476	14.913	81	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	97519	16.619	133856	16.619	73	50 - 200	0.0000	+/-0.50	
LCS (6011208-BS1)			Lab File ID: 6011208-BS159.d			Analyzed: 01/12/16 23:44			
Fluorobenzene	348406	12.427	391920	12.438	89	50 - 200	-0.0110	+/-0.50	
Chlorobenzene-d5	260313	14.903	286476	14.913	91	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	126246	16.609	133856	16.619	94	50 - 200	-0.0100	+/-0.50	
LCS Dup (6011208-BSD1)			Lab File ID: 6011208-BSD159.d			Analyzed: 01/13/16 00:16			
Fluorobenzene	340437	12.433	391920	12.438	87	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	247036	14.898	286476	14.913	86	50 - 200	-0.0150	+/-0.50	
1,4-Dichlorobenzene-d4	123995	16.614	133856	16.619	93	50 - 200	-0.0050	+/-0.50	

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K. Target Compound Results

(ANALYSIS DATA SHEETS)

Analysis Data Sheets (ADS), Tentatively Identified Compounds (TICs), and Surrogate Recovery Results

Sample data shall be arranged in packets with the Analysis Data Sheet, followed by the raw data for volatile or semivolatile samples. These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers.

a. Target Analyte Results (ANALYSIS DATA SHEET)

Tabulated results (identification and quantitation) and Tentatively Identified Compounds (TICs) shall be included.

b. Reconstructed Ion Chromatograms (RICs)

Include for each sample or sample extract, including dilutions and reanalyses. The RIC shall contain the following header information: Client Sample ID Number, date and time of analysis, instrument ID, Lab file ID, and analyst ID.

d. Quantitation Report for target analytes and TICs.

Include a printout of the Extracted Ion Current Profile (EICP) for all manual changes to all compounds, internal standards, and surrogate compounds.

e. Copies of raw spectra and copies of background-subtracted mass spectra of target analytes plus TICs identified in the sample.

- The spectra shall include the following information: Client Sample ID number, Lab file ID, date and time of analysis, and instrument ID.
- The compound name must be clearly marked.

ANALYSIS DATA SHEET

SW 8260B

TRIP BLANK

Client: DRAPER ADEN ASSOCIATES SDG 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Preparation: EPA 5030B File ID: 1601026-0159.d Sampled: 01/07/16 00:00

Initial/Final: 5mL / 5mL Lab ID: 1601026-01 Received: 01/08/16 09:06

Dilution: 1 pH: 2 Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/12/16 23:06

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
74-87-3	Chloromethane		0.39	5.0	U
75-01-4	Vinyl chloride		0.48	5.0	U
74-83-9	Bromomethane		0.76	5.0	U
75-00-3	Chloroethane		0.55	5.0	U
75-69-4	Trichlorofluoromethane		0.49	5.0	U
75-35-4	1,1-Dichloroethene		0.53	5.0	U
67-64-1	Acetone		1.6	13	U
74-88-4	Iodomethane		0.30	5.0	U
75-15-0	Carbon disulfide		0.16	5.0	U
75-09-2	Methylene chloride		0.49	5.0	U
107-13-1	Acrylonitrile		5.1	50	U
156-60-5	trans-1,2-Dichloroethene		0.44	5.0	U
75-34-3	1,1-Dichloroethane		0.27	5.0	U
108-05-4	Vinyl acetate		0.39	5.0	U
156-59-2	cis-1,2-Dichloroethene		0.65	5.0	U
78-93-3	2-Butanone		1.5	13	U
74-97-5	Bromochloromethane		0.70	5.0	U
67-66-3	Chloroform		0.27	5.0	U
71-55-6	1,1,1-Trichloroethane		0.32	5.0	U
56-23-5	Carbon tetrachloride		0.31	5.0	U
107-06-2	1,2-Dichloroethane		0.23	5.0	U
71-43-2	Benzene		0.28	5.0	U
79-01-6	Trichloroethene		0.28	5.0	U
78-87-5	1,2-Dichloropropane		0.86	5.0	U
74-95-3	Dibromomethane		1.2	5.0	U
75-27-4	Bromodichloromethane		0.36	5.0	U
10061-01-5	cis-1,3-Dichloropropene		0.52	5.0	U
108-10-1	4-Methyl-2-pentanone		1.1	13	U
108-88-3	Toluene		0.31	5.0	U
10061-02-6	trans-1,3-Dichloropropene		0.45	5.0	U
79-00-5	1,1,2-Trichloroethane		0.51	5.0	U
127-18-4	Tetrachloroethene		0.42	5.0	U
591-78-6	2-Hexanone		1.2	13	U
124-48-1	Dibromochloromethane		0.32	5.0	U
106-93-4	1,2-Dibromoethane		0.44	5.0	U

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ANALYSIS DATA SHEET

SW 8260B

TRIP BLANK

Client: DRAPER ADEN ASSOCIATES SDG 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Preparation: EPA 5030B File ID: 1601026-0159.d Sampled: 01/07/16 00:00

Initial/Final: 5mL / 5mL Lab ID: 1601026-01 Received: 01/08/16 09:06

Dilution: 1 pH: 2 Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/12/16 23:06

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	RL	Q
108-90-7	Chlorobenzene		0.27	5.0	*U*
630-20-6	1,1,1,2-Tetrachloroethane		0.34	5.0	*U*
100-41-4	Ethylbenzene		0.42	5.0	*U*
100-42-5	Styrene		0.36	5.0	*U*
75-25-2	Bromoform		0.95	5.0	*U*
79-34-5	1,1,2,2-Tetrachloroethane		0.64	5.0	*U*
96-18-4	1,2,3-Trichloropropane		1.1	5.0	*U*
110-57-6	trans-1,4-Dichloro-2-butene		2.6	20	*U*
106-46-7	1,4-Dichlorobenzene		0.30	5.0	*U*
95-50-1	1,2-Dichlorobenzene		0.35	5.0	*U*
96-12-8	1,2-Dibromo-3-chloropropane		0.91	5.0	*U*
1330-20-7	Xylenes (total)		0.25	5.0	*U*

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	50.88	102	66 - 128	
1,2-Dichloroethane-d4	50.00	56.91	114	55 - 147	
Toluene-d8	50.00	51.81	104	50 - 150	
Bromofluorobenzene	50.00	57.10	114	70 - 132	

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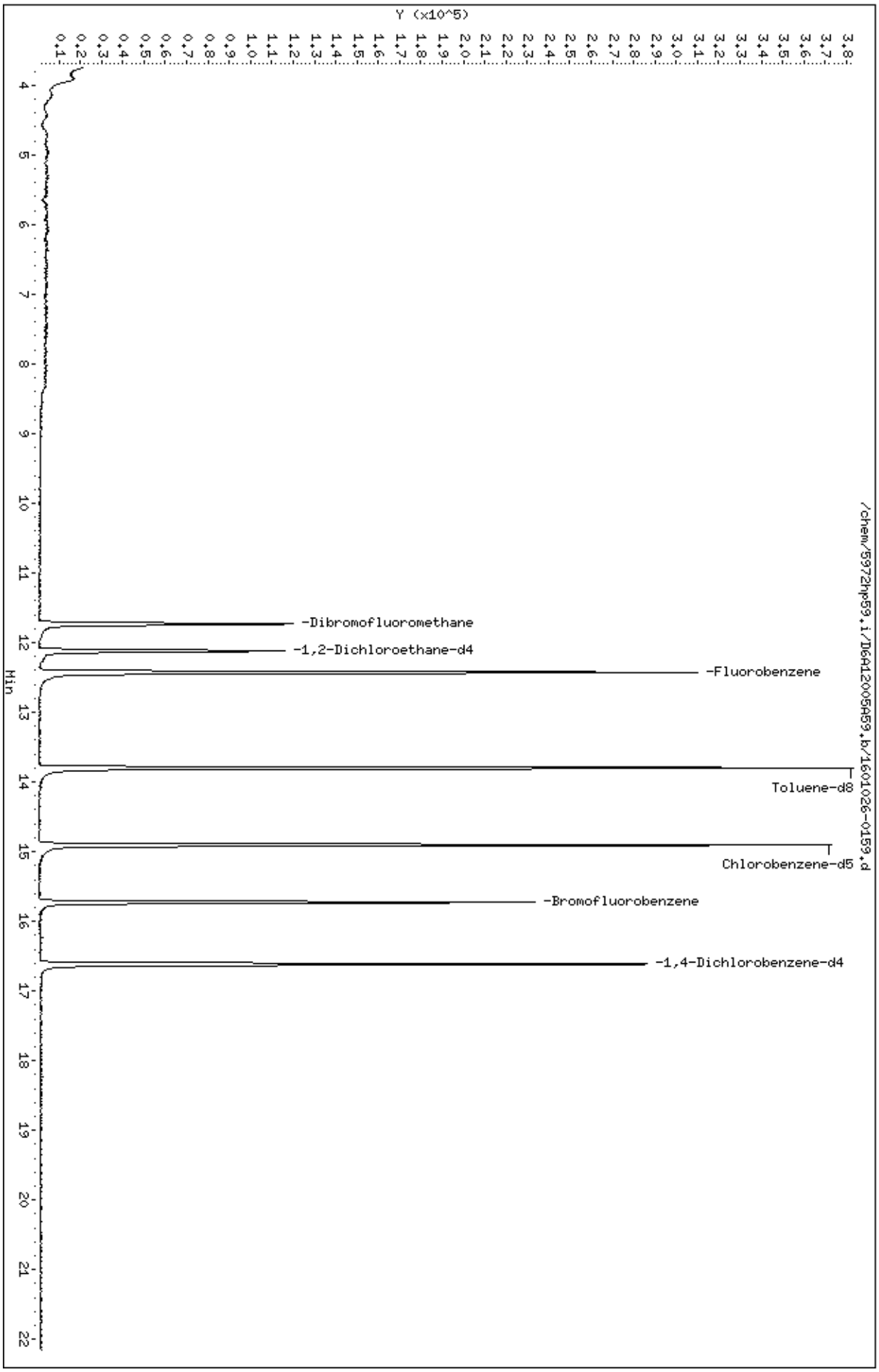
Data File: /chem/5972hp59.i/D6A12005A59.b/1601026-0159.d
Date : 12-JAN-2016 23:06
Client ID: TRIP BLANK
Sample Info: 1601026-01:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601026-0159.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601026-0159.d
Lab Smp Id: 1601026-01 Client Smp ID: TRIP BLANK
Inj Date : 12-JAN-2016 23:06
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601026-01:JAO
Misc Info : TRIP BLANK
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGAWATER.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.428	12.418	(1.000)	325269	250.000	
* 2 Chlorobenzene-d5	117	14.903	14.894	(1.000)	233168	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.619	16.600	(1.000)	97519	250.000	
$ 4 Dibromofluoromethane	113	11.728	11.718	(0.944)	95279	254.412	50.8824
$ 5 1,2-Dichloroethane-d4	65	12.122	12.113	(0.975)	97721	284.565	56.9131
$ 6 Toluene-d8	98	13.798	13.789	(0.926)	272164	259.028	51.8057
$ 7 Bromofluorobenzene	95	15.731	15.722	(0.947)	85682	285.475	57.0950
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
178 Diethyl ether	45	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/1601026-0159.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/1601026-0159.d
Lab Smp Id: 1601026-01 Client Smp ID: TRIP BLANK
Inj Date : 12-JAN-2016 23:06
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 1601026-01:JAO
Misc Info : TRIP BLANK
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGAWATER.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

L. Initial Calibration and Second Source Calibration Verification Data

(INITIAL CALIBRATION DATA) (SECOND-SOURCE CALIBRATION VERIFICATION)

If more than one instrument is used, forms shall be arranged in order by instrument. Multiple initial calibrations from the same instrument shall be in chronological order. Within each initial calibration, the standards are in order by level, from lowest to highest. The calibration is followed by the second source calibration verification form.

(1) RICs and Quantitation reports for the initial calibration and the second source calibration verification. Spectra not required.

(2) EICPs displaying each manual integration.

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Chloromethane	5	0.4359721	10	0.3944955	20	0.4419522	50	0.4328191	100	0.4598268	200	0.4109895
Chloromethane	5	0.4359721	10	0.3944955	20	0.4419522	50	0.4328191	100	0.4598268	200	0.4109895
Vinyl chloride	5	0.2926313	10	0.2341472	20	0.2914651	50	0.302564	100	0.2901067	200	0.2837613
Vinyl chloride	5	0.2926313	10	0.2341472	20	0.2914651	50	0.302564	100	0.2901067	200	0.2837613
Bromomethane	5	0.1403789	10	0.1446825	20	0.1357357	50	0.1544784	100	0.1341185	200	0.143931
Bromomethane	5	0.1403789	10	0.1446825	20	0.1357357	50	0.1544784	100	0.1341185	200	0.143931
Chloroethane	5	0.1423795	10	0.1143021	20	0.1295724	50	0.1396116	100	0.1204362	200	0.1144328
Chloroethane	5	0.1423795	10	0.1143021	20	0.1295724	50	0.1396116	100	0.1204362	200	0.1144328
Trichlorofluoromethane	5	0.2203504	10	0.2122503	20	0.2465336	50	0.2551115	100	0.2462841	200	0.2262193
Trichlorofluoromethane	5	0.2203504	10	0.2122503	20	0.2465336	50	0.2551115	100	0.2462841	200	0.2262193
1,1-Dichloroethene	5	0.1432888	10	0.1320574	20	0.1704401	50	0.1632235	100	0.1846333	200	0.1613264
1,1-Dichloroethene	5	0.1432888	10	0.1320574	20	0.1704401	50	0.1632235	100	0.1846333	200	0.1613264
Acetone	12.5	4.931318E-02	25	4.377388E-02	50	5.963676E-02	125	5.101221E-02	250	5.072625E-02	500	4.994251E-02
Acetone	12.5	4.931318E-02	25	4.377388E-02	50	5.963676E-02	125	5.101221E-02	250	5.072625E-02	500	4.994251E-02
Iodomethane	5	0.1046281	10	0.1400779	20	0.1452178	50	0.1834517	100	0.1564949	200	0.1636268
Iodomethane	5	0.1046281	10	0.1400779	20	0.1452178	50	0.1834517	100	0.1564949	200	0.1636268
Carbon disulfide	5	0.6509703	10	0.6466107	20	0.7228244	50	0.7721606	100	0.7838172	200	0.6892086
Carbon disulfide	5	0.6509703	10	0.6466107	20	0.7228244	50	0.7721606	100	0.7838172	200	0.6892086
Methylene chloride	5	0.2189734	10	0.2123254	20	0.2297707	50	0.2460926	100	0.2360011	200	0.2236308
Methylene chloride	5	0.2189734	10	0.2123254	20	0.2297707	50	0.2460926	100	0.2360011	200	0.2236308
Acrylonitrile	50	0.0632965	100	6.217483E-02	200	6.968232E-02	500	0.0708297	1000	6.845265E-02	2000	0.063457
Acrylonitrile	50	0.0632965	100	6.217483E-02	200	6.968232E-02	500	0.0708297	1000	6.845265E-02	2000	0.063457
trans-1,2-Dichloroethene	5	0.1972527	10	0.1969474	20	0.2193743	50	0.2375175	100	0.2480711	200	0.2291785
trans-1,2-Dichloroethene	5	0.1972527	10	0.1969474	20	0.2193743	50	0.2375175	100	0.2480711	200	0.2291785
1,1-Dichloroethane	5	0.424748	10	0.3970856	20	0.4455079	50	0.5062146	100	0.5058337	200	0.4464006
1,1-Dichloroethane	5	0.424748	10	0.3970856	20	0.4455079	50	0.5062146	100	0.5058337	200	0.4464006
Vinyl acetate	5	0.5619831	10	0.5378267	20	0.5252589	50	0.5939533	100	0.6147418	200	0.559262

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Vinyl acetate	5	0.5619831	10	0.5378267	20	0.5252589	50	0.5939533	100	0.6147418	200	0.559262
cis-1,2-Dichloroethene	5	0.2318862	10	0.2234365	20	0.2620029	50	0.287559	100	0.2859284	200	0.2577188
cis-1,2-Dichloroethene	5	0.2318862	10	0.2234365	20	0.2620029	50	0.287559	100	0.2859284	200	0.2577188
2-Butanone	12.5	0.1289625	25	0.104755	50	0.1218824	125	0.116342	250	0.1210535	500	0.1153269
2-Butanone	12.5	0.1289625	25	0.104755	50	0.1218824	125	0.116342	250	0.1210535	500	0.1153269
Bromochloromethane	5	0.1017441	10	0.1025153	20	0.1100935	50	0.1149736	100	0.1089823	200	0.104402
Bromochloromethane	5	0.1017441	10	0.1025153	20	0.1100935	50	0.1149736	100	0.1089823	200	0.104402
Chloroform	5	0.3883218	10	0.3754889	20	0.4347526	50	0.4751414	100	0.4541663	200	0.4058296
Chloroform	5	0.3883218	10	0.3754889	20	0.4347526	50	0.4751414	100	0.4541663	200	0.4058296
1,1,1-Trichloroethane	5	0.2982953	10	0.2850983	20	0.3095216	50	0.3511249	100	0.3582972	200	0.3114461
1,1,1-Trichloroethane	5	0.2982953	10	0.2850983	20	0.3095216	50	0.3511249	100	0.3582972	200	0.3114461
Carbon tetrachloride	5	0.2560752	10	0.244933	20	0.2900089	50	0.3096771	100	0.3258255	200	0.2869777
Carbon tetrachloride	5	0.2560752	10	0.244933	20	0.2900089	50	0.3096771	100	0.3258255	200	0.2869777
1,2-Dichloroethane	5	0.2861879	10	0.2810317	20	0.3323531	50	0.3200331	100	0.3238536	200	0.3041076
1,2-Dichloroethane	5	0.2861879	10	0.2810317	20	0.3323531	50	0.3200331	100	0.3238536	200	0.3041076
Benzene	5	0.824086	10	0.8296567	20	0.9214533	50	0.9553279	100	0.9706907	200	0.8687096
Benzene	5	0.824086	10	0.8296567	20	0.9214533	50	0.9553279	100	0.9706907	200	0.8687096
Trichloroethene	5	0.2147903	10	0.2157788	20	0.2492225	50	0.2743642	100	0.2808306	200	0.2501795
Trichloroethene	5	0.2147903	10	0.2157788	20	0.2492225	50	0.2743642	100	0.2808306	200	0.2501795
1,2-Dichloropropane	5	7.002055E-02	10	6.779296E-02	20	7.500989E-02	50	8.420874E-02	100	8.235345E-02	200	7.329175E-02
1,2-Dichloropropane	5	7.002055E-02	10	6.779296E-02	20	7.500989E-02	50	8.420874E-02	100	8.235345E-02	200	7.329175E-02
Dibromomethane	5	0.1312593	10	0.1346099	20	0.1534604	50	0.1664186	100	0.1626464	200	0.1531249
Dibromomethane	5	0.1312593	10	0.1346099	20	0.1534604	50	0.1664186	100	0.1626464	200	0.1531249
Bromodichloromethane	5	0.2653246	10	0.2714596	20	0.3062164	50	0.3272525	100	0.3143274	200	0.2970518
Bromodichloromethane	5	0.2653246	10	0.2714596	20	0.3062164	50	0.3272525	100	0.3143274	200	0.2970518
cis-1,3-Dichloropropene	5	0.3127152	10	0.327153	20	0.3483642	50	0.3975407	100	0.3992675	200	0.3745145
cis-1,3-Dichloropropene	5	0.3127152	10	0.327153	20	0.3483642	50	0.3975407	100	0.3992675	200	0.3745145

Liberty Analytical

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INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
4-Methyl-2-pentanone	12.5	0.3329325	25	0.3436663	50	0.3889027	125	0.3665296	250	0.3592158	500	0.3366968
4-Methyl-2-pentanone	12.5	0.3329325	25	0.3436663	50	0.3889027	125	0.3665296	250	0.3592158	500	0.3366968
Toluene	5	0.5794008	10	0.6532814	20	0.6995564	50	0.7286453	100	0.7211694	200	0.6602194
Toluene	5	0.5794008	10	0.6532814	20	0.6995564	50	0.7286453	100	0.7211694	200	0.6602194
trans-1,3-Dichloropropene	5	0.3599368	10	0.4146708	20	0.4453284	50	0.4409579	100	0.4570257	200	0.4241089
trans-1,3-Dichloropropene	5	0.3599368	10	0.4146708	20	0.4453284	50	0.4409579	100	0.4570257	200	0.4241089
1,1,2-Trichloroethane	5	0.2169862	10	0.2354813	20	0.2511858	50	0.2538255	100	0.2528369	200	0.2353129
1,1,2-Trichloroethane	5	0.2169862	10	0.2354813	20	0.2511858	50	0.2538255	100	0.2528369	200	0.2353129
Tetrachloroethene	5	0.2242213	10	0.2359533	20	0.2618654	50	0.2783781	100	0.2780052	200	0.2552923
Tetrachloroethene	5	0.2242213	10	0.2359533	20	0.2618654	50	0.2783781	100	0.2780052	200	0.2552923
2-Hexanone	12.5	0.2169862	25	0.2296703	50	0.257473	125	0.2546818	250	0.2452155	500	0.240185
2-Hexanone	12.5	0.2169862	25	0.2296703	50	0.257473	125	0.2546818	250	0.2452155	500	0.240185
Dibromochloromethane	5	0.2674336	10	0.3007063	20	0.3310135	50	0.332425	100	0.3384683	200	0.3163962
Dibromochloromethane	5	0.2674336	10	0.3007063	20	0.3310135	50	0.332425	100	0.3384683	200	0.3163962
1,2-Dibromoethane	5	0.2428541	10	0.2504982	20	0.2782731	50	0.2769984	100	0.2811107	200	0.2635072
1,2-Dibromoethane	5	0.2428541	10	0.2504982	20	0.2782731	50	0.2769984	100	0.2811107	200	0.2635072
Chlorobenzene	5	0.6971443	10	0.758435	20	0.8155431	50	0.8452148	100	0.8346141	200	0.7632348
Chlorobenzene	5	0.6971443	10	0.758435	20	0.8155431	50	0.8452148	100	0.8346141	200	0.7632348
1,1,1,2-Tetrachloroethane	5	0.2641959	10	0.2875424	20	0.3002536	50	0.3140832	100	0.3245795	200	0.303901
1,1,1,2-Tetrachloroethane	5	0.2641959	10	0.2875424	20	0.3002536	50	0.3140832	100	0.3245795	200	0.303901
Ethylbenzene	5	0.3254133	10	0.355512	20	0.3740426	50	0.3989453	100	0.4155437	200	0.3695925
Ethylbenzene	5	0.3254133	10	0.355512	20	0.3740426	50	0.3989453	100	0.4155437	200	0.3695925
Styrene	5	0.6141226	10	0.685518	20	0.7773833	50	0.8168341	100	0.8368686	200	0.7931226
Styrene	5	0.6141226	10	0.685518	20	0.7773833	50	0.8168341	100	0.8368686	200	0.7931226
Bromoform	5	0.382844	10	0.3874154	20	0.4134483	50	0.4385614	100	0.444852	200	0.4066968
Bromoform	5	0.382844	10	0.3874154	20	0.4134483	50	0.4385614	100	0.444852	200	0.4066968
1,1,2,2-Tetrachloroethane	5	0.7431543	10	0.739718	20	0.7208499	50	0.7297122	100	0.7439788	200	0.6689755

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
1,1,2,2-Tetrachloroethane	5	0.7431543	10	0.739718	20	0.7208499	50	0.7297122	100	0.7439788	200	0.6689755
1,2,3-Trichloropropane	5	0.0720204	10	7.641341E-02	20	8.412144E-02	50	8.575084E-02	100	8.590592E-02	200	0.0857995
1,2,3-Trichloropropane	5	0.0720204	10	7.641341E-02	20	8.412144E-02	50	8.575084E-02	100	8.590592E-02	200	0.0857995
trans-1,4-Dichloro-2-butene	20	7.567098E-02	40	8.631254E-02	80	9.512081E-02	200	0.0933682	400	9.428667E-02	800	8.898961E-02
trans-1,4-Dichloro-2-butene	20	7.567098E-02	40	8.631254E-02	80	9.512081E-02	200	0.0933682	400	9.428667E-02	800	8.898961E-02
1,4-Dichlorobenzene	5	1.310835	10	1.278039	20	1.2784	50	1.352131	100	1.378145	200	1.177212
1,4-Dichlorobenzene	5	1.310835	10	1.278039	20	1.2784	50	1.352131	100	1.378145	200	1.177212
1,2-Dichlorobenzene	5	1.062508	10	1.080998	20	1.150217	50	1.181283	100	1.187625	200	1.065216
1,2-Dichlorobenzene	5	1.062508	10	1.080998	20	1.150217	50	1.181283	100	1.187625	200	1.065216
1,2-Dibromo-3-chloropropane	5	8.922114E-02	10	0.1159443	20	0.1182169	50	0.1296271	100	0.1302867	200	0.1133761
1,2-Dibromo-3-chloropropane	5	8.922114E-02	10	0.1159443	20	0.1182169	50	0.1296271	100	0.1302867	200	0.1133761
Xylenes (total)	15	0.407554	30	0.4359521	60	0.489268	150	0.5173361	300	0.5307801	600	0.4889122
Xylenes (total)	15	0.407554	30	0.4359521	60	0.489268	150	0.5173361	300	0.5307801	600	0.4889122
Dibromofluoromethane	5	0.2741584	10	0.2656413	20	0.291736	50	0.3011658	100	0.29329	200	0.3010708
Dibromofluoromethane	5	0.2741584	10	0.2656413	20	0.291736	50	0.3011658	100	0.29329	200	0.3010708
1,2-Dichloroethane-d4	5	0.2654545	10	0.2489371	20	0.2712005	50	0.2685589	100	0.2635326	200	0.2659492
1,2-Dichloroethane-d4	5	0.2654545	10	0.2489371	20	0.2712005	50	0.2685589	100	0.2635326	200	0.2659492
Toluene-d8	5	1.016545	10	1.11066	20	1.164746	50	1.170973	100	1.120531	200	1.175905
Toluene-d8	5	1.016545	10	1.11066	20	1.164746	50	1.170973	100	1.120531	200	1.175905
Bromofluorobenzene	5	0.7255689	10	0.7537707	20	0.7814937	50	0.7884428	100	0.7925384	200	0.7747988
Bromofluorobenzene	5	0.7255689	10	0.7537707	20	0.7814937	50	0.7884428	100	0.7925384	200	0.7747988

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
Chloromethane	0.4293425	5.407908	4.639833	5.213894E-02			CCC (15)	
Chloromethane	0.4293425	5.407908	4.639833	5.213894E-02			CCC (15)	
Vinyl chloride	0.2824459	8.647834	4.944167	7.608906E-02			CCC (30)	
Vinyl chloride	0.2824459	8.647834	4.944167	7.608906E-02			CCC (30)	
Bromomethane	0.1422208	5.170087	5.920167	0.14831			CCC (15)	
Bromomethane	0.1422208	5.170087	5.920167	0.14831			CCC (15)	
Chloroethane	0.1267891	9.750617	6.237667	8.645976E-02			CCC (15)	
Chloroethane	0.1267891	9.750617	6.237667	8.645976E-02			CCC (15)	
Trichlorofluoromethane	0.2344582	7.318996	6.972167	6.891093E-02			CCC (15)	
Trichlorofluoromethane	0.2344582	7.318996	6.972167	6.891093E-02			CCC (15)	
1,1-Dichloroethene	0.1591616	11.86718	8.300166	4.601099E-02			CCC (30)	
1,1-Dichloroethene	0.1591616	11.86718	8.300166	4.601099E-02			CCC (30)	
Acetone	5.073413E-02	10.06689	8.467667	4.774105E-02			CCC (15)	
Acetone	5.073413E-02	10.06689	8.467667	4.774105E-02			CCC (15)	
Iodomethane	0.1489162	17.81682	8.637167	6.621125E-02	0.9977652		CCC (15)	
Iodomethane	0.1489162	17.81682	8.637167	6.621125E-02	0.9977652		CCC (15)	
Carbon disulfide	0.710932	8.299476	8.748667	4.317902E-02			CCC (15)	
Carbon disulfide	0.710932	8.299476	8.748667	4.317902E-02			CCC (15)	
Methylene chloride	0.227799	5.342305	9.312667	4.147101E-02			CCC (15)	
Methylene chloride	0.227799	5.342305	9.312667	4.147101E-02			CCC (15)	
Acrylonitrile	0.0663155	5.670816	9.766167	3.797726E-02			CCC (15)	
Acrylonitrile	0.0663155	5.670816	9.766167	3.797726E-02			CCC (15)	
trans-1,2-Dichloroethene	0.2213903	9.510764	9.7285	2.117292E-02			CCC (15)	
trans-1,2-Dichloroethene	0.2213903	9.510764	9.7285	2.117292E-02			CCC (15)	
1,1-Dichloroethane	0.4542984	9.663908	10.41883	2.115553E-02			CCC (15)	
1,1-Dichloroethane	0.4542984	9.663908	10.41883	2.115553E-02			CCC (15)	
Vinyl acetate	0.5655043	5.955277	10.4335	3.120793E-02			CCC (15)	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
Vinyl acetate	0.5655043	5.955277	10.4335	3.120793E-02			CCC (15)	
cis-1,2-Dichloroethene	0.2580886	10.31899	11.19617	3.182937E-02			CCC (15)	
cis-1,2-Dichloroethene	0.2580886	10.31899	11.19617	3.182937E-02			CCC (15)	
2-Butanone	0.1180537	6.880408	11.18117	5.267854E-02			CCC (15)	
2-Butanone	0.1180537	6.880408	11.18117	5.267854E-02			CCC (15)	
Bromochloromethane	0.1071185	4.787196	11.48383	0.0135455			CCC (15)	
Bromochloromethane	0.1071185	4.787196	11.48383	0.0135455			CCC (15)	
Chloroform	0.4222834	9.220204	11.54283	2.566641E-02			CCC (30)	
Chloroform	0.4222834	9.220204	11.54283	2.566641E-02			CCC (30)	
1,1,1-Trichloroethane	0.3189639	9.195342	11.75483	4.356968E-02			CCC (15)	
1,1,1-Trichloroethane	0.3189639	9.195342	11.75483	4.356968E-02			CCC (15)	
Carbon tetrachloride	0.2855829	10.78662	11.916	2.731353E-02			CCC (15)	
Carbon tetrachloride	0.2855829	10.78662	11.916	2.731353E-02			CCC (15)	
1,2-Dichloroethane	0.3079278	6.823463	12.19383	1.291538E-02			CCC (15)	
1,2-Dichloroethane	0.3079278	6.823463	12.19383	1.291538E-02			CCC (15)	
Benzene	0.8949874	7.076892	12.14283	3.168892E-02			CCC (15)	
Benzene	0.8949874	7.076892	12.14283	3.168892E-02			CCC (15)	
Trichloroethene	0.2475276	11.3103	12.774	3.003329E-02			CCC (15)	
Trichloroethene	0.2475276	11.3103	12.774	3.003329E-02			CCC (15)	
1,2-Dichloropropane	7.544622E-02	8.738587	13.8505	0.0126082			CCC (30)	
1,2-Dichloropropane	7.544622E-02	8.738587	13.8505	0.0126082			CCC (30)	
Dibromomethane	0.1502532	9.593633	13.12083	1.824179E-02			CCC (15)	
Dibromomethane	0.1502532	9.593633	13.12083	1.824179E-02			CCC (15)	
Bromodichloromethane	0.2969387	8.188457	13.2225	3.063624E-02			CCC (15)	
Bromodichloromethane	0.2969387	8.188457	13.2225	3.063624E-02			CCC (15)	
cis-1,3-Dichloropropene	0.3599258	10.10345	13.59217	2.765911E-02			CCC (15)	
cis-1,3-Dichloropropene	0.3599258	10.10345	13.59217	2.765911E-02			CCC (15)	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
4-Methyl-2-pentanone	0.3546573	5.981109	13.66283	1.529175E-02			CCC (15)	
4-Methyl-2-pentanone	0.3546573	5.981109	13.66283	1.529175E-02			CCC (15)	
Toluene	0.6737121	8.246138	13.8505	0.0126082			CCC (30)	
Toluene	0.6737121	8.246138	13.8505	0.0126082			CCC (30)	
trans-1,3-Dichloropropene	0.4236714	8.192488	14.0195	2.708791E-02			CCC (15)	
trans-1,3-Dichloropropene	0.4236714	8.192488	14.0195	2.708791E-02			CCC (15)	
1,1,2-Trichloroethane	0.2409381	6.008249	14.17083	1.299102E-02			CCC (15)	
1,1,2-Trichloroethane	0.2409381	6.008249	14.17083	1.299102E-02			CCC (15)	
Tetrachloroethene	0.2556193	8.625726	14.2745	1.946793E-02			CCC (15)	
Tetrachloroethene	0.2556193	8.625726	14.2745	1.946793E-02			CCC (15)	
2-Hexanone	0.240702	6.386276	14.28433	1.094562E-02			CCC (15)	
2-Hexanone	0.240702	6.386276	14.28433	1.094562E-02			CCC (15)	
Dibromochloromethane	0.3144072	8.507743	14.4765	2.079354E-02			CCC (15)	
Dibromochloromethane	0.3144072	8.507743	14.4765	2.079354E-02			CCC (15)	
1,2-Dibromoethane	0.2655403	6.027572	14.59317	4.103232E-02			CCC (15)	
1,2-Dibromoethane	0.2655403	6.027572	14.59317	4.103232E-02			CCC (15)	
Chlorobenzene	0.7856977	7.180727	14.9205	0.0220104			CCC (15)	
Chlorobenzene	0.7856977	7.180727	14.9205	0.0220104			CCC (15)	
1,1,1,2-Tetrachloroethane	0.2990926	7.092461	14.9615	2.194016E-02			CCC (15)	
1,1,1,2-Tetrachloroethane	0.2990926	7.092461	14.9615	2.194016E-02			CCC (15)	
Ethylbenzene	0.3731749	8.529693	14.94483	0.0176984			CCC (30)	
Ethylbenzene	0.3731749	8.529693	14.94483	0.0176984			CCC (30)	
Styrene	0.7539749	11.43211	15.328	2.500628E-02			CCC (15)	
Styrene	0.7539749	11.43211	15.328	2.500628E-02			CCC (15)	
Bromoform	0.412303	6.201541	15.52683	2.301701E-02			CCC (15)	
Bromoform	0.412303	6.201541	15.52683	2.301701E-02			CCC (15)	
1,1,2,2-Tetrachloroethane	0.7243981	3.944524	15.78333	9.180034E-03			CCC (15)	

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INITIAL CALIBRATION DATA (Continued)

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Calibration: 5123005 Instrument: 5972hp59

Calibration Date: 12/29/2015 5:04:46PM

Compound	Mean RF	% RSD	Mean RT	RT RSD	Linear r	Quad COD	RSD LIMIT	Q
1,1,2,2-Tetrachloroethane	0.7243981	3.944524	15.78333	9.180034E-03			CCC (15)	
1,2,3-Trichloropropane	8.166858E-02	7.314145	15.849	2.537084E-02			CCC (15)	
1,2,3-Trichloropropane	8.166858E-02	7.314145	15.849	2.537084E-02			CCC (15)	
trans-1,4-Dichloro-2-butene	8.895814E-02	8.250947	15.81283	1.593818E-02			CCC (15)	
trans-1,4-Dichloro-2-butene	8.895814E-02	8.250947	15.81283	1.593818E-02			CCC (15)	
1,4-Dichlorobenzene	1.295794	5.441778	16.6265	1.458902E-02			CCC (15)	
1,4-Dichlorobenzene	1.295794	5.441778	16.6265	1.458902E-02			CCC (15)	
1,2-Dichlorobenzene	1.121308	5.209202	16.9585	2.002981E-02			CCC (15)	
1,2-Dichlorobenzene	1.121308	5.209202	16.9585	2.002981E-02			CCC (15)	
1,2-Dibromo-3-chloropropane	0.116112	12.882	17.64517	3.128676E-02			CCC (15)	
1,2-Dibromo-3-chloropropane	0.116112	12.882	17.64517	3.128676E-02			CCC (15)	
Xylenes (total)	0.4783004	9.9433	15.31983	1.472473E-02			CCC (15)	
Xylenes (total)	0.4783004	9.9433	15.31983	1.472473E-02			CCC (15)	
Dibromofluoromethane	0.2878437	5.099901	11.72217	3.978905E-02			CCC (15)	
Dibromofluoromethane	0.2878437	5.099901	11.72217	3.978905E-02			CCC (15)	
1,2-Dichloroethane-d4	0.2639388	2.962185	12.11317	3.127988E-02			CCC (15)	
1,2-Dichloroethane-d4	0.2639388	2.962185	12.11317	3.127988E-02			CCC (15)	
Toluene-d8	1.12656	5.363983	13.79433	2.742076E-02			CCC (15)	
Toluene-d8	1.12656	5.363983	13.79433	2.742076E-02			CCC (15)	
Bromofluorobenzene	0.7694356	3.307822	15.72383	1.202549E-02			CCC (15)	
Bromofluorobenzene	0.7694356	3.307822	15.72383	1.202549E-02			CCC (15)	

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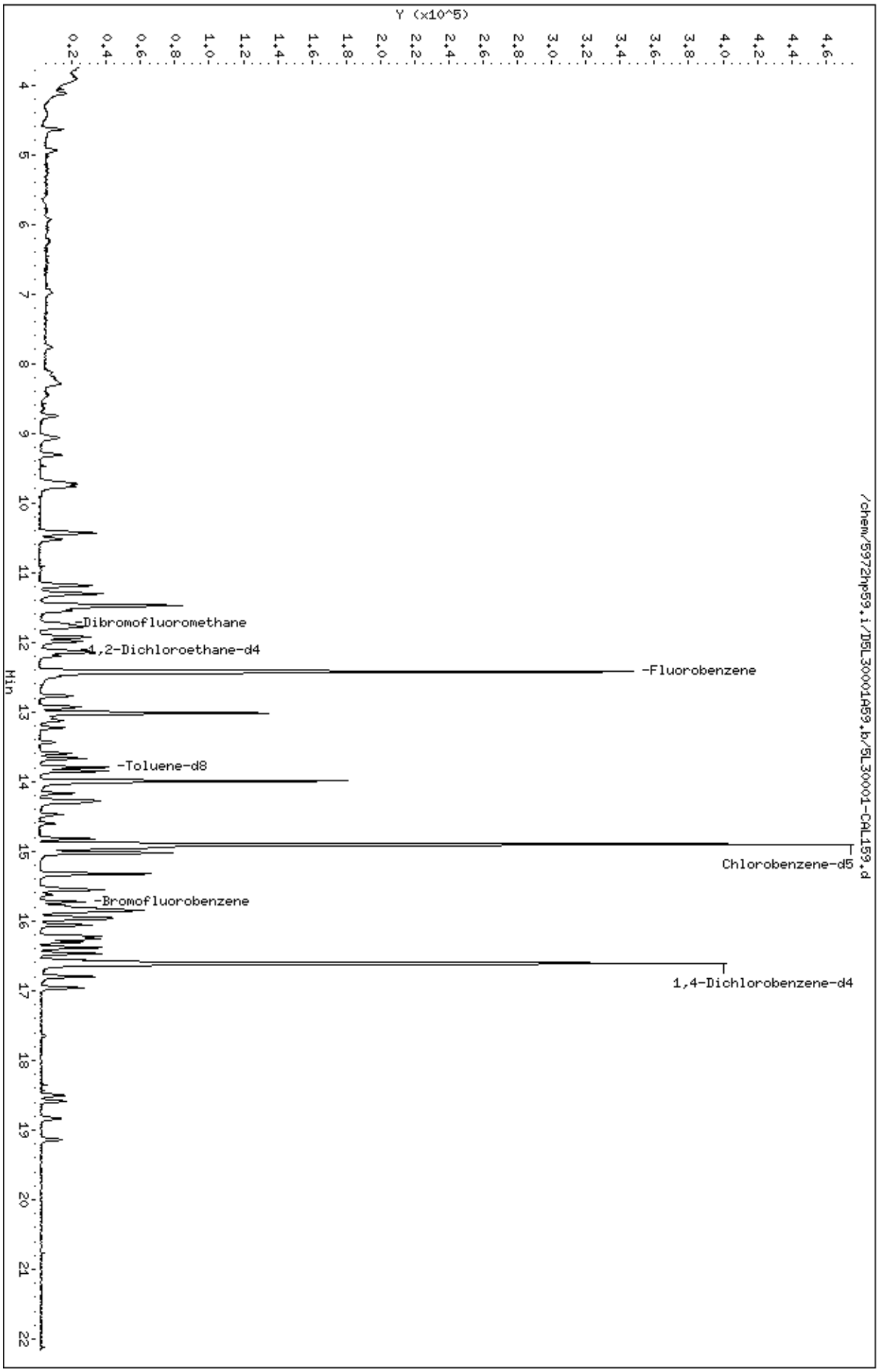
Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Date : 29-DEC-2015 18:00
Client ID: VSTD005AB
Sample Info: 5L30001-CAL1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Lab Smp Id: 5L30001-CAL1 Client Smp ID: VSTD005AB
Inj Date : 29-DEC-2015 18:00
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL1:JAO
Misc Info : VSTD005AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 18:00 Cal File: 5L30001-CAL159.d
Als bottle: 24 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.423	12.423	(1.000)	384887	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.898	(1.000)	302692	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.604	(1.000)	131359	250.000	
$ 4 Dibromofluoromethane	113	11.723	11.723	(0.944)	10552	25.0000	25.0000
$ 5 1,2-Dichloroethane-d4	65	12.117	12.117	(0.975)	10217	25.0000	25.0000
$ 6 Toluene-d8	98	13.793	13.793	(0.926)	30770	25.0000	25.0000
$ 7 Bromofluorobenzene	95	15.726	15.726	(0.947)	9531	25.0000	25.0000
8 Dichlorodifluoromethane	85	4.129	4.129	(0.332)	11504	25.0000	25.0000
9 Chloromethane	50	4.642	4.642	(0.374)	16780	25.0000	25.0000
10 Vinyl Chloride	62	4.948	4.948	(0.398)	11263	25.0000	25.0000
11 Bromomethane	94	5.924	5.924	(0.477)	5403	25.0000	25.0000(M)
12 Chloroethane	64	6.240	6.240	(0.502)	5480	25.0000	25.0000
13 Trichlorofluoromethane	101	6.979	6.979	(0.562)	8481	25.0000	25.0000
178 Diethyl ether	45	7.758	7.758	(0.625)	4337	25.0000	25.0000
14 Acrolein	56	8.133	8.133	(0.655)	6661	250.000	250.000

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.212	8.212	(0.661)	2746	25.0000	25.0000
16 1,1,2-trichloro-1,2,2-trifluo	101	8.261	8.261	(0.665)	7220	25.0000	25.0000
17 1,1-Dichloroethene	96	8.301	8.301	(0.668)	5515	25.0000	25.0000
18 Acetone	43	8.468	8.468	(0.682)	4745	62.5000	62.5000(M)
19 Iodomethane	142	8.646	8.646	(0.696)	4027	25.0000	25.0000(M)
20 Carbon disulfide	76	8.744	8.744	(0.704)	25055	25.0000	25.0000
21 3-Chloropropene	76	9.050	9.050	(0.729)	3882	25.0000	25.0000
22 Acetonitrile	41	9.060	9.060	(0.729)	12931	25.0000	25.0000
23 Methyl acetate	43	9.090	9.090	(0.732)	8871	25.0000	25.0000
24 Methylene Chloride	84	9.316	9.316	(0.750)	8428	25.0000	25.0000
25 Acrylonitrile	53	9.770	9.770	(0.786)	24362	250.000	250.000
26 Methyl-tert-butyl ether	73	9.711	9.711	(0.782)	17473	25.0000	25.0000
28 trans-1,2-Dichloroethene	96	9.731	9.731	(0.783)	7592	25.0000	25.0000
29 trans-1,2-DCE (part of total)	96	9.731	9.731	(0.783)	7592	25.0000	25.0000
31 Isopropyl ether	45	10.431	10.431	(0.840)	30677	25.0000	25.0000
32 1,1-Dichloroethane	63	10.421	10.421	(0.839)	16348	25.0000	25.0000
33 Vinyl acetate	43	10.431	10.431	(0.840)	21630	25.0000	25.0000(M)
34 Chloroprene	53	10.520	10.520	(0.847)	11493	25.0000	25.0000
35 2-butanone	43	11.190	11.190	(0.901)	12409	62.5000	62.5000(M)
36 2,2-Dichloropropane	77	11.180	11.180	(0.900)	10963	25.0000	25.0000
37 cis-1,2-Dichloroethene	96	11.200	11.200	(0.902)	8925	25.0000	25.0000
38 cis-1,2-DCE (part of total)	96	11.200	11.200	(0.902)	8925	25.0000	25.0000
39 Propionitrile	54	11.308	11.308	(0.910)	49121	1250.00	1250.00
40 Methacrylonitrile	41	11.466	11.466	(0.923)	59523	250.000	250.000
41 Bromochloromethane	128	11.486	11.486	(0.925)	3916	25.0000	25.0000
180 Tetrahydrofuran	42	11.506	11.506	(0.926)	12331	100.000	100.000
42 Chloroform	83	11.545	11.545	(0.929)	14946	25.0000	25.0000
43 1,1,1-Trichloroethane	97	11.762	11.762	(0.947)	11481	25.0000	25.0000
44 Cyclohexane	56	11.782	11.782	(0.948)	11923	25.0000	25.0000
46 1,1-dichloropropene	75	11.930	11.930	(0.960)	10683	25.0000	25.0000
47 Isobutyl alcohol	43	11.989	11.989	(0.965)	21422	1250.00	1250.00
48 Carbon Tetrachloride	117	11.920	11.920	(0.959)	9856	25.0000	25.0000
49 Benzene	78	12.147	12.147	(0.978)	31718	25.0000	25.0000
50 1,2-Dichloroethane	62	12.196	12.196	(0.982)	11015	25.0000	25.0000
51 Trichloroethene	130	12.778	12.778	(1.029)	8267	25.0000	25.0000
52 Methylcyclohexane	83	12.935	12.935	(1.041)	10816	25.0000	25.0000
53 Methylmethacrylate	100	13.014	13.014	(1.048)	17719	250.000	250.000
54 1,2-Dichloropropane	63	13.853	13.853	(1.115)	2695	25.0000	25.0000
55 1,4-dioxane	88	13.083	13.083	(1.053)	3782	1250.00	1250.00
56 Dibromomethane	174	13.123	13.123	(1.056)	5052	25.0000	25.0000
57 Bromodichloromethane	83	13.221	13.221	(1.064)	10212	25.0000	25.0000
58 cis-1,3-Dichloropropene	75	13.596	13.596	(1.094)	12036	25.0000	25.0000
59 4-Methyl-2-pentanone	43	13.665	13.665	(0.917)	25194	62.5000	62.5000
60 Toluene	92	13.853	13.853	(0.930)	17538	25.0000	25.0000
61 Ethylmethacrylate	99	13.991	13.991	(0.939)	15584	250.000	250.000
62 trans-1,3-Dichloropropene	75	14.020	14.020	(0.941)	10895	25.0000	25.0000
63 1,1,2-Trichloroethane	97	14.168	14.168	(0.951)	6568	25.0000	25.0000

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Report Date: 30-Dec-2015 07:22

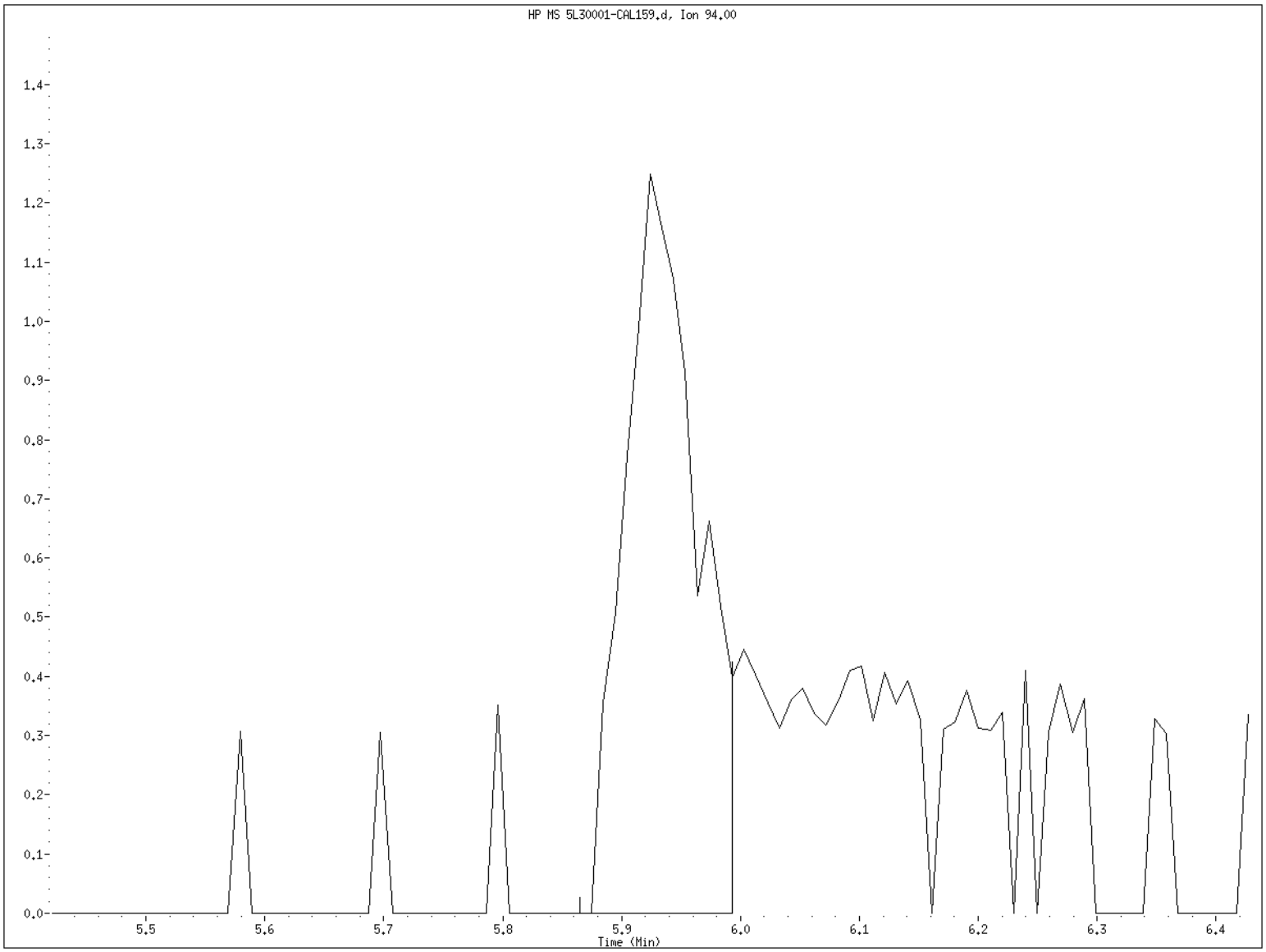
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.286	14.286	(0.959)	16420	62.5000	62.5000
65 2-chloroethyl vinyl ether	63	13.438	13.438	(1.082)	3873	25.0000	25.0000
66 1,3-Dichloropropane	76	14.306	14.306	(0.960)	11978	25.0000	25.0000
67 Tetrachloroethene	164	14.277	14.277	(0.958)	6787	25.0000	25.0000
68 Dibromochloromethane	129	14.474	14.474	(0.972)	8095	25.0000	25.0000
69 1,2-Dibromoethane	107	14.602	14.602	(0.980)	7351	25.0000	25.0000
70 1-Chlorohexane	55	14.819	14.819	(0.995)	8334	25.0000	25.0000
71 Chlorobenzene	112	14.918	14.918	(1.001)	21102	25.0000	25.0000
72 Ethylbenzene	106	14.947	14.947	(1.003)	9850	25.0000	25.0000
73 1,1,1,2-Tetrachloroethane	131	14.967	14.967	(1.005)	7997	25.0000	25.0000
74 m,p-Xylene	106	15.026	15.026	(1.009)	25417	50.0000	50.0000
75 m,p-Xylene (part of total)	106	15.026	15.026	(1.009)	25417	50.0000	50.0000
76 o-Xylene	106	15.322	15.322	(1.028)	11592	25.0000	25.0000
77 o-Xylene (part of total)	106	15.322	15.322	(1.028)	11592	25.0000	25.0000
78 Styrene	104	15.332	15.332	(1.029)	18589	25.0000	25.0000
79 Bromoform	173	15.529	15.529	(0.935)	5029	25.0000	25.0000(M)
80 Isopropyl Benzene	105	15.559	15.559	(1.044)	29149	25.0000	25.0000
81 1,1,2,2-Tetrachloroethane	83	15.785	15.785	(0.951)	9762	25.0000	25.0000
82 trans-1,4-dichloro-2-butene	53	15.815	15.815	(1.062)	9162	100.000	100.000
83 1,2,3-Trichloropropane	110	15.854	15.854	(1.064)	2180	25.0000	25.0000
84 Bromobenzene	156	15.874	15.874	(1.066)	8163	25.0000	25.0000
85 n-Propyl Benzene	91	15.845	15.845	(0.954)	38775	25.0000	25.0000
86 1,3,5-Trimethyl Benzene	105	15.953	15.953	(0.961)	23150	25.0000	25.0000
87 2-Chlorotoluene	91	15.983	15.983	(0.963)	25272	25.0000	25.0000
88 4-Chlorotoluene	91	16.052	16.052	(0.967)	23435	25.0000	25.0000
89 tert-Butyl Benzene	119	16.219	16.219	(0.977)	24426	25.0000	25.0000
90 1,2,4-Trimethyl Benzene	105	16.249	16.249	(0.979)	23719	25.0000	25.0000
91 Pentachloroethane	167	16.308	16.308	(0.982)	5233	25.0000	25.0000
92 sec-Butyl Benzene	105	16.377	16.377	(0.986)	33025	25.0000	25.0000
93 p-Isopropyl Toluene	119	16.466	16.466	(0.992)	25351	25.0000	25.0000
94 1,3-Dichlorobenzene	146	16.564	16.564	(0.998)	13950	25.0000	25.0000
95 1,4-Dichlorobenzene	146	16.624	16.624	(1.001)	17219	25.0000	25.0000
96 n-Butyl Benzene	91	16.801	16.801	(1.012)	24088	25.0000	25.0000
97 1,2-Dichlorobenzene	146	16.959	16.959	(1.021)	13957	25.0000	25.0000
98 1,2-Dibromo-3-Chloropropane	157	17.649	17.649	(1.063)	1172	25.0000	25.0000
99 1,2,4-Trichlorobenzene	180	18.507	18.507	(1.115)	8926	25.0000	25.0000
100 Hexachlorobutadiene	225	18.596	18.596	(1.120)	4665	25.0000	25.0000
101 Naphthalene	128	18.842	18.842	(1.135)	18183	25.0000	25.0000
102 1,2,3-Trichlorobenzene	180	19.128	19.128	(1.152)	8166	25.0000	25.0000
M 103 1,2-Dichloroethene (total)	96				16517	50.0000	50.0000
M 104 Xylene (total)	106				37009	75.0000	75.0000

QC Flag Legend

M - Compound response manually integrated.

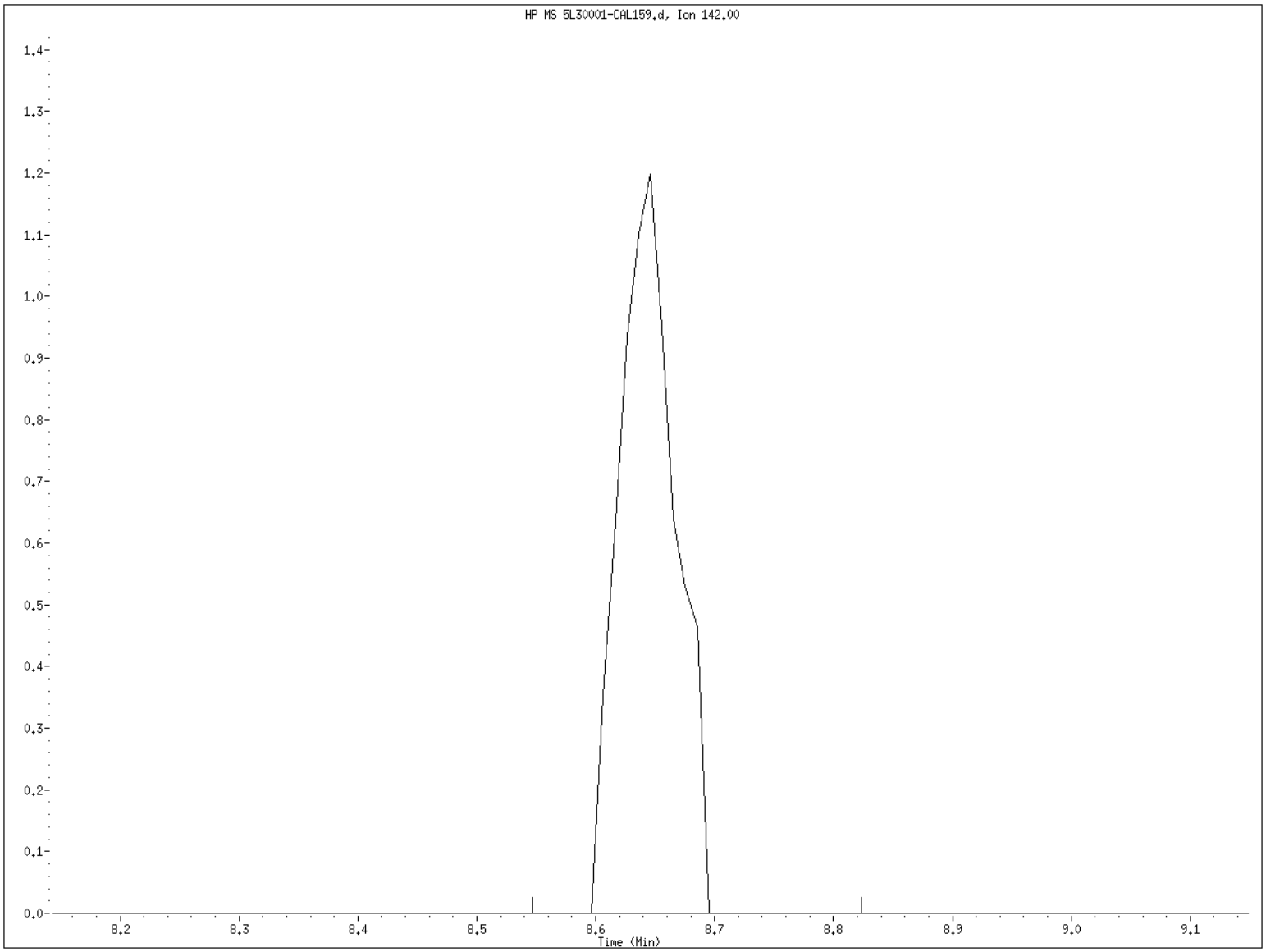
12/30/2015

Bromomethane CAS Number 74-83-9 Area = 5403 Manually integrated



File name: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL159.d
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 5.92
Operator ID: JAO

Iodomethane CAS Number 74-88-4 Area = 4027 Manually integrated



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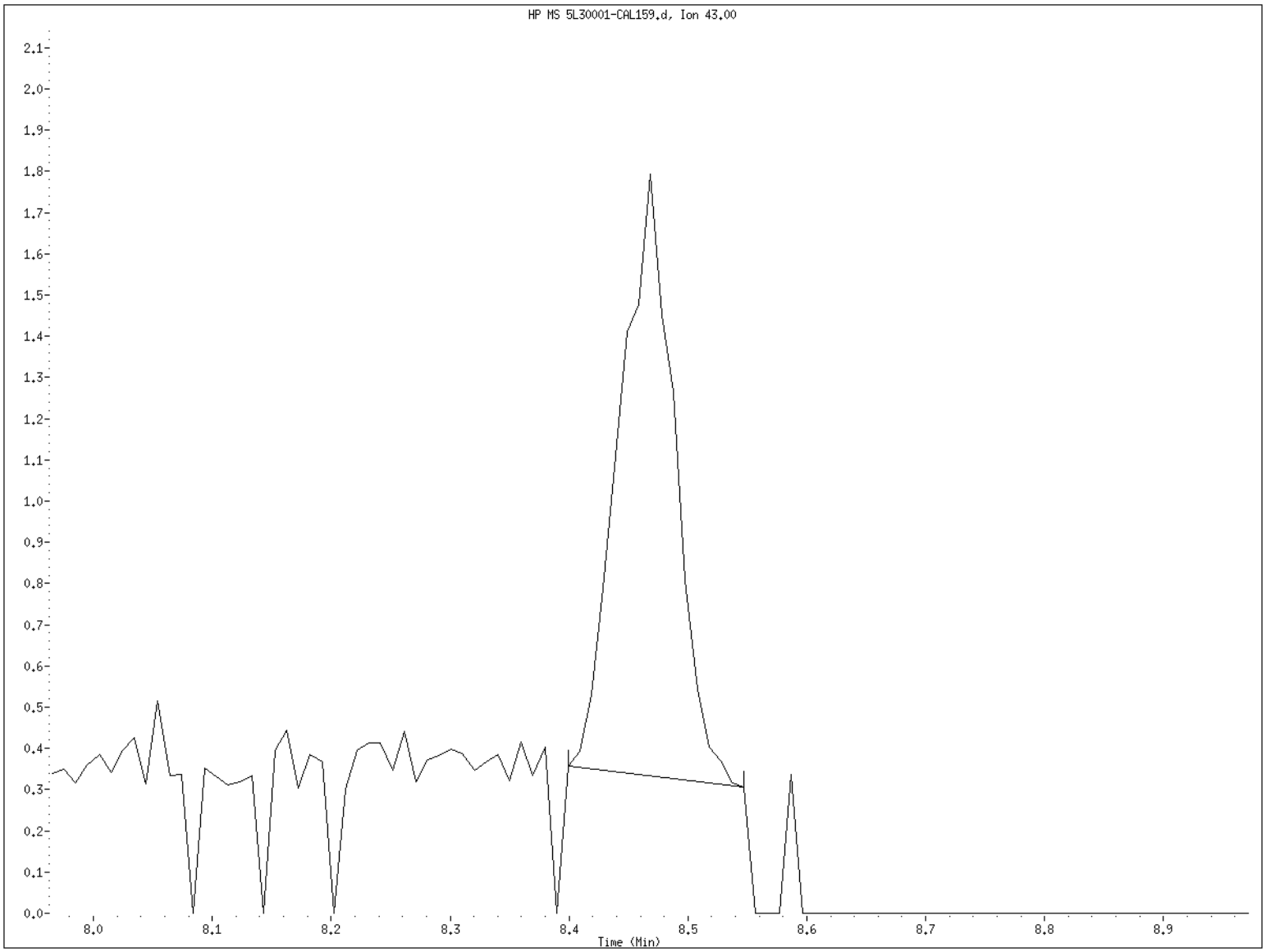
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 8.65
Operator ID: JAO

Acetone CAS Number 67-64-1 Area = 4745 Manually integrated



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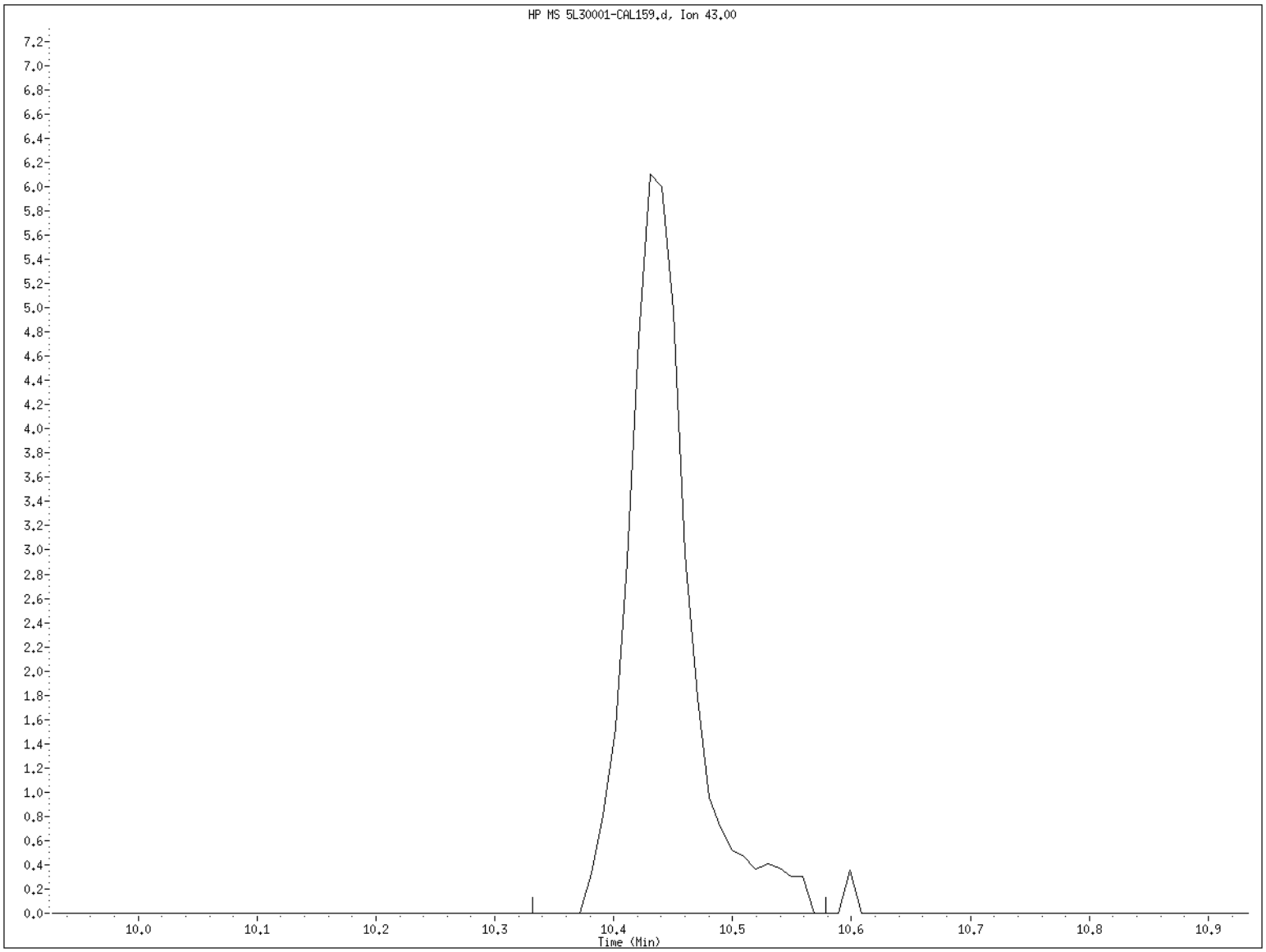
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 8.47
Operator ID: JAO

Vinyl acetate CAS Number 108-05-4 Area = 21630 Manually integrated



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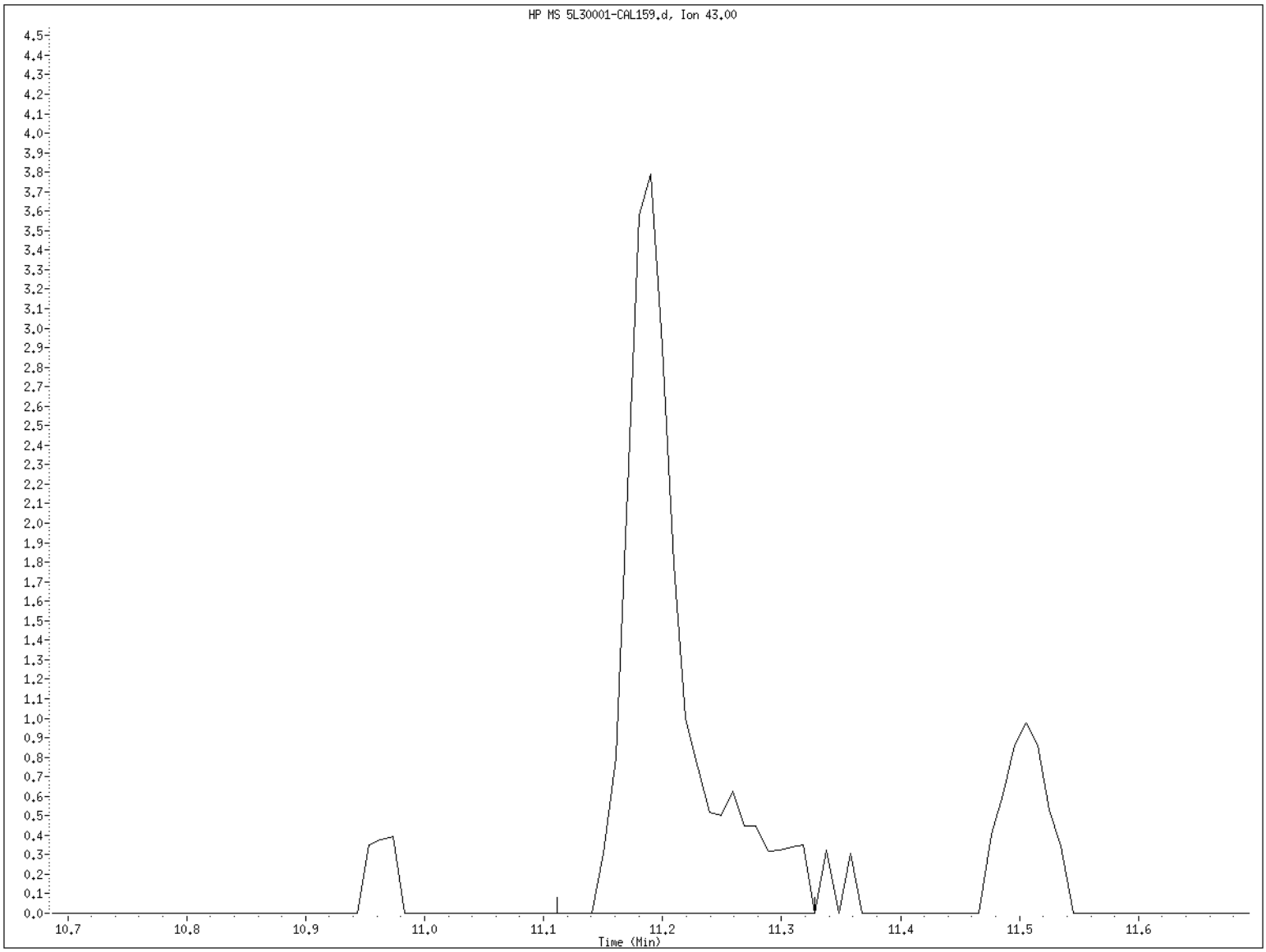
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 10.43
Operator ID: JAO

2-butanone CAS Number 78-93-3 Area = 12409 Manually integrated



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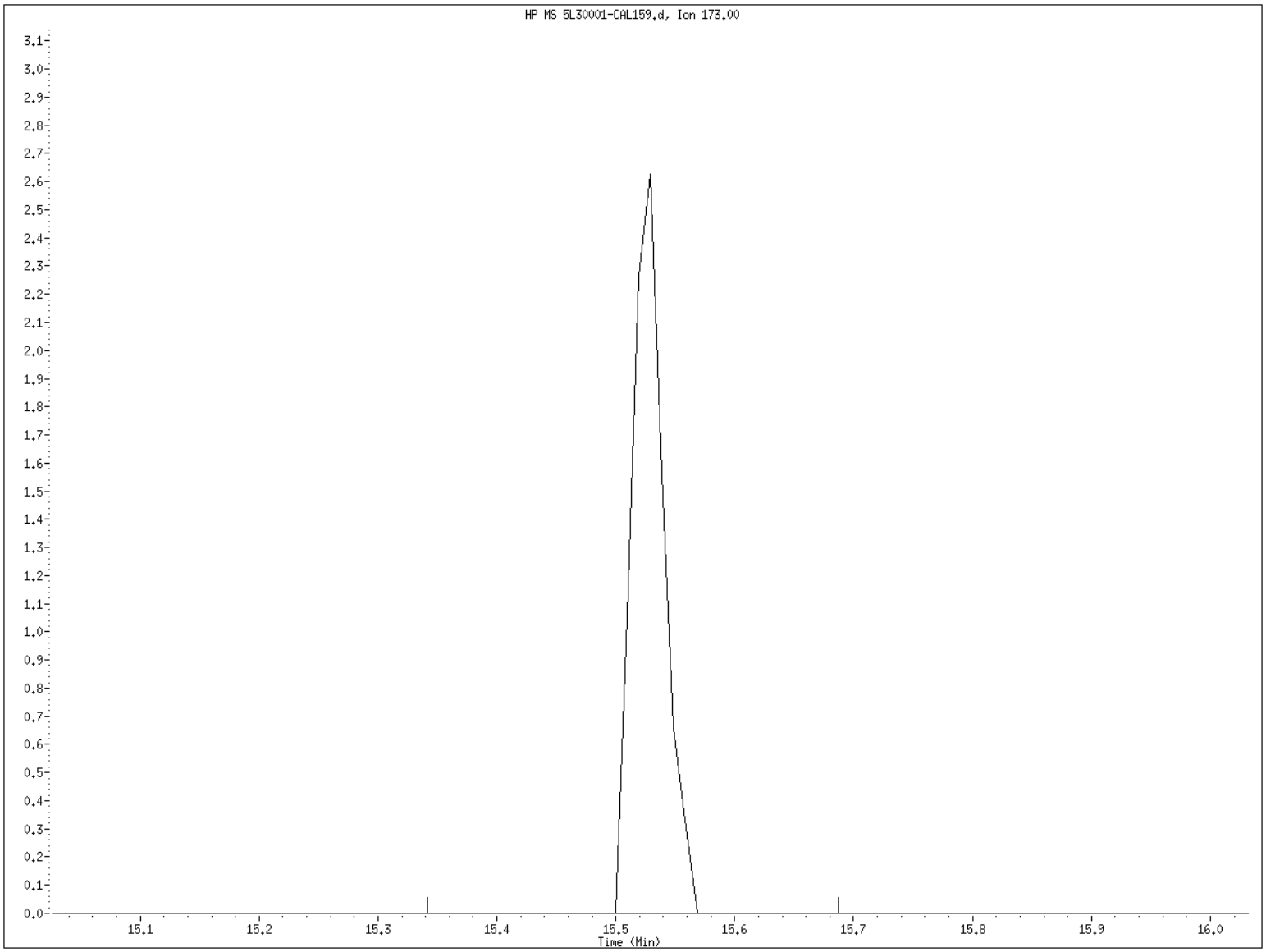
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 11.19
Operator ID: JAO

Bromoform CAS Number 75-25-2 Area = 5029 Manually integrated



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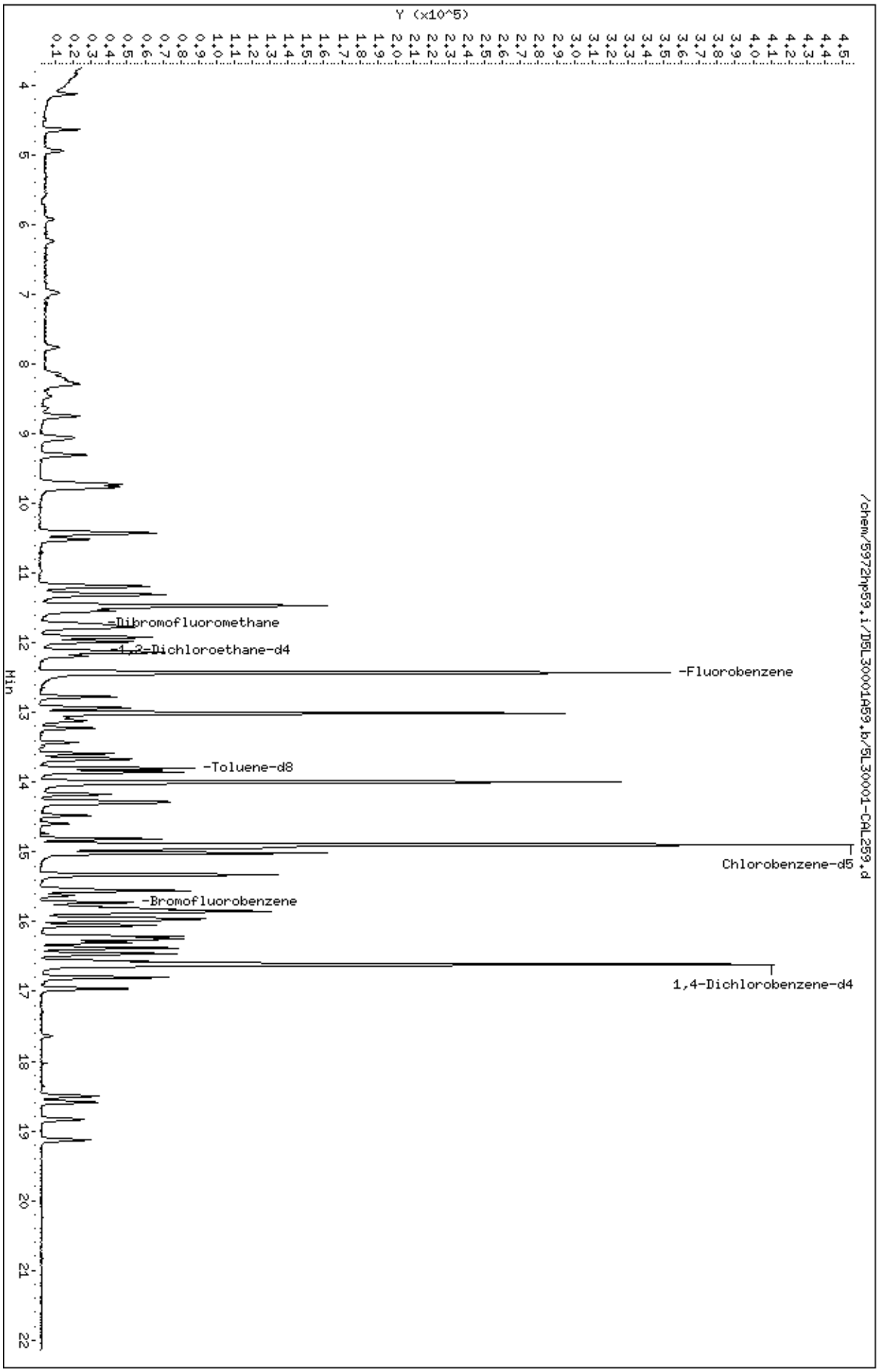
Client ID: VSTD005AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:00
Retention Time: 15.53
Operator ID: JAO

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Date : 29-DEC-2015 17:28
Client ID: WSTD010AB
Sample Info: 5L30001-CAL2:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Lab Smp Id: 5L30001-CAL2 Client Smp ID: VSTD010AB
Inj Date : 29-DEC-2015 17:28
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL2:JAO
Misc Info : VSTD010AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 17:28 Cal File: 5L30001-CAL259.d
Als bottle: 23 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.429	12.429	(1.000)	399599	250.000	
* 2 Chlorobenzene-d5	117	14.894	14.894	(1.000)	286010	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.610	16.610	(1.000)	132003	250.000	
$ 4 Dibromofluoromethane	113	11.729	11.729	(0.944)	21230	50.0000	49.2111
$ 5 1,2-Dichloroethane-d4	65	12.113	12.113	(0.975)	19895	50.0000	48.3945
$ 6 Toluene-d8	98	13.799	13.799	(0.927)	63532	50.0000	52.2122
$ 7 Bromofluorobenzene	95	15.722	15.722	(0.947)	19900	50.0000	50.9532
8 Dichlorodifluoromethane	85	4.126	4.126	(0.332)	21806	50.0000	47.7224
9 Chloromethane	50	4.638	4.638	(0.373)	31528	50.0000	47.5028
10 Vinyl Chloride	62	4.944	4.944	(0.398)	18713	50.0000	44.4489
11 Bromomethane	94	5.930	5.930	(0.477)	11563	50.0000	50.7549(M)
12 Chloroethane	64	6.246	6.246	(0.503)	9135	50.0000	44.5307
13 Trichlorofluoromethane	101	6.966	6.966	(0.560)	16963	50.0000	49.0638
178 Diethyl ether	45	7.774	7.774	(0.625)	7624	50.0000	45.8461
14 Acrolein	56	8.129	8.129	(0.654)	12903	500.000	482.640

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.208	8.208	(0.660)	5624	50.0000	49.6560
16 1,1,2-trichloro-1,2,2-trifluo	101	8.257	8.257	(0.664)	12979	50.0000	46.4017
17 1,1-Dichloroethene	96	8.307	8.307	(0.668)	10554	50.0000	47.9605
18 Acetone	43	8.474	8.474	(0.682)	8746	125.000	117.562(M)
19 Iodomethane	142	8.642	8.642	(0.695)	11195	50.0000	50.0000(M)
20 Carbon disulfide	76	8.751	8.751	(0.704)	51677	50.0000	49.8320
21 3-Chloropropene	76	9.056	9.056	(0.729)	7228	50.0000	47.2765
22 Acetonitrile	41	9.056	9.056	(0.729)	23925	50.0000	47.1191
23 Methyl acetate	43	9.086	9.086	(0.731)	17532	50.0000	48.7648
24 Methylene Chloride	84	9.313	9.313	(0.749)	16969	50.0000	49.2293
25 Acrylonitrile	53	9.766	9.766	(0.786)	49690	500.000	495.530
26 Methyl-tert-butyl ether	73	9.707	9.707	(0.781)	36703	50.0000	50.2886
28 trans-1,2-Dichloroethene	96	9.727	9.727	(0.783)	15740	50.0000	49.9613
29 trans-1,2-DCE (part of total)	96	9.727	9.727	(0.783)	15740	50.0000	49.9613
31 Isopropyl ether	45	10.427	10.427	(0.839)	60223	50.0000	48.5974
32 1,1-Dichloroethane	63	10.417	10.417	(0.838)	31735	50.0000	48.3170
33 Vinyl acetate	43	10.437	10.437	(0.840)	42983	50.0000	48.9018(M)
34 Chloroprene	53	10.516	10.516	(0.846)	23393	50.0000	49.5010
35 2-butanone	43	11.186	11.186	(0.900)	20930	125.000	112.053
36 2,2-Dichloropropane	77	11.176	11.176	(0.899)	22256	50.0000	49.4357
37 cis-1,2-Dichloroethene	96	11.196	11.196	(0.901)	17857	50.0000	49.0721
38 cis-1,2-DCE (part of total)	96	11.196	11.196	(0.901)	17857	50.0000	49.0721
39 Propionitrile	54	11.305	11.305	(0.910)	101032	2500.00	2488.11
40 Methacrylonitrile	41	11.462	11.462	(0.922)	112469	500.000	476.431
41 Bromochloromethane	128	11.482	11.482	(0.924)	8193	50.0000	50.1888
180 Tetrahydrofuran	42	11.502	11.502	(0.925)	22655	200.000	187.776
42 Chloroform	83	11.541	11.541	(0.929)	30009	50.0000	49.1599
43 1,1,1-Trichloroethane	97	11.758	11.758	(0.946)	22785	50.0000	48.8689
44 Cyclohexane	56	11.788	11.788	(0.948)	24480	50.0000	49.7182
46 1,1-dichloropropene	75	11.926	11.926	(0.960)	22320	50.0000	50.1543
47 Isobutyl alcohol	43	11.985	11.985	(0.964)	40711	2500.00	2389.35
48 Carbon Tetrachloride	117	11.916	11.916	(0.959)	19575	50.0000	48.8880
49 Benzene	78	12.143	12.143	(0.977)	66306	50.0000	50.1684
50 1,2-Dichloroethane	62	12.192	12.192	(0.981)	22460	50.0000	49.5455
51 Trichloroethene	130	12.774	12.774	(1.028)	17245	50.0000	50.1148
52 Methylcyclohexane	83	12.932	12.932	(1.040)	21997	50.0000	49.4805
53 Methylmethacrylate	100	13.011	13.011	(1.047)	38653	500.000	512.329
54 1,2-Dichloropropane	63	13.849	13.849	(1.114)	5418	50.0000	49.1918
55 1,4-dioxane	88	13.080	13.080	(1.052)	7424	2500.00	2429.78
56 Dibromomethane	174	13.119	13.119	(1.056)	10758	50.0000	50.6301
57 Bromodichloromethane	83	13.228	13.228	(1.064)	21695	50.0000	50.5715
58 cis-1,3-Dichloropropene	75	13.592	13.592	(1.094)	26146	50.0000	51.1282
59 4-Methyl-2-pentanone	43	13.661	13.661	(0.917)	49146	125.000	126.983
60 Toluene	92	13.849	13.849	(0.930)	37369	50.0000	52.9967
61 Ethylmethacrylate	99	13.997	13.997	(0.940)	31592	500.000	517.543
62 trans-1,3-Dichloropropene	75	14.026	14.026	(0.942)	23720	50.0000	53.5330
63 1,1,2-Trichloroethane	97	14.174	14.174	(0.952)	13470	50.0000	52.0438

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Report Date: 30-Dec-2015 07:22

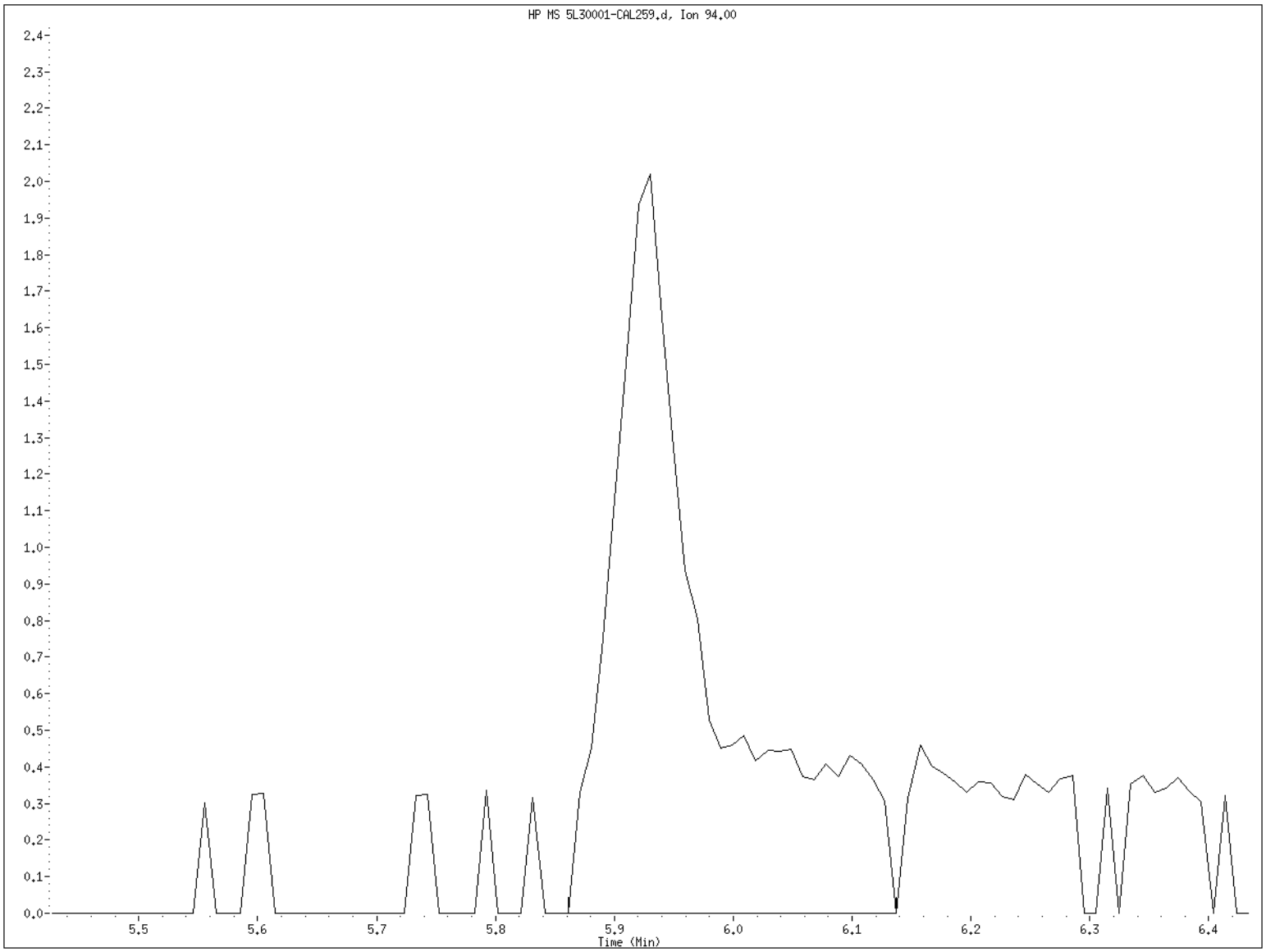
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.283	14.283	(0.959)	32844	125.000	128.550
65 2-chloroethyl vinyl ether	63	13.435	13.435	(1.081)	8345	50.0000	50.9243
66 1,3-Dichloropropane	76	14.302	14.302	(0.960)	22790	50.0000	50.1698
67 Tetrachloroethene	164	14.273	14.273	(0.958)	13497	50.0000	51.2747
68 Dibromochloromethane	129	14.480	14.480	(0.972)	17201	50.0000	52.9282
69 1,2-Dibromoethane	107	14.598	14.598	(0.980)	14329	50.0000	50.7747
70 1-Chlorohexane	55	14.815	14.815	(0.995)	16400	50.0000	51.0119
71 Chlorobenzene	112	14.924	14.924	(1.002)	43384	50.0000	52.1054
72 Ethylbenzene	106	14.943	14.943	(1.003)	20336	50.0000	52.2101
73 1,1,1,2-Tetrachloroethane	131	14.963	14.963	(1.005)	16448	50.0000	52.1157
74 m,p-Xylene	106	15.022	15.022	(1.009)	50225	100.000	102.231
75 m,p-Xylene (part of total)	106	15.022	15.022	(1.009)	50225	100.000	102.231
76 o-Xylene	106	15.318	15.318	(1.028)	24587	50.0000	52.8829
77 o-Xylene (part of total)	106	15.318	15.318	(1.028)	24587	50.0000	52.8829
78 Styrene	104	15.328	15.328	(1.029)	39213	50.0000	52.7467
79 Bromoform	173	15.525	15.525	(0.935)	10228	50.0000	50.2967
80 Isopropyl Benzene	105	15.555	15.555	(1.044)	60973	50.0000	52.5366
81 1,1,2,2-Tetrachloroethane	83	15.782	15.782	(0.950)	19529	50.0000	49.8841
82 trans-1,4-dichloro-2-butene	53	15.811	15.811	(1.062)	19749	200.000	213.139
83 1,2,3-Trichloropropane	110	15.851	15.851	(1.064)	4371	50.0000	51.4798
84 Bromobenzene	156	15.870	15.870	(1.066)	17264	50.0000	52.8109
85 n-Propyl Benzene	91	15.851	15.851	(0.954)	81024	50.0000	50.9732
86 1,3,5-Trimethyl Benzene	105	15.949	15.949	(0.960)	51264	50.0000	52.4220
87 2-Chlorotoluene	91	15.979	15.979	(0.962)	49683	50.0000	49.4482
88 4-Chlorotoluene	91	16.058	16.058	(0.967)	47856	50.0000	50.3982
89 tert-Butyl Benzene	119	16.215	16.215	(0.976)	49745	50.0000	50.3306
90 1,2,4-Trimethyl Benzene	105	16.255	16.255	(0.979)	52030	50.0000	52.1863
91 Pentachloroethane	167	16.304	16.304	(0.982)	10620	50.0000	50.2429
92 sec-Butyl Benzene	105	16.383	16.383	(0.986)	67243	50.0000	50.3253
93 p-Isopropyl Toluene	119	16.462	16.462	(0.991)	53351	50.0000	51.1507
94 1,3-Dichlorobenzene	146	16.561	16.561	(0.997)	31328	50.0000	52.7720
95 1,4-Dichlorobenzene	146	16.630	16.630	(1.001)	33741	50.0000	49.3666
96 n-Butyl Benzene	91	16.797	16.797	(1.011)	52600	50.0000	52.0729
97 1,2-Dichlorobenzene	146	16.965	16.965	(1.021)	28539	50.0000	50.4313
98 1,2-Dibromo-3-Chloropropane	157	17.655	17.655	(1.063)	3061	50.0000	56.5126
99 1,2,4-Trichlorobenzene	180	18.503	18.503	(1.114)	17550	50.0000	49.4512
100 Hexachlorobutadiene	225	18.592	18.592	(1.119)	9309	50.0000	49.8214
101 Naphthalene	128	18.839	18.839	(1.134)	33547	50.0000	47.8619
102 1,2,3-Trichlorobenzene	180	19.134	19.134	(1.152)	15723	50.0000	48.9279
M 103 1,2-Dichloroethene (total)	96				33597	100.000	98.9694
M 104 Xylene (total)	106				74812	150.000	155.114

QC Flag Legend

M - Compound response manually integrated.

12/30/2015

Bromomethane CAS Number 74-83-9 Area = 11563 Manually integrated



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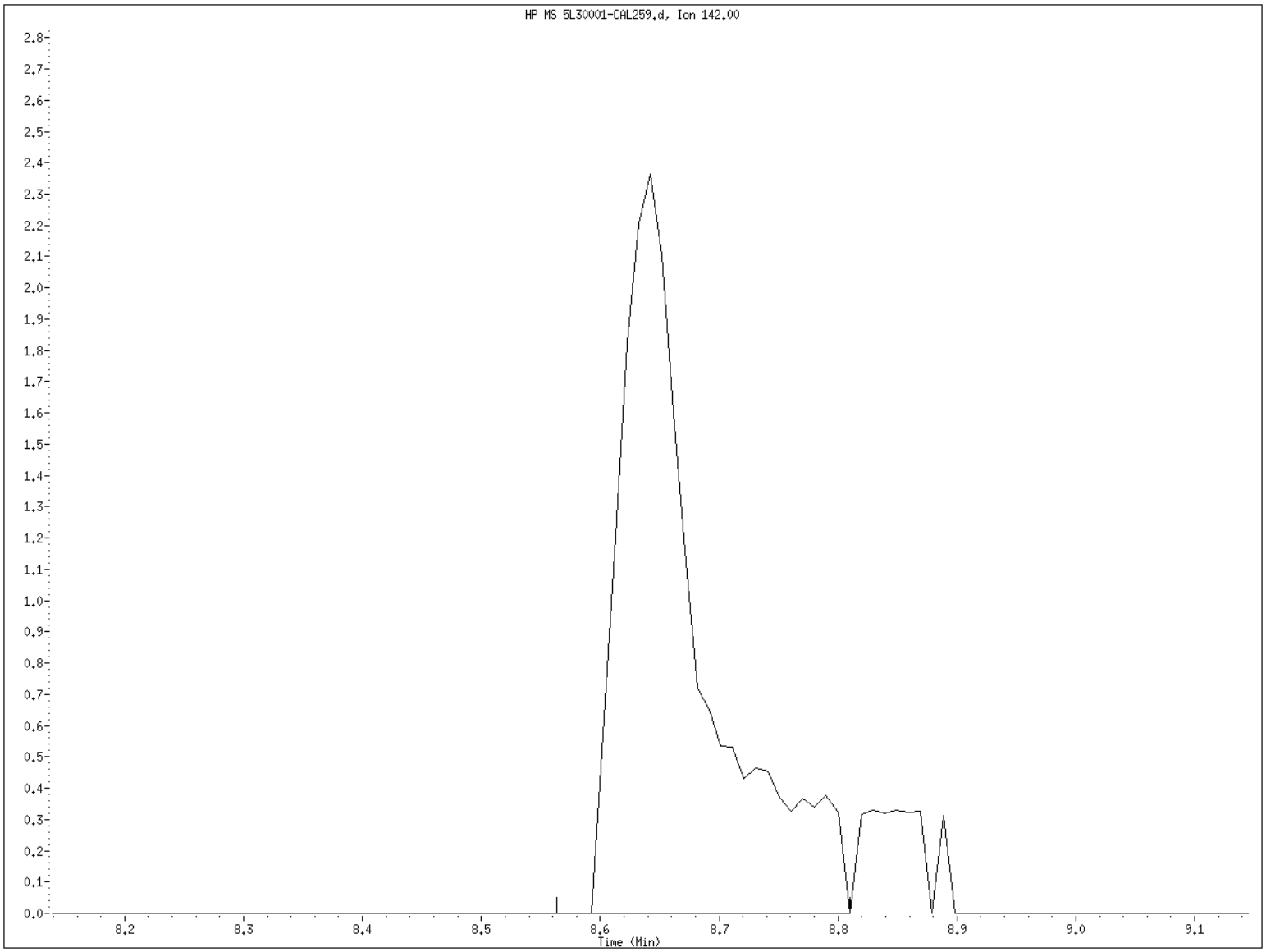
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 5.93
Operator ID: JAO

Iodomethane CAS Number 74-88-4 Area = 11195 Manually integrated



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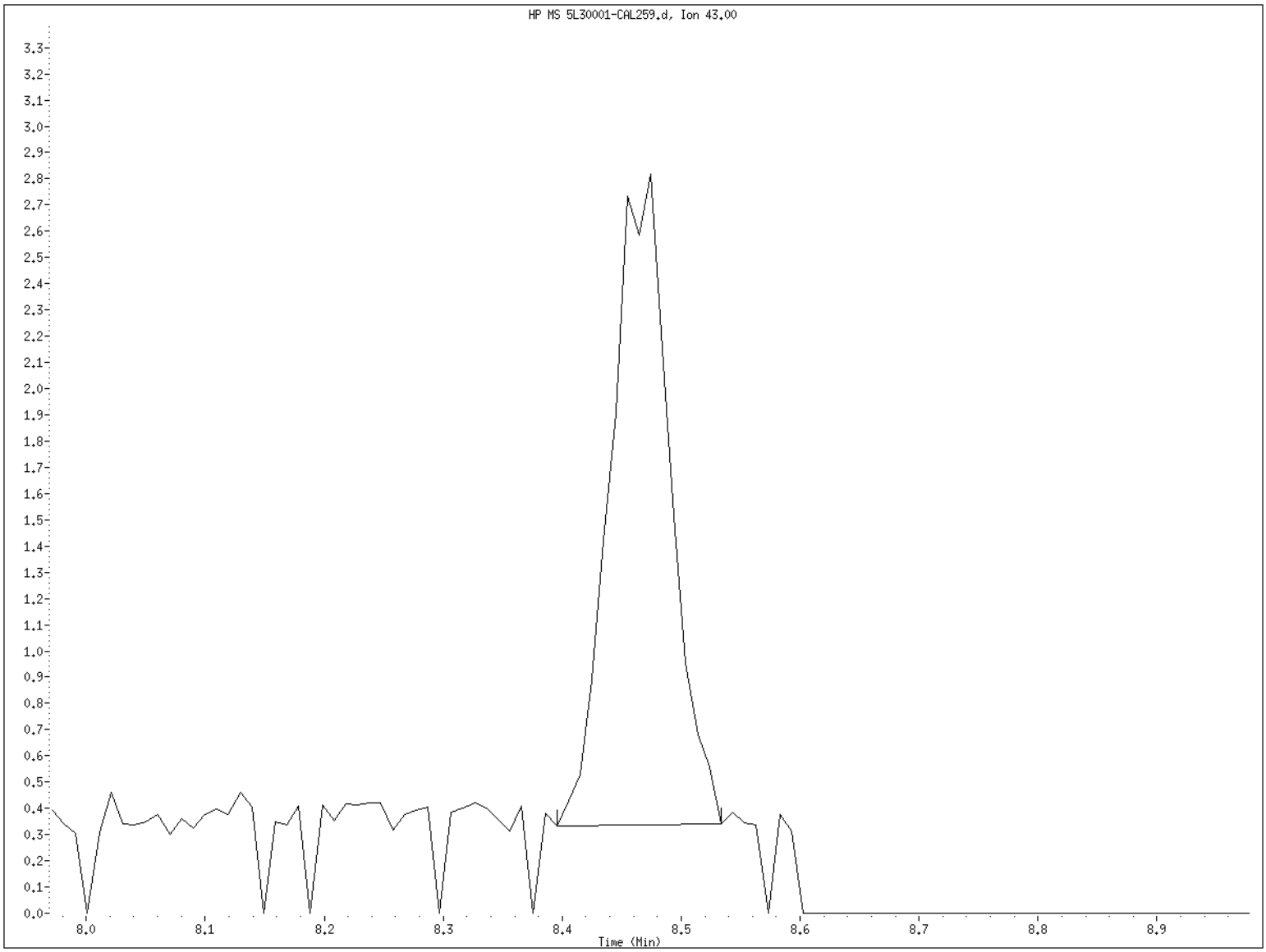
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 8.64
Operator ID: JAO

Acetone CAS Number 67-64-1 Area = 8746 Manually integrated



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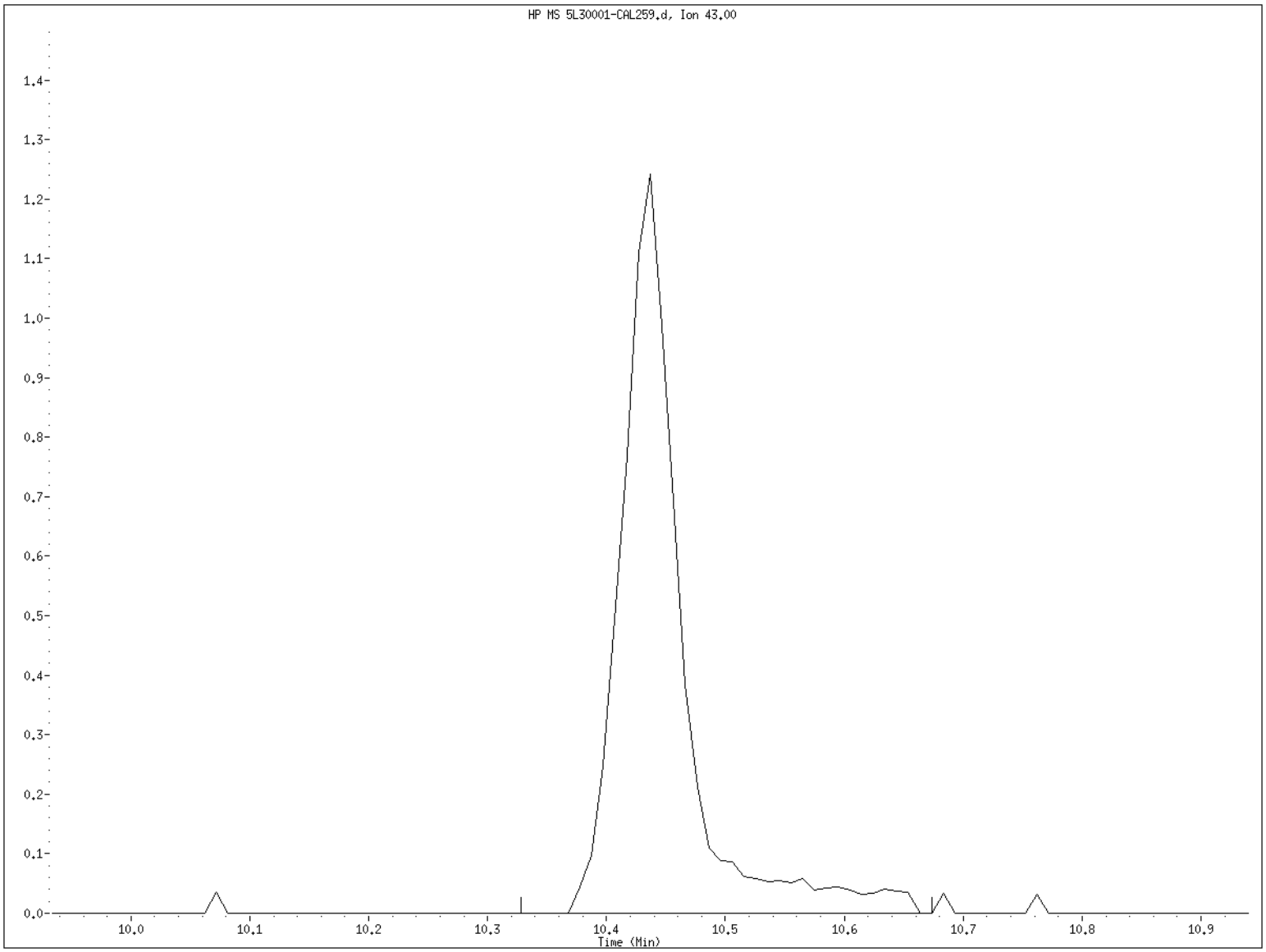
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 8.47
Operator ID: JAO

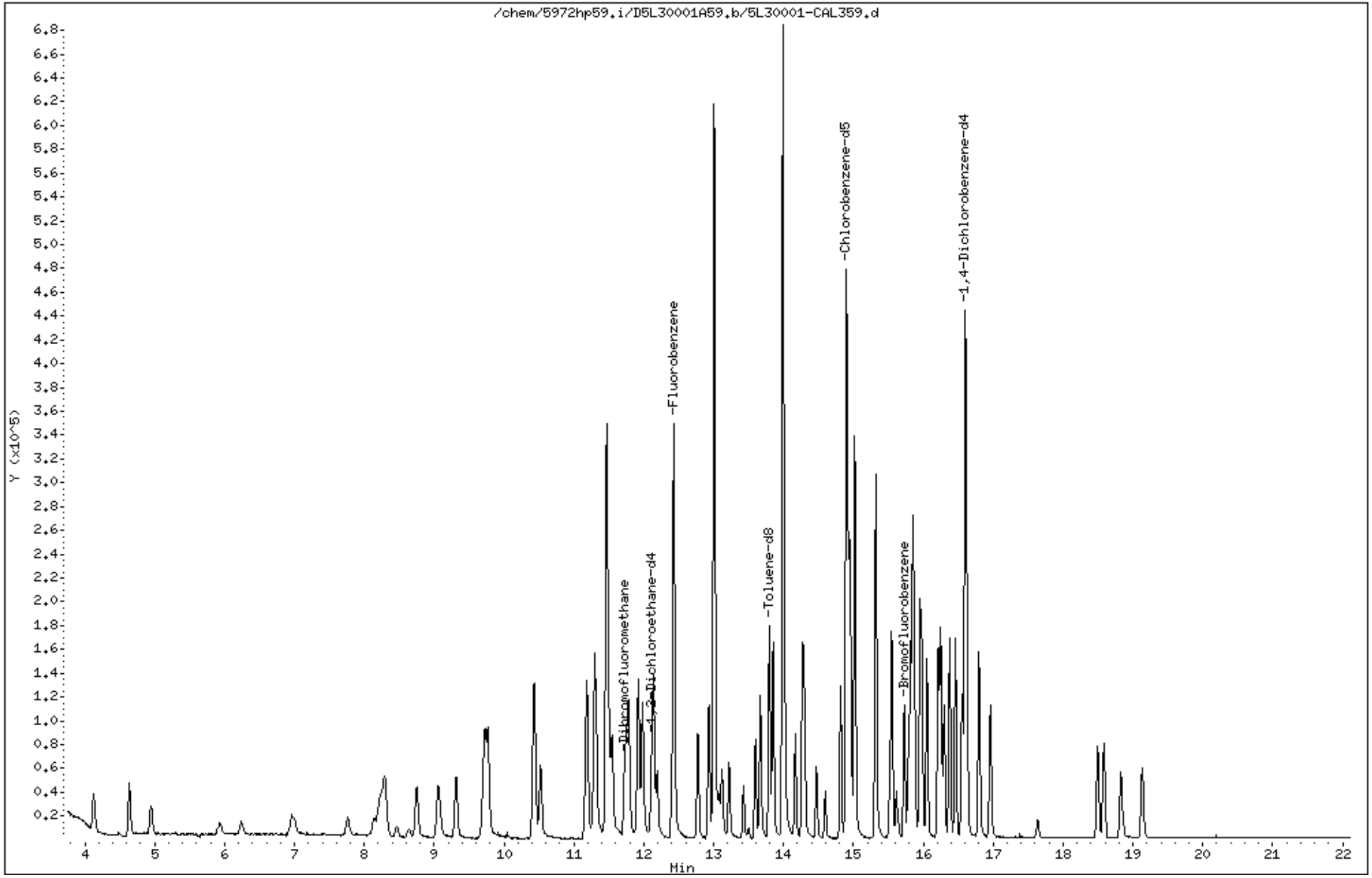
Vinyl acetate CAS Number 108-05-4 Area = 42983 Manually integrated



File name: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL259.d
Client ID: VSTD010AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 17:28
Retention Time: 10.44
Operator ID: JAO

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Date : 29-DEC-2015 18:32
Client ID: VSTD020AB
Sample Info: 5L30001-CAL3:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Lab Smp Id: 5L30001-CAL3 Client Smp ID: VSTD020AB
Inj Date : 29-DEC-2015 18:32
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL3:JAO
Misc Info : VSTD020AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 18:32 Cal File: 5L30001-CAL359.d
Als bottle: 25 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 1 Fluorobenzene	96	12.423	12.423	(1.000)	369118	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.898	(1.000)	273652	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.604	(1.000)	132701	250.000	
$ 4 Dibromofluoromethane	113	11.723	11.723	(0.944)	43074	100.000	105.252
$ 5 1,2-Dichloroethane-d4	65	12.117	12.117	(0.975)	40042	100.000	103.565
$ 6 Toluene-d8	98	13.794	13.794	(0.926)	127494	100.000	106.145
$ 7 Bromofluorobenzene	95	15.726	15.726	(0.947)	41482	100.000	103.700
8 Dichlorodifluoromethane	85	4.120	4.120	(0.332)	47591	100.000	108.156
9 Chloromethane	50	4.642	4.642	(0.374)	65253	100.000	104.200
10 Vinyl Chloride	62	4.938	4.938	(0.397)	43034	100.000	106.862
11 Bromomethane	94	5.924	5.924	(0.477)	20041	100.000	96.7704(M)
12 Chloroethane	64	6.240	6.240	(0.502)	19131	100.000	100.638
13 Trichlorofluoromethane	101	6.970	6.970	(0.561)	36400	100.000	108.903
178 Diethyl ether	45	7.768	7.768	(0.625)	13741	100.000	92.7127
14 Acrolein	56	8.133	8.133	(0.655)	20020	1000.00	865.294

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.212	8.212	(0.661)	13720	100.000	118.808
16 1,1,2-trichloro-1,2,2-trifluo	101	8.261	8.261	(0.665)	33868	100.000	118.776
17 1,1-Dichloroethene	96	8.301	8.301	(0.668)	25165	100.000	114.701
18 Acetone	43	8.469	8.469	(0.682)	22013	250.000	292.866
19 Iodomethane	142	8.636	8.636	(0.695)	21441	100.000	99.3653(M)
20 Carbon disulfide	76	8.754	8.754	(0.705)	106723	100.000	107.329
21 3-Chloropropene	76	9.060	9.060	(0.729)	13185	100.000	95.4740
22 Acetonitrile	41	9.060	9.060	(0.729)	50003	100.000	104.312
23 Methyl acetate	43	9.090	9.090	(0.732)	34997	100.000	103.525
24 Methylene Chloride	84	9.317	9.317	(0.750)	33925	100.000	104.272
25 Acrylonitrile	53	9.770	9.770	(0.786)	102884	1000.00	1071.19
26 Methyl-tert-butyl ether	73	9.711	9.711	(0.782)	73979	100.000	106.284
28 trans-1,2-Dichloroethene	96	9.731	9.731	(0.783)	32390	100.000	107.260
29 trans-1,2-DCE (part of total)	96	9.731	9.731	(0.783)	32390	100.000	107.260
31 Isopropyl ether	45	10.431	10.431	(0.840)	122618	100.000	104.636
32 1,1-Dichloroethane	63	10.421	10.421	(0.839)	65778	100.000	105.459
33 Vinyl acetate	43	10.431	10.431	(0.840)	77553	100.000	96.9668
34 Chloroprene	53	10.520	10.520	(0.847)	50315	100.000	109.682
35 2-butanone	43	11.180	11.180	(0.900)	44989	250.000	257.064
36 2,2-Dichloropropane	77	11.180	11.180	(0.900)	44849	100.000	105.098
37 cis-1,2-Dichloroethene	96	11.200	11.200	(0.902)	38684	100.000	109.575
38 cis-1,2-DCE (part of total)	96	11.200	11.200	(0.902)	38684	100.000	109.575
39 Propionitrile	54	11.309	11.309	(0.910)	216148	5000.00	5483.83
40 Methacrylonitrile	41	11.466	11.466	(0.923)	255958	1000.00	1109.52
41 Bromochloromethane	128	11.486	11.486	(0.925)	16255	100.000	105.067
180 Tetrahydrofuran	42	11.506	11.506	(0.926)	49885	400.000	430.532
42 Chloroform	83	11.545	11.545	(0.929)	64190	100.000	108.818
43 1,1,1-Trichloroethane	97	11.752	11.752	(0.946)	45700	100.000	103.992
44 Cyclohexane	56	11.782	11.782	(0.948)	54922	100.000	112.942
46 1,1-dichloropropene	75	11.930	11.930	(0.960)	48509	100.000	111.323
47 Isobutyl alcohol	43	11.979	11.979	(0.964)	88969	5000.00	5417.07
48 Carbon Tetrachloride	117	11.920	11.920	(0.960)	42819	100.000	109.988
49 Benzene	78	12.147	12.147	(0.978)	136050	100.000	107.346
50 1,2-Dichloroethane	62	12.196	12.196	(0.982)	49071	100.000	110.837
51 Trichloroethene	130	12.778	12.778	(1.029)	36797	100.000	109.985
52 Methylcyclohexane	83	12.936	12.936	(1.041)	47620	100.000	110.104
53 Methylmethacrylate	100	13.015	13.015	(1.048)	83913	1000.00	1127.39
54 1,2-Dichloropropane	63	13.853	13.853	(1.115)	11075	100.000	105.735
55 1,4-dioxane	88	13.084	13.084	(1.053)	16248	5000.00	5480.35
56 Dibromomethane	174	13.123	13.123	(1.056)	22658	100.000	109.790
57 Bromodichloromethane	83	13.222	13.222	(1.064)	45212	100.000	108.974
58 cis-1,3-Dichloropropene	75	13.596	13.596	(1.094)	51435	100.000	105.754
59 4-Methyl-2-pentanone	43	13.665	13.665	(0.917)	106424	250.000	273.746
60 Toluene	92	13.853	13.853	(0.930)	76574	100.000	108.613
61 Ethylmethacrylate	99	13.991	13.991	(0.939)	61407	1000.00	1033.69
62 trans-1,3-Dichloropropene	75	14.020	14.020	(0.941)	48746	100.000	109.513
63 1,1,2-Trichloroethane	97	14.168	14.168	(0.951)	27495	100.000	107.092

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Report Date: 30-Dec-2015 07:22

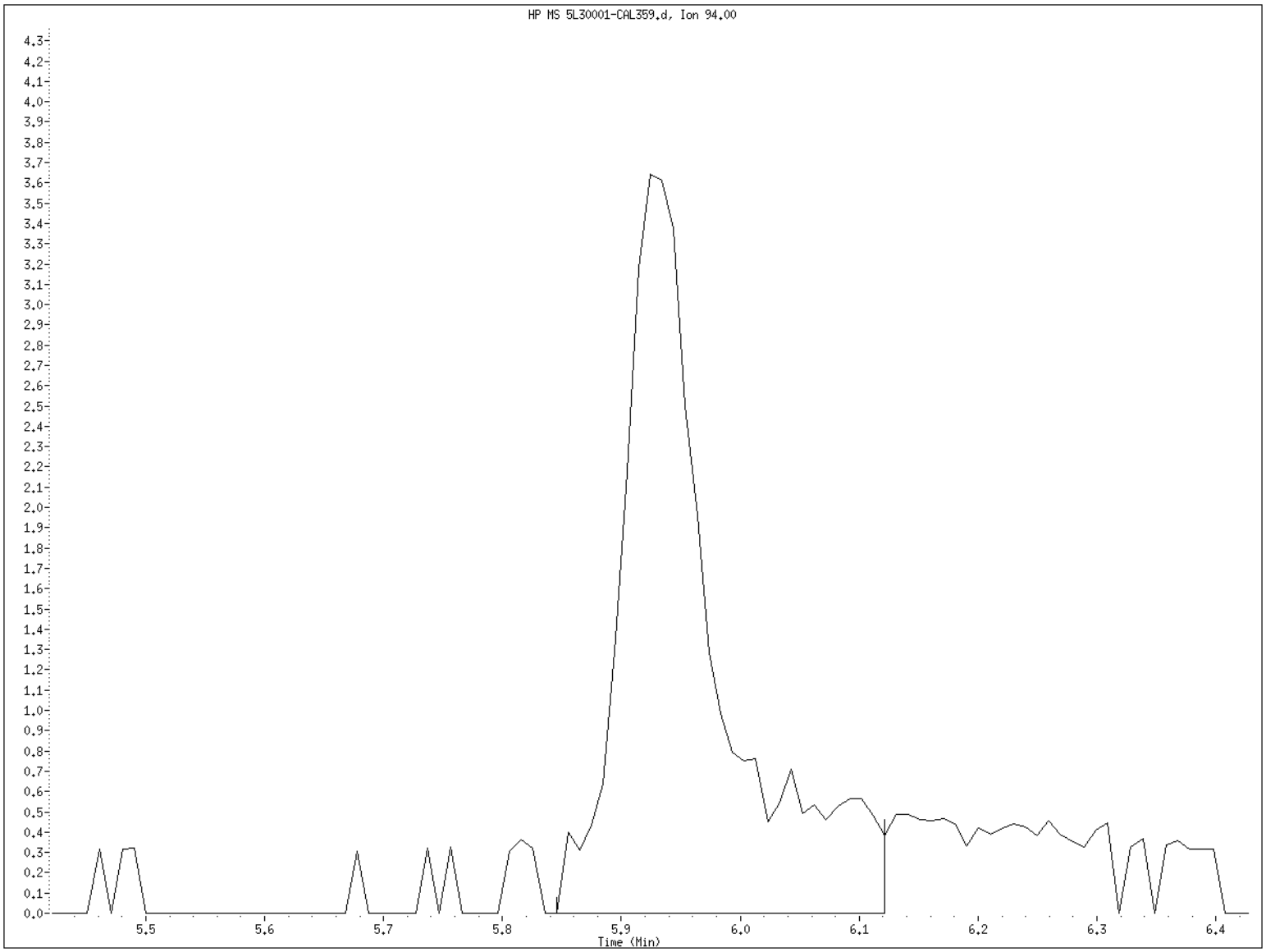
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.287	14.287	(0.959)	70458	250.000	274.246
65 2-chloroethyl vinyl ether	63	13.429	13.429	(1.081)	17996	100.000	111.845
66 1,3-Dichloropropane	76	14.306	14.306	(0.960)	48831	100.000	107.908
67 Tetrachloroethene	164	14.277	14.277	(0.958)	28664	100.000	108.802
68 Dibromochloromethane	129	14.474	14.474	(0.972)	36233	100.000	110.442
69 1,2-Dibromoethane	107	14.592	14.592	(0.979)	30460	100.000	108.190
70 1-Chlorohexane	55	14.809	14.809	(0.994)	33967	100.000	106.717
71 Chlorobenzene	112	14.918	14.918	(1.001)	89270	100.000	107.728
72 Ethylbenzene	106	14.947	14.947	(1.003)	40943	100.000	106.366
73 1,1,1,2-Tetrachloroethane	131	14.957	14.957	(1.004)	32866	100.000	105.724
74 m,p-Xylene	106	15.016	15.016	(1.008)	107628	200.000	218.422
75 m,p-Xylene (part of total)	106	15.016	15.016	(1.008)	107628	200.000	218.422
76 o-Xylene	106	15.322	15.322	(1.028)	53039	100.000	112.048
77 o-Xylene (part of total)	106	15.322	15.322	(1.028)	53039	100.000	112.048
78 Styrene	104	15.332	15.332	(1.029)	85093	100.000	112.283
79 Bromoform	173	15.529	15.529	(0.935)	21946	100.000	104.785
80 Isopropyl Benzene	105	15.549	15.549	(1.044)	133788	100.000	112.782
81 1,1,2,2-Tetrachloroethane	83	15.786	15.786	(0.951)	38263	100.000	98.1317
82 trans-1,4-dichloro-2-butene	53	15.815	15.815	(1.062)	41648	400.000	443.964
83 1,2,3-Trichloropropane	110	15.845	15.845	(1.064)	9208	100.000	108.518
84 Bromobenzene	156	15.874	15.874	(1.066)	36112	100.000	109.799
85 n-Propyl Benzene	91	15.845	15.845	(0.954)	174001	100.000	105.756
86 1,3,5-Trimethyl Benzene	105	15.953	15.953	(0.961)	109349	100.000	107.217
87 2-Chlorotoluene	91	15.973	15.973	(0.962)	103312	100.000	101.510
88 4-Chlorotoluene	91	16.052	16.052	(0.967)	99608	100.000	102.857
89 tert-Butyl Benzene	119	16.219	16.219	(0.977)	106892	100.000	104.930
90 1,2,4-Trimethyl Benzene	105	16.249	16.249	(0.979)	110872	100.000	106.838
91 Pentachloroethane	167	16.298	16.298	(0.982)	22563	100.000	104.039
92 sec-Butyl Benzene	105	16.377	16.377	(0.986)	147126	100.000	106.158
93 p-Isopropyl Toluene	119	16.466	16.466	(0.992)	116809	100.000	107.323
94 1,3-Dichlorobenzene	146	16.565	16.565	(0.998)	64428	100.000	105.168
95 1,4-Dichlorobenzene	146	16.624	16.624	(1.001)	67858	100.000	99.1706
96 n-Butyl Benzene	91	16.791	16.791	(1.011)	108849	100.000	104.682
97 1,2-Dichlorobenzene	146	16.959	16.959	(1.021)	61054	100.000	104.764
98 1,2-Dibromo-3-Chloropropane	157	17.639	17.639	(1.062)	6275	100.000	109.669
99 1,2,4-Trichlorobenzene	180	18.497	18.497	(1.114)	38309	100.000	104.800
100 Hexachlorobutadiene	225	18.586	18.586	(1.119)	22892	100.000	113.591
101 Naphthalene	128	18.833	18.833	(1.134)	71878	100.000	101.331
102 1,2,3-Trichlorobenzene	180	19.128	19.128	(1.152)	33664	100.000	102.766
M 103 1,2-Dichloroethene (total)	96				71074	200.000	217.016
M 104 Xylene (total)	106				160667	300.000	330.470

QC Flag Legend

M - Compound response manually integrated.

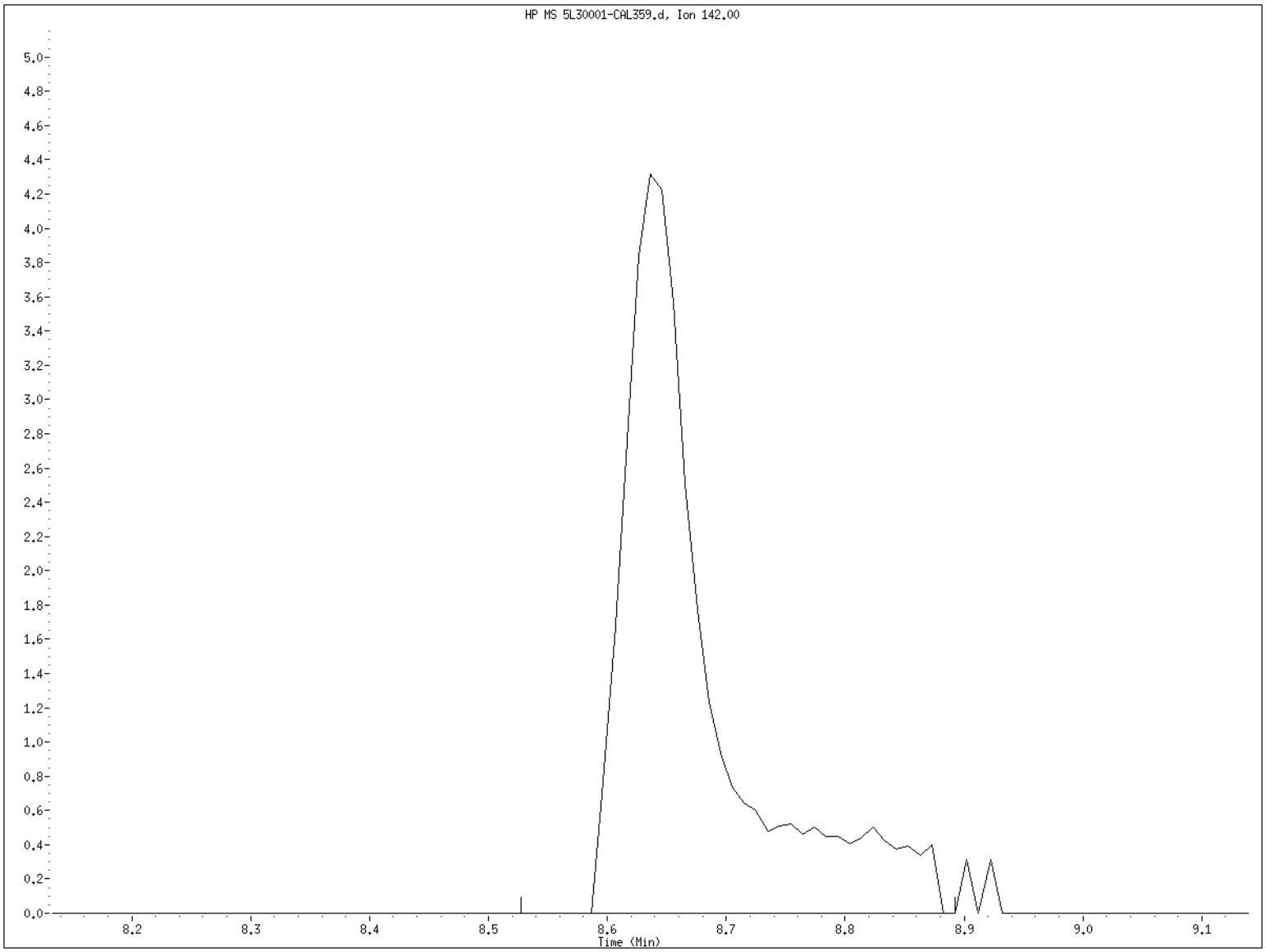
12/30/2015

Bromomethane CAS Number 74-83-9 Area = 20041 Manually integrated



File name: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Client ID: VSTD020AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:32
Retention Time: 5.92
Operator ID: JAO

Iodomethane CAS Number 74-88-4 Area = 21441 Manually integrated

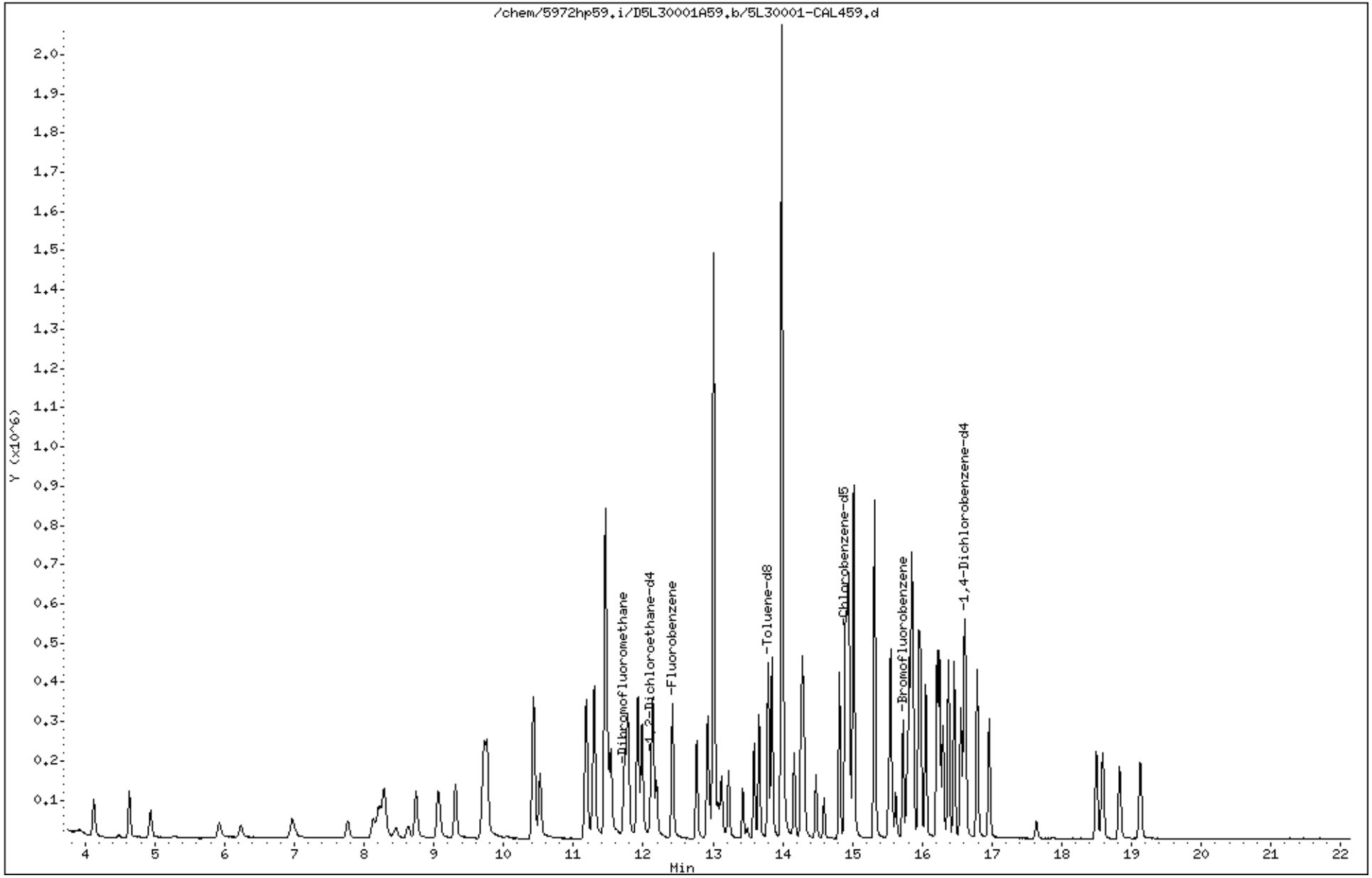


File name: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL359.d
Client ID: VSTD020AB
Instrument ID: 5972hp59.i
Injection Date and Time: 29-DEC-2015 18:32
Retention Time: 8.64
Operator ID: JAO

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Date : 29-DEC-2015 20:07
Client ID: VSTD050AB
Sample Info: 5L30001-CAL4:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Lab Smp Id: 5L30001-CAL4 Client Smp ID: VSTD050AB
Inj Date : 29-DEC-2015 20:07
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL4:JAO
Misc Info : VSTD050AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 28 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.418	12.418	(1.000)	376208	250.000	
* 2 Chlorobenzene-d5	117	14.894	14.894	(1.000)	289175	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.600	16.600	(1.000)	138667	250.000	
$ 4 Dibromofluoromethane	113	11.718	11.718	(0.944)	113301	250.000	261.571
$ 5 1,2-Dichloroethane-d4	65	12.113	12.113	(0.975)	101034	250.000	254.376
$ 6 Toluene-d8	98	13.789	13.789	(0.926)	338616	250.000	259.856
$ 7 Bromofluorobenzene	95	15.722	15.722	(0.947)	109331	250.000	256.176
8 Dichlorodifluoromethane	85	4.125	4.125	(0.332)	135005	250.000	279.600
9 Chloromethane	50	4.638	4.638	(0.373)	162830	250.000	252.024
10 Vinyl Chloride	62	4.944	4.944	(0.398)	113827	250.000	267.807
11 Bromomethane	94	5.920	5.920	(0.477)	58116	250.000	271.547
12 Chloroethane	64	6.235	6.235	(0.502)	52523	250.000	275.283
13 Trichlorofluoromethane	101	6.975	6.975	(0.562)	95975	250.000	272.022
178 Diethyl ether	45	7.764	7.764	(0.625)	36820	250.000	262.192
14 Acrolein	56	8.129	8.129	(0.655)	72092	2500.00	2776.96

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.198	8.198	(0.660)	34856	250.000	271.903
16 1,1,2-trichloro-1,2,2-trifluo	101	8.257	8.257	(0.665)	80429	250.000	255.838
17 1,1-Dichloroethene	96	8.296	8.296	(0.668)	61406	250.000	256.380
18 Acetone	43	8.464	8.464	(0.682)	47978	625.000	628.426
19 Iodomethane	142	8.632	8.632	(0.695)	69016	250.000	283.589
20 Carbon disulfide	76	8.750	8.750	(0.705)	290493	250.000	271.531
21 3-Chloropropene	76	9.056	9.056	(0.729)	41040	250.000	266.376
22 Acetonitrile	41	9.056	9.056	(0.729)	130680	250.000	267.707
23 Methyl acetate	43	9.085	9.085	(0.732)	82038	250.000	249.402
24 Methylene Chloride	84	9.312	9.312	(0.750)	92582	250.000	270.076
25 Acrylonitrile	53	9.766	9.766	(0.786)	266467	2500.00	2670.18
26 Methyl-tert-butyl ether	73	9.707	9.707	(0.782)	202569	250.000	268.667
28 trans-1,2-Dichloroethene	96	9.726	9.726	(0.783)	89356	250.000	268.211
29 trans-1,2-DCE (part of total)	96	9.726	9.726	(0.783)	89356	250.000	268.211
31 Isopropyl ether	45	10.426	10.426	(0.840)	345271	250.000	269.793
32 1,1-Dichloroethane	63	10.417	10.417	(0.839)	190442	250.000	278.569
33 Vinyl acetate	43	10.436	10.436	(0.840)	223450	250.000	262.577
34 Chloroprene	53	10.515	10.515	(0.847)	136243	250.000	274.073
35 2-butanone	43	11.176	11.176	(0.900)	109422	625.000	615.938
36 2,2-Dichloropropane	77	11.176	11.176	(0.900)	126610	250.000	273.658
37 cis-1,2-Dichloroethene	96	11.196	11.196	(0.902)	108182	250.000	278.547
38 cis-1,2-DCE (part of total)	96	11.196	11.196	(0.902)	108182	250.000	278.547
39 Propionitrile	54	11.304	11.304	(0.910)	537888	12500.0	13221.6
40 Methacrylonitrile	41	11.462	11.462	(0.923)	606437	2500.00	2589.91
41 Bromochloromethane	128	11.482	11.482	(0.925)	43254	250.000	268.333
180 Tetrahydrofuran	42	11.501	11.501	(0.926)	123682	1000.00	1054.13
42 Chloroform	83	11.541	11.541	(0.929)	178752	250.000	281.293
43 1,1,1-Trichloroethane	97	11.748	11.748	(0.946)	132096	250.000	275.207
44 Cyclohexane	56	11.777	11.777	(0.948)	157662	250.000	287.115
46 1,1-dichloropropene	75	11.925	11.925	(0.960)	136064	250.000	280.563
47 Isobutyl alcohol	43	11.985	11.985	(0.965)	225716	12500.0	13191.5
48 Carbon Tetrachloride	117	11.915	11.915	(0.959)	116503	250.000	271.092
49 Benzene	78	12.142	12.142	(0.978)	359402	250.000	266.855
50 1,2-Dichloroethane	62	12.192	12.192	(0.982)	120399	250.000	259.828
51 Trichloroethene	130	12.773	12.773	(1.029)	103218	250.000	277.105
52 Methylcyclohexane	83	12.931	12.931	(1.041)	134494	250.000	278.982
53 Methylmethacrylate	100	13.010	13.010	(1.048)	216719	2500.00	2659.57
54 1,2-Dichloropropane	63	13.848	13.848	(1.115)	31680	250.000	279.036
55 1,4-dioxane	88	13.079	13.079	(1.053)	42112	12500.0	13456.3
56 Dibromomethane	174	13.119	13.119	(1.056)	62608	250.000	276.897
57 Bromodichloromethane	83	13.217	13.217	(1.064)	123115	250.000	275.522
58 cis-1,3-Dichloropropene	75	13.592	13.592	(1.094)	149558	250.000	276.127
59 4-Methyl-2-pentanone	43	13.661	13.661	(0.917)	264978	625.000	645.922
60 Toluene	92	13.848	13.848	(0.930)	210706	250.000	270.385
61 Ethylmethacrylate	99	13.986	13.986	(0.939)	198660	2500.00	2846.04
62 trans-1,3-Dichloropropene	75	14.016	14.016	(0.941)	127514	250.000	260.200
63 1,1,2-Trichloroethane	97	14.174	14.174	(0.952)	73400	250.000	263.372

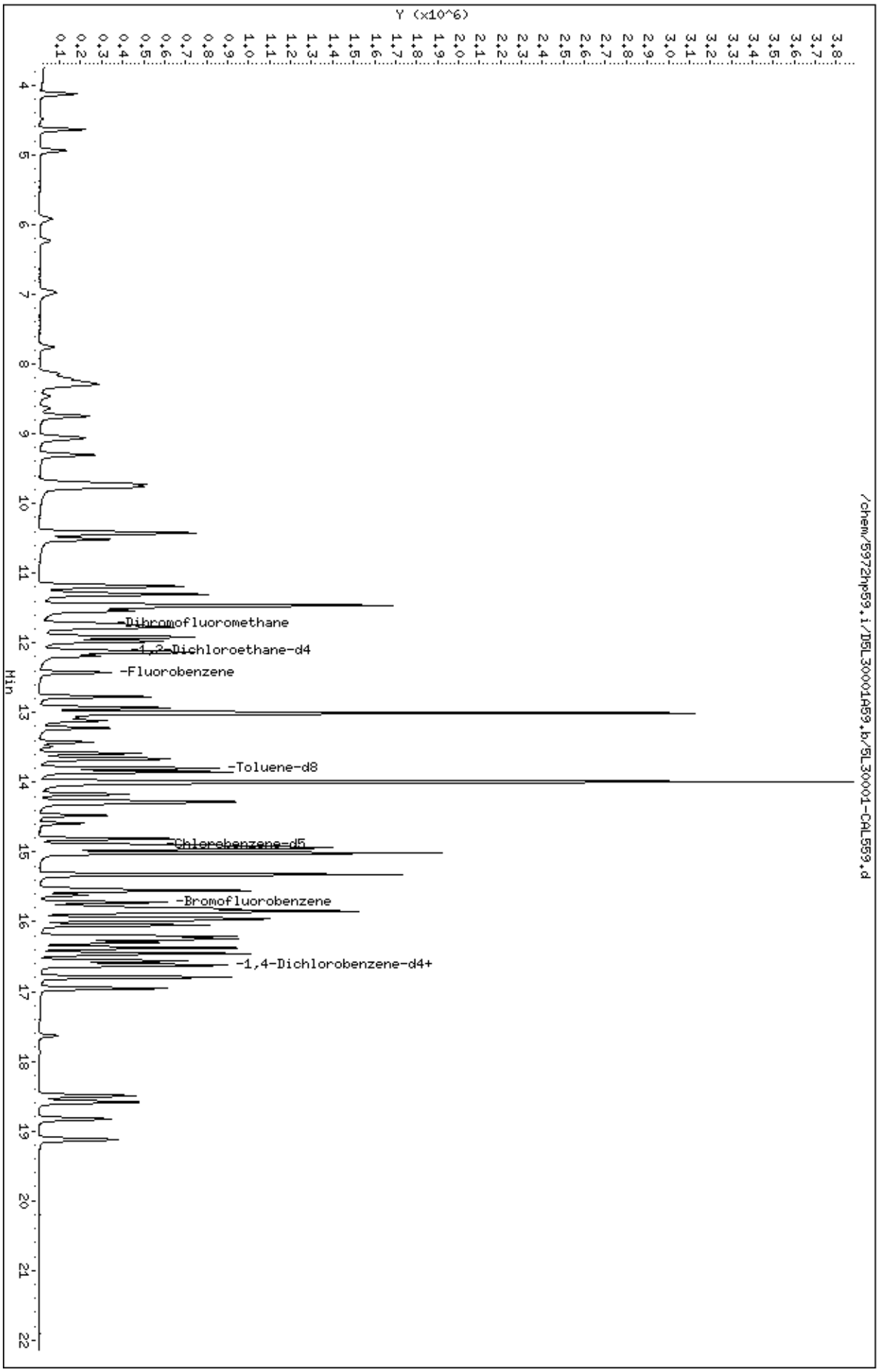
Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL459.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.282	14.282	(0.959)	184119	625.000	661.300
65 2-chloroethyl vinyl ether	63	13.424	13.424	(1.081)	51194	250.000	279.411
66 1,3-Dichloropropane	76	14.302	14.302	(0.960)	128983	250.000	262.287
67 Tetrachloroethene	164	14.272	14.272	(0.958)	80500	250.000	272.259
68 Dibromochloromethane	129	14.479	14.479	(0.972)	96129	250.000	264.327
69 1,2-Dibromoethane	107	14.588	14.588	(0.979)	80101	250.000	260.788
70 1-Chlorohexane	55	14.815	14.815	(0.995)	101936	250.000	291.052
71 Chlorobenzene	112	14.923	14.923	(1.002)	244415	250.000	268.938
72 Ethylbenzene	106	14.943	14.943	(1.003)	115365	250.000	267.264
73 1,1,1,2-Tetrachloroethane	131	14.963	14.963	(1.005)	90825	250.000	262.530
74 m,p-Xylene	106	15.022	15.022	(1.009)	302711	500.000	538.986
75 m,p-Xylene (part of total)	106	15.022	15.022	(1.009)	302711	500.000	538.986
76 o-Xylene	106	15.318	15.318	(1.028)	146091	250.000	272.309
77 o-Xylene (part of total)	106	15.318	15.318	(1.028)	146091	250.000	272.309
78 Styrene	104	15.327	15.327	(1.029)	236208	250.000	270.843
79 Bromoform	173	15.525	15.525	(0.935)	60814	250.000	265.922
80 Isopropyl Benzene	105	15.554	15.554	(1.044)	369834	250.000	275.821
81 1,1,2,2-Tetrachloroethane	83	15.781	15.781	(0.951)	101187	250.000	251.834
82 trans-1,4-dichloro-2-butene	53	15.811	15.811	(1.062)	107999	1000.00	1049.57
83 1,2,3-Trichloropropane	110	15.850	15.850	(1.064)	24797	250.000	262.496
84 Bromobenzene	156	15.870	15.870	(1.066)	101317	250.000	271.576
85 n-Propyl Benzene	91	15.850	15.850	(0.955)	471019	250.000	262.346
86 1,3,5-Trimethyl Benzene	105	15.949	15.949	(0.961)	296298	250.000	267.383
87 2-Chlorotoluene	91	15.978	15.978	(0.963)	289951	250.000	267.753
88 4-Chlorotoluene	91	16.047	16.047	(0.967)	266337	250.000	261.245
89 tert-Butyl Benzene	119	16.215	16.215	(0.977)	308670	250.000	277.563
90 1,2,4-Trimethyl Benzene	105	16.245	16.245	(0.979)	299394	250.000	266.173
91 Pentachloroethane	167	16.304	16.304	(0.982)	63076	250.000	268.272
92 sec-Butyl Benzene	105	16.383	16.383	(0.987)	413163	250.000	270.209
93 p-Isopropyl Toluene	119	16.462	16.462	(0.992)	317627	250.000	263.429
94 1,3-Dichlorobenzene	146	16.560	16.560	(0.998)	175448	250.000	264.753
95 1,4-Dichlorobenzene	146	16.629	16.629	(1.002)	187496	250.000	260.869
96 n-Butyl Benzene	91	16.797	16.797	(1.012)	314016	250.000	270.096
97 1,2-Dichlorobenzene	146	16.955	16.955	(1.021)	163805	250.000	263.372
98 1,2-Dibromo-3-Chloropropane	157	17.645	17.645	(1.063)	17975	250.000	279.099
99 1,2,4-Trichlorobenzene	180	18.493	18.493	(1.114)	112206	250.000	275.202
100 Hexachlorobutadiene	225	18.582	18.582	(1.119)	65658	250.000	279.586
101 Naphthalene	128	18.828	18.828	(1.134)	238500	250.000	298.723
102 1,2,3-Trichlorobenzene	180	19.134	19.134	(1.153)	105616	250.000	286.520
M 103 1,2-Dichloroethene (total)	96				197538	500.000	547.549
M 104 Xylene (total)	106				448802	750.000	811.295

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Date : 29-DEC-2015 19:36
Client ID: WSTD100AB
Sample Info: 5L30001-CAL5:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Lab Smp Id: 5L30001-CAL5 Client Smp ID: VSTD100AB
Inj Date : 29-DEC-2015 19:36
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL5:JAO
Misc Info : VSTD100AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 19:36 Cal File: 5L30001-CAL559.d
Als bottle: 27 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.418	12.418	(1.000)	383888	250.000	
* 2 Chlorobenzene-d5	117	14.893	14.893	(1.000)	293187	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.609	16.609	(1.000)	139715	250.000	
$ 4 Dibromofluoromethane	113	11.718	11.718	(0.944)	225181	500.000	514.220
$ 5 1,2-Dichloroethane-d4	65	12.112	12.112	(0.975)	202334	500.000	500.984
$ 6 Toluene-d8	98	13.798	13.798	(0.927)	657050	500.000	501.276
$ 7 Bromofluorobenzene	95	15.721	15.721	(0.947)	221459	500.000	517.570
8 Dichlorodifluoromethane	85	4.125	4.125	(0.332)	271636	500.000	564.684
9 Chloromethane	50	4.637	4.637	(0.373)	353044	500.000	536.370
10 Vinyl Chloride	62	4.943	4.943	(0.398)	222737	500.000	520.983
11 Bromomethane	94	5.919	5.919	(0.477)	102973	500.000	479.785
12 Chloroethane	64	6.235	6.235	(0.502)	92468	500.000	484.752
13 Trichlorofluoromethane	101	6.974	6.974	(0.562)	189091	500.000	534.639
178 Diethyl ether	45	7.763	7.763	(0.625)	63777	500.000	449.448
14 Acrolein	56	8.128	8.128	(0.655)	142924	5000.00	5517.49

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Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.197	8.197	(0.660)	72227	500.000	562.000
16 1,1,2-trichloro-1,2,2-trifluo	101	8.256	8.256	(0.665)	185132	500.000	579.815
17 1,1-Dichloroethene	96	8.296	8.296	(0.668)	141757	500.000	582.994
18 Acetone	43	8.463	8.463	(0.682)	97366	1250.00	1251.18
19 Iodomethane	142	8.631	8.631	(0.695)	120153	500.000	487.165
20 Carbon disulfide	76	8.749	8.749	(0.705)	601796	500.000	560.922
21 3-Chloropropene	76	9.055	9.055	(0.729)	84140	500.000	542.301
22 Acetonitrile	41	9.055	9.055	(0.729)	247150	500.000	503.303
23 Methyl acetate	43	9.085	9.085	(0.732)	155302	500.000	462.465
24 Methylene Chloride	84	9.312	9.312	(0.750)	181196	500.000	526.459
25 Acrylonitrile	53	9.765	9.765	(0.786)	525563	5000.00	5232.37
26 Methyl-tert-butyl ether	73	9.706	9.706	(0.782)	413782	500.000	545.973
28 trans-1,2-Dichloroethene	96	9.726	9.726	(0.783)	190463	500.000	568.541
29 trans-1,2-DCE (part of total)	96	9.726	9.726	(0.783)	190463	500.000	568.541
31 Isopropyl ether	45	10.426	10.426	(0.840)	720783	500.000	560.829
32 1,1-Dichloroethane	63	10.416	10.416	(0.839)	388367	500.000	569.741
33 Vinyl acetate	43	10.436	10.436	(0.840)	471984	500.000	549.058
34 Chloroprene	53	10.515	10.515	(0.847)	284108	500.000	571.090
35 2-butanone	43	11.175	11.175	(0.900)	232355	1250.00	1278.06
36 2,2-Dichloropropane	77	11.175	11.175	(0.900)	260591	500.000	562.627
37 cis-1,2-Dichloroethene	96	11.195	11.195	(0.902)	219529	500.000	566.881
38 cis-1,2-DCE (part of total)	96	11.195	11.195	(0.902)	219529	500.000	566.881
39 Propionitrile	54	11.304	11.304	(0.910)	1061479	25000.0	25868.4
40 Methacrylonitrile	41	11.461	11.461	(0.923)	1212223	5000.00	5110.22
41 Bromochloromethane	128	11.481	11.481	(0.925)	83674	500.000	516.272
180 Tetrahydrofuran	42	11.501	11.501	(0.926)	239186	2000.00	2019.64
42 Chloroform	83	11.540	11.540	(0.929)	348698	500.000	551.558
43 1,1,1-Trichloroethane	97	11.757	11.757	(0.947)	275092	500.000	573.217
44 Cyclohexane	56	11.777	11.777	(0.948)	321755	500.000	591.792
46 1,1-dichloropropene	75	11.925	11.925	(0.960)	276379	500.000	572.489
47 Isobutyl alcohol	43	11.984	11.984	(0.965)	445294	25000.0	25789.0
48 Carbon Tetrachloride	117	11.915	11.915	(0.959)	250161	500.000	580.248
49 Benzene	78	12.142	12.142	(0.978)	745273	500.000	549.705
50 1,2-Dichloroethane	62	12.191	12.191	(0.982)	248647	500.000	530.027
51 Trichloroethene	130	12.773	12.773	(1.029)	215615	500.000	579.844
52 Methylcyclohexane	83	12.931	12.931	(1.041)	273964	500.000	570.136
53 Methylmethacrylate	100	13.010	13.010	(1.048)	454819	5000.00	5540.58
54 1,2-Dichloropropane	63	13.848	13.848	(1.115)	63229	500.000	558.755
55 1,4-dioxane	88	13.079	13.079	(1.053)	83448	25000.0	26537.2
56 Dibromomethane	174	13.118	13.118	(1.056)	124876	500.000	553.143
57 Bromodichloromethane	83	13.226	13.226	(1.065)	241333	500.000	540.312
58 cis-1,3-Dichloropropene	75	13.591	13.591	(1.094)	306548	500.000	566.493
59 4-Methyl-2-pentanone	43	13.660	13.660	(0.917)	526587	1250.00	1274.60
60 Toluene	92	13.848	13.848	(0.930)	422875	500.000	544.094
61 Ethylmethacrylate	99	13.986	13.986	(0.939)	393929	5000.00	5724.76
62 trans-1,3-Dichloropropene	75	14.015	14.015	(0.941)	267988	500.000	543.801
63 1,1,2-Trichloroethane	97	14.173	14.173	(0.952)	148257	500.000	530.366

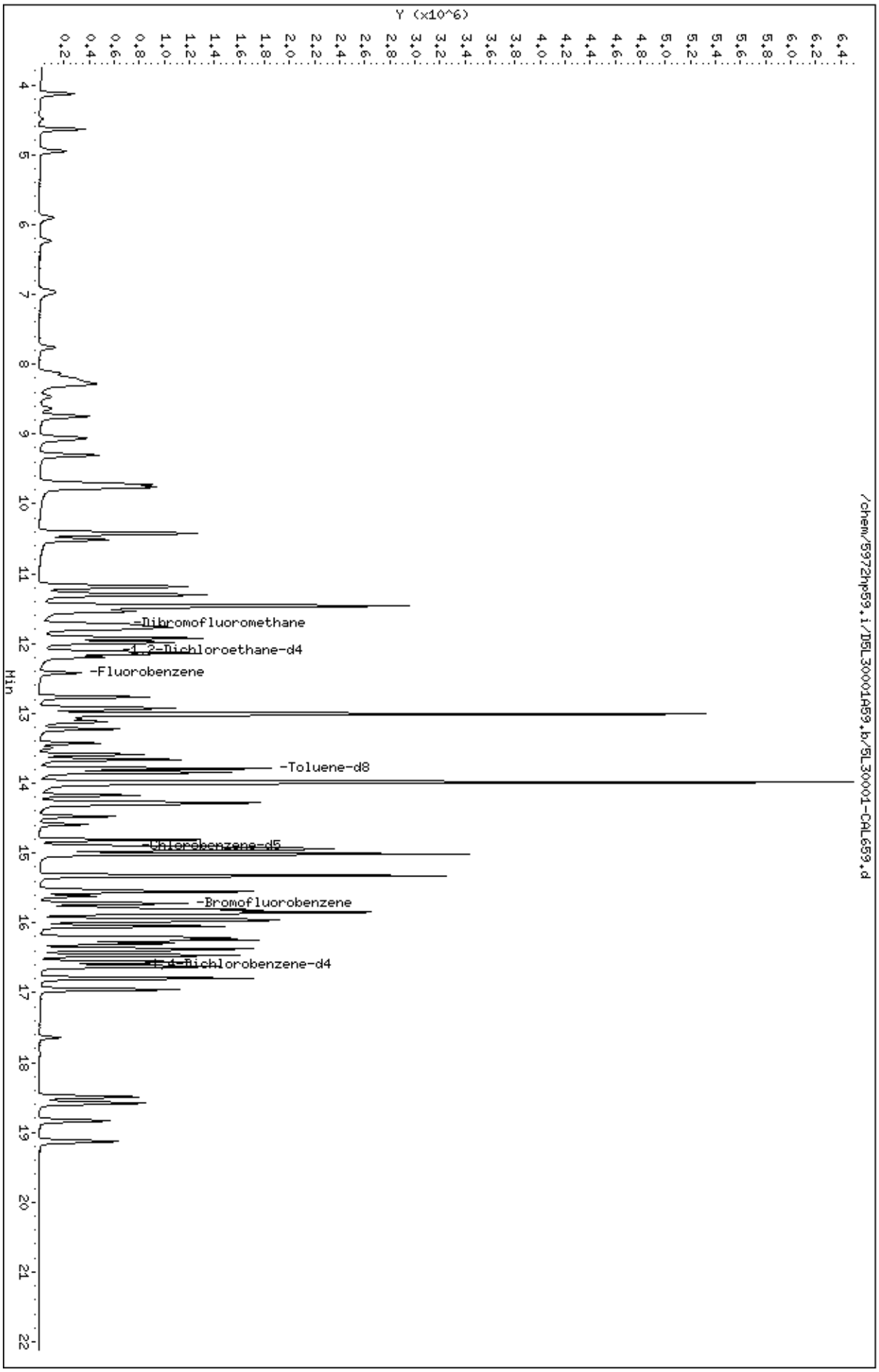
Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL559.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.282	14.282	(0.959)	359470	1250.00	1288.41
65 2-chloroethyl vinyl ether	63	13.424	13.424	(1.081)	103817	500.000	568.665
66 1,3-Dichloropropane	76	14.301	14.301	(0.960)	261163	500.000	529.008
67 Tetrachloroethene	164	14.272	14.272	(0.958)	163015	500.000	553.646
68 Dibromochloromethane	129	14.479	14.479	(0.972)	198469	500.000	544.505
69 1,2-Dibromoethane	107	14.587	14.587	(0.979)	164836	500.000	533.926
70 1-Chlorohexane	55	14.804	14.804	(0.994)	172135	500.000	501.223
71 Chlorobenzene	112	14.923	14.923	(1.002)	489396	500.000	539.300
72 Ethylbenzene	106	14.942	14.942	(1.003)	243664	500.000	564.565
73 1,1,1,2-Tetrachloroethane	131	14.962	14.962	(1.005)	190325	500.000	548.101
74 m,p-Xylene	106	15.021	15.021	(1.009)	638342	1000.00	1138.79
75 m,p-Xylene (part of total)	106	15.021	15.021	(1.009)	638342	1000.00	1138.79
76 o-Xylene	106	15.317	15.317	(1.028)	295365	500.000	552.885
77 o-Xylene (part of total)	106	15.317	15.317	(1.028)	295365	500.000	552.885
78 Styrene	104	15.327	15.327	(1.029)	490718	500.000	564.382
79 Bromoform	173	15.524	15.524	(0.935)	124305	500.000	546.432
80 Isopropyl Benzene	105	15.554	15.554	(1.044)	761510	500.000	571.974
81 1,1,2,2-Tetrachloroethane	83	15.781	15.781	(0.950)	207890	500.000	514.270
82 trans-1,4-dichloro-2-butene	53	15.810	15.810	(1.062)	221149	2000.00	2141.03
83 1,2,3-Trichloropropane	110	15.850	15.850	(1.064)	50373	500.000	531.253
84 Bromobenzene	156	15.869	15.869	(1.066)	205605	500.000	553.122
85 n-Propyl Benzene	91	15.850	15.850	(0.954)	1002095	500.000	559.481
86 1,3,5-Trimethyl Benzene	105	15.948	15.948	(0.960)	616525	500.000	559.974
87 2-Chlorotoluene	91	15.978	15.978	(0.962)	582661	500.000	541.712
88 4-Chlorotoluene	91	16.047	16.047	(0.966)	541900	500.000	532.341
89 tert-Butyl Benzene	119	16.214	16.214	(0.976)	610379	500.000	557.032
90 1,2,4-Trimethyl Benzene	105	16.254	16.254	(0.979)	619349	500.000	553.659
91 Pentachloroethane	167	16.303	16.303	(0.982)	128135	500.000	548.914
92 sec-Butyl Benzene	105	16.382	16.382	(0.986)	866989	500.000	572.005
93 p-Isopropyl Toluene	119	16.461	16.461	(0.991)	698620	500.000	581.310
94 1,3-Dichlorobenzene	146	16.560	16.560	(0.997)	366074	500.000	554.814
95 1,4-Dichlorobenzene	146	16.629	16.629	(1.001)	385095	500.000	536.441
96 n-Butyl Benzene	91	16.796	16.796	(1.011)	666452	500.000	578.235
97 1,2-Dichlorobenzene	146	16.954	16.954	(1.021)	331858	500.000	535.297
98 1,2-Dibromo-3-Chloropropane	157	17.644	17.644	(1.062)	36406	500.000	574.410
99 1,2,4-Trichlorobenzene	180	18.492	18.492	(1.113)	232362	500.000	577.266
100 Hexachlorobutadiene	225	18.591	18.591	(1.119)	139922	500.000	605.686
101 Naphthalene	128	18.828	18.828	(1.134)	451788	500.000	584.402
102 1,2,3-Trichlorobenzene	180	19.133	19.133	(1.152)	213847	500.000	593.110
M 103 1,2-Dichloroethene (total)	96				409992	1000.00	1135.30
M 104 Xylene (total)	106				933707	1500.00	1691.68

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Date : 29-DEC-2015 19:04
Client ID: VSTD200AB
Sample Info: 5L30001-CAL6:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Report Date: 30-Dec-2015 07:22

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Lab Smp Id: 5L30001-CAL6 Client Smp ID: VSTD200AB
Inj Date : 29-DEC-2015 19:04
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-CAL6:JAO
Misc Info : VSTD200AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:22 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 19:04 Cal File: 5L30001-CAL659.d
Als bottle: 26 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.422	12.422	(1.000)	363530	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.898	(1.000)	279888	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.604	(1.000)	140874	250.000	
$ 4 Dibromofluoromethane	113	11.722	11.722	(0.944)	437793	1000.00	1063.28(A)
$ 5 1,2-Dichloroethane-d4	65	12.107	12.107	(0.975)	386722	1000.00	1011.65(A)
$ 6 Toluene-d8	98	13.793	13.793	(0.926)	1316487	1000.00	1052.77(A)
$ 7 Bromofluorobenzene	95	15.726	15.726	(0.947)	436596	1000.00	1020.94(A)
8 Dichlorodifluoromethane	85	4.129	4.129	(0.332)	463107	1000.00	1050.61(A)
9 Chloromethane	50	4.642	4.642	(0.374)	597628	1000.00	976.565
10 Vinyl Chloride	62	4.948	4.948	(0.398)	412623	1000.00	1029.98(A)
11 Bromomethane	94	5.904	5.904	(0.475)	209293	1000.00	1019.47(A)
12 Chloroethane	64	6.230	6.230	(0.501)	166399	1000.00	914.207
13 Trichlorofluoromethane	101	6.969	6.969	(0.561)	328950	1000.00	999.474
178 Diethyl ether	45	7.768	7.768	(0.625)	113188	1000.00	821.560
14 Acrolein	56	8.133	8.133	(0.655)	272224	10000.0	11392.3(A)

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.202	8.202	(0.660)	130523	1000.00	1106.79(A)
16 1,1,2-trichloro-1,2,2-trifluo	101	8.261	8.261	(0.665)	318706	1000.00	1097.87(A)
17 1,1-Dichloroethene	96	8.300	8.300	(0.668)	234588	1000.00	1062.91(A)
18 Acetone	43	8.468	8.468	(0.682)	181556	2500.00	2464.27
19 Iodomethane	142	8.636	8.636	(0.695)	237933	1000.00	1000.13(A)
20 Carbon disulfide	76	8.744	8.744	(0.704)	1002192	1000.00	1017.43(A)
21 3-Chloropropene	76	9.060	9.060	(0.729)	167244	1000.00	1162.88(A)
22 Acetonitrile	41	9.060	9.060	(0.729)	440678	1000.00	949.233
23 Methyl acetate	43	9.079	9.079	(0.731)	297081	1000.00	916.992
24 Methylene Chloride	84	9.306	9.306	(0.749)	325186	1000.00	1011.10(A)
25 Acrylonitrile	53	9.760	9.760	(0.786)	922741	10000.0	9815.06
26 Methyl-tert-butyl ether	73	9.701	9.701	(0.781)	748235	1000.00	1067.09(A)
28 trans-1,2-Dichloroethene	96	9.730	9.730	(0.783)	333253	1000.00	1087.76(A)
29 trans-1,2-DCE (part of total)	96	9.730	9.730	(0.783)	333253	1000.00	1087.76(A)
31 Isopropyl ether	45	10.430	10.430	(0.840)	1257799	1000.00	1065.90(A)
32 1,1-Dichloroethane	63	10.421	10.421	(0.839)	649120	1000.00	1041.93(A)
33 Vinyl acetate	43	10.430	10.430	(0.840)	813234	1000.00	1024.13(A)
34 Chloroprene	53	10.519	10.519	(0.847)	462051	1000.00	1016.94(A)
35 2-butanone	43	11.180	11.180	(0.900)	419248	2500.00	2448.93
36 2,2-Dichloropropane	77	11.180	11.180	(0.900)	438657	1000.00	1032.45(A)
37 cis-1,2-Dichloroethene	96	11.190	11.190	(0.901)	374754	1000.00	1057.26(A)
38 cis-1,2-DCE (part of total)	96	11.190	11.190	(0.901)	374754	1000.00	1057.26(A)
39 Propionitrile	54	11.308	11.308	(0.910)	1881233	50000.0	48837.5
40 Methacrylonitrile	41	11.466	11.466	(0.923)	2119923	10000.0	9489.46
41 Bromochloromethane	128	11.486	11.486	(0.925)	151813	1000.00	997.261
180 Tetrahydrofuran	42	11.495	11.495	(0.925)	420619	4000.00	3759.75
42 Chloroform	83	11.545	11.545	(0.929)	590125	1000.00	1011.80(A)
43 1,1,1-Trichloroethane	97	11.752	11.752	(0.946)	452880	1000.00	1034.39(A)
44 Cyclohexane	56	11.781	11.781	(0.948)	528165	1000.00	1075.18(A)
46 1,1-dichloropropene	75	11.919	11.919	(0.959)	474924	1000.00	1077.91(A)
47 Isobutyl alcohol	43	11.979	11.979	(0.964)	818147	50000.0	50434.0(A)
48 Carbon Tetrachloride	117	11.910	11.910	(0.959)	417300	1000.00	1064.86(A)
49 Benzene	78	12.136	12.136	(0.977)	1263208	1000.00	1008.98(A)
50 1,2-Dichloroethane	62	12.196	12.196	(0.982)	442209	1000.00	1010.59(A)
51 Trichloroethene	130	12.768	12.768	(1.028)	363791	1000.00	1076.07(A)
52 Methylcyclohexane	83	12.935	12.935	(1.041)	478483	1000.00	1089.73(A)
53 Methylmethacrylate	100	13.004	13.004	(1.047)	826231	10000.0	10924.0(A)
54 1,2-Dichloropropane	63	13.852	13.852	(1.115)	106575	1000.00	1024.65(A)
55 1,4-dioxane	88	13.083	13.083	(1.053)	148423	50000.0	50621.2(A)
56 Dibromomethane	174	13.123	13.123	(1.056)	222662	1000.00	1069.95(A)
57 Bromodichloromethane	83	13.221	13.221	(1.064)	431949	1000.00	1042.24(A)
58 cis-1,3-Dichloropropene	75	13.586	13.586	(1.094)	544589	1000.00	1099.29(A)
59 4-Methyl-2-pentanone	43	13.665	13.665	(0.917)	942374	2500.00	2401.21
60 Toluene	92	13.852	13.852	(0.930)	739150	1000.00	1018.68(A)
61 Ethylmethacrylate	99	13.990	13.990	(0.939)	709608	10000.0	11208.5(A)
62 trans-1,3-Dichloropropene	75	14.020	14.020	(0.941)	474812	1000.00	1031.87(A)
63 1,1,2-Trichloroethane	97	14.168	14.168	(0.951)	263445	1000.00	1002.43(A)

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-CAL659.d
Report Date: 30-Dec-2015 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.286	14.286	(0.959)	672249	2500.00	2543.49(A)
65 2-chloroethyl vinyl ether	63	13.428	13.428	(1.081)	192389	1000.00	1152.40(A)
66 1,3-Dichloropropane	76	14.306	14.306	(0.960)	469313	1000.00	1010.46(A)
67 Tetrachloroethene	164	14.276	14.276	(0.958)	285813	1000.00	1044.85(A)
68 Dibromochloromethane	129	14.473	14.473	(0.972)	354222	1000.00	1041.16(A)
69 1,2-Dibromoethane	107	14.592	14.592	(0.979)	295010	1000.00	1018.25(A)
70 1-Chlorohexane	55	14.809	14.809	(0.994)	333972	1000.00	1019.29(A)
71 Chlorobenzene	112	14.917	14.917	(1.001)	854481	1000.00	1006.12(A)
72 Ethylbenzene	106	14.947	14.947	(1.003)	413778	1000.00	1037.77(A)
73 1,1,1,2-Tetrachloroethane	131	14.957	14.957	(1.004)	340233	1000.00	1051.66(A)
74 m,p-Xylene	106	15.016	15.016	(1.008)	1108499	2000.00	2145.97(A)
75 m,p-Xylene (part of total)	106	15.016	15.016	(1.008)	1108499	2000.00	2145.97(A)
76 o-Xylene	106	15.322	15.322	(1.028)	533589	1000.00	1074.69(A)
77 o-Xylene (part of total)	106	15.322	15.322	(1.028)	533589	1000.00	1074.69(A)
78 Styrene	104	15.322	15.322	(1.028)	887942	1000.00	1105.34(A)
79 Bromoform	173	15.529	15.529	(0.935)	229172	1000.00	1022.88(A)
80 Isopropyl Benzene	105	15.548	15.548	(1.044)	1261121	1000.00	1029.28(A)
81 1,1,2,2-Tetrachloroethane	83	15.785	15.785	(0.951)	376965	1000.00	931.494
82 trans-1,4-dichloro-2-butene	53	15.815	15.815	(1.062)	398514	4000.00	4114.01(A)
83 1,2,3-Trichloropropane	110	15.844	15.844	(1.064)	96057	1000.00	1078.04(A)
84 Bromobenzene	156	15.874	15.874	(1.066)	372563	1000.00	1078.55(A)
85 n-Propyl Benzene	91	15.844	15.844	(0.954)	1769150	1000.00	1009.64(A)
86 1,3,5-Trimethyl Benzene	105	15.953	15.953	(0.961)	1059235	1000.00	983.658
87 2-Chlorotoluene	91	15.972	15.972	(0.962)	1006290	1000.00	947.636
88 4-Chlorotoluene	91	16.051	16.051	(0.967)	955042	1000.00	945.771
89 tert-Butyl Benzene	119	16.219	16.219	(0.977)	1049090	1000.00	977.394
90 1,2,4-Trimethyl Benzene	105	16.248	16.248	(0.979)	1085635	1000.00	989.041
91 Pentachloroethane	167	16.298	16.298	(0.982)	227773	1000.00	991.983
92 sec-Butyl Benzene	105	16.377	16.377	(0.986)	1479213	1000.00	1004.05(A)
93 p-Isopropyl Toluene	119	16.465	16.465	(0.992)	1183780	1000.00	1018.30(A)
94 1,3-Dichlorobenzene	146	16.554	16.554	(0.997)	637167	1000.00	984.721
95 1,4-Dichlorobenzene	146	16.623	16.623	(1.001)	663354	1000.00	933.464
96 n-Butyl Benzene	91	16.791	16.791	(1.011)	1155112	1000.00	1034.43(A)
97 1,2-Dichlorobenzene	146	16.959	16.959	(1.021)	600245	1000.00	977.500
98 1,2-Dibromo-3-Chloropropane	157	17.639	17.639	(1.062)	63887	1000.00	1038.34(A)
99 1,2,4-Trichlorobenzene	180	18.497	18.497	(1.114)	396550	1000.00	1016.32(A)
100 Hexachlorobutadiene	225	18.586	18.586	(1.119)	240660	1000.00	1090.83(A)
101 Naphthalene	128	18.832	18.832	(1.134)	727300	1000.00	974.155
102 1,2,3-Trichlorobenzene	180	19.128	19.128	(1.152)	343205	1000.00	990.154
M 103 1,2-Dichloroethene (total)	96				708007	2000.00	2142.80(A)
M 104 Xylene (total)	106				1642088	3000.00	3220.66

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Second Source Calibration Verification

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chloromethane	50.00	58.86	17.7	20.00
Vinyl chloride	50.00	53.22	6.4	20.00
Bromomethane	50.00	59.06	18.1	20.00
Chloroethane	50.00	51.26	2.5	20.00
Trichlorofluoromethane	50.00	55.71	11.4	20.00
1,1-Dichloroethene	50.00	54.04	8.1	20.00
Acetone	125.0	123.8	-1.0	20.00
Iodomethane	50.00	61.69	23.4 *	20.00
Carbon disulfide	50.00	56.69	13.4	20.00
Methylene chloride	50.00	50.64	1.3	20.00
Acrylonitrile	500.0	546.1	9.2	20.00
trans-1,2-Dichloroethene	50.00	54.47	8.9	20.00
1,1-Dichloroethane	50.00	53.02	6.0	20.00
Vinyl acetate	50.00	57.11	14.2	20.00
cis-1,2-Dichloroethene	50.00	51.56	3.1	20.00
2-Butanone	125.0	114.7	-8.3	20.00
Bromochloromethane	50.00	54.92	9.8	20.00
Chloroform	50.00	55.93	11.9	20.00
1,1,1-Trichloroethane	50.00	56.47	12.9	20.00
Carbon tetrachloride	50.00	55.38	10.8	20.00
1,2-Dichloroethane	50.00	54.66	9.3	20.00

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Benzene	50.00	54.30	8.6	20.00
Trichloroethene	50.00	55.41	10.8	20.00
1,2-Dichloropropane	50.00	56.69	13.4	20.00
Dibromomethane	50.00	55.25	10.5	20.00
Bromodichloromethane	50.00	58.56	17.1	20.00
cis-1,3-Dichloropropene	50.00	57.28	14.6	20.00
4-Methyl-2-pentanone	125.0	123.3	-1.4	20.00
Toluene	50.00	57.24	14.5	20.00
trans-1,3-Dichloropropene	50.00	59.00	18.0	20.00
1,1,2-Trichloroethane	50.00	56.58	13.2	20.00
Tetrachloroethene	50.00	56.77	13.5	20.00
2-Hexanone	125.0	133.3	6.7	20.00
Dibromochloromethane	50.00	58.01	16.0	20.00
1,2-Dibromoethane	50.00	56.02	12.0	20.00
Chlorobenzene	50.00	55.67	11.3	20.00
1,1,1,2-Tetrachloroethane	50.00	54.71	9.4	20.00
Ethylbenzene	50.00	56.64	13.3	20.00
Styrene	50.00	58.02	16.0	20.00
Bromoform	50.00	54.94	9.9	20.00
1,1,2,2-Tetrachloroethane	50.00	51.78	3.6	20.00
1,2,3-Trichloropropane	50.00	55.04	10.1	20.00

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

SECOND-SOURCE CALIBRATION VERIFICATION

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument: 5972hp59 Calibration: 5123005

Lab File ID: 5L30001-SCV159.d Standard ID: 5K06037

Sequence: 5L30001 Injection Date: 12/29/15

Lab Sample ID: 5L30001-SCV1 InjectionTime: 21:11

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
trans-1,4-Dichloro-2-butene	200.0	230.3	15.1	20.00
1,4-Dichlorobenzene	50.00	52.04	4.1	20.00
1,2-Dichlorobenzene	50.00	53.60	7.2	20.00
1,2-Dibromo-3-chloropropane	50.00	52.82	5.6	20.00
Dibromofluoromethane	50.00	52.45	4.9	20.00
1,2-Dichloroethane-d4	50.00	49.42	-1.2	20.00
Toluene-d8	50.00	53.31	6.6	20.00
Bromofluorobenzene	50.00	51.61	3.2	20.00

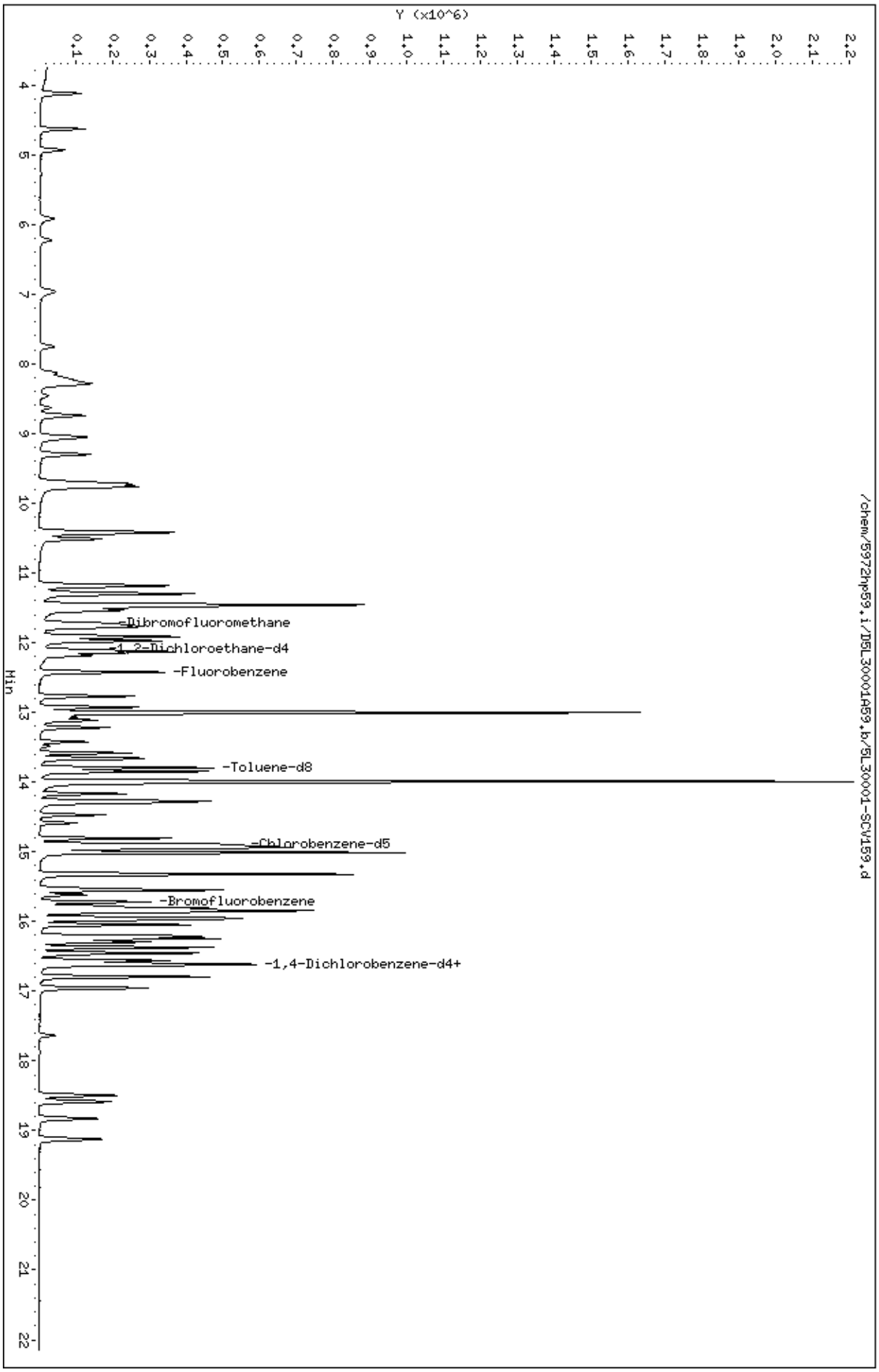
* Values outside of QC limits

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Date : 29-DEC-2015 21:11
Client ID: VSTD050AB
Sample Info: 5L30001-SCV1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Report Date: 30-Dec-2015 07:23

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Lab Smp Id: 5L30001-SCV1 Client Smp ID: VSTD050AB
Inj Date : 29-DEC-2015 21:11
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-SCV1:JAO
Misc Info : VSTD050AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:23 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 30 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.423	12.418	(1.000)	374232	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.894	(1.000)	279223	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.604	16.600	(1.000)	141207	250.000	
$ 4 Dibromofluoromethane	113	11.723	11.718	(0.944)	113009	262.274	52.4548
$ 5 1,2-Dichloroethane-d4	65	12.107	12.113	(0.975)	97638	247.124	49.4248
$ 6 Toluene-d8	98	13.793	13.789	(0.926)	335399	266.561	53.3122
$ 7 Bromofluorobenzene	95	15.716	15.722	(0.947)	112154	258.063	51.6127
8 Dichlorodifluoromethane	85	4.120	4.125	(0.332)	157258	327.406	65.4812(R)
9 Chloromethane	50	4.632	4.638	(0.373)	189145	294.300	58.8600
10 Vinyl Chloride	62	4.938	4.944	(0.397)	112514	266.116	53.2231
11 Bromomethane	94	5.924	5.920	(0.477)	62867	295.297	59.0593
12 Chloroethane	64	6.230	6.235	(0.501)	48646	256.309	51.2619
13 Trichlorofluoromethane	101	6.969	6.975	(0.561)	97769	278.570	55.7141
14 Acrolein	56	8.123	8.129	(0.654)	65899	2551.81	510.362
178 Diethyl ether	45	7.768	7.764	(0.625)	36047	258.043	51.6085

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Report Date: 30-Dec-2015 07:23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.212	8.198	(0.661)	35029	274.695	54.9390
16 1,1,2-trichloro-1,2,2-trifluo	101	8.251	8.257	(0.664)	88810	283.988	56.7977
17 1,1-Dichloroethene	96	8.291	8.296	(0.667)	64372	270.183	54.0366
18 Acetone	43	8.458	8.464	(0.681)	46994	618.787	123.757
19 Iodomethane	142	8.636	8.632	(0.695)	74761	308.432	61.6863(R)
20 Carbon disulfide	76	8.744	8.750	(0.704)	301632	283.432	56.6863
21 3-Chloropropene	76	9.050	9.056	(0.729)	43992	287.044	57.4087
22 Acetonitrile	41	9.050	9.056	(0.729)	149928	308.759	61.7518(R)
23 Methyl acetate	43	9.080	9.085	(0.731)	83016	253.708	50.7416
24 Methylene Chloride	84	9.307	9.312	(0.749)	86333	253.177	50.6354
25 Acrylonitrile	53	9.760	9.766	(0.786)	271069	2730.64	546.127
26 Methyl-tert-butyl ether	73	9.701	9.707	(0.781)	199432	265.903	53.1807
28 trans-1,2-Dichloroethene	96	9.721	9.726	(0.782)	90258	272.349	54.4699
29 trans-1,2-DCE (part of total)	96	9.721	9.726	(0.782)	90258	272.349	54.4699
31 Isopropyl ether	45	10.421	10.426	(0.839)	332615	261.276	52.2552
32 1,1-Dichloroethane	63	10.421	10.417	(0.839)	180279	265.096	53.0192
33 Vinyl acetate	43	10.431	10.436	(0.840)	241712	285.536	57.1073
34 Chloroprene	53	10.519	10.515	(0.847)	139835	282.784	56.5569
35 2-butanone	43	11.180	11.176	(0.900)	101333	573.417	114.683
36 2,2-Dichloropropane	77	11.170	11.176	(0.899)	135869	295.221	59.0442
37 cis-1,2-Dichloroethene	96	11.190	11.196	(0.901)	99604	257.814	51.5629
38 cis-1,2-DCE (part of total)	96	11.190	11.196	(0.901)	99604	257.814	51.5629
39 Propionitrile	54	11.298	11.304	(0.909)	565282	13968.3	2793.66
40 Methacrylonitrile	41	11.456	11.462	(0.922)	644517	2767.07	553.414
41 Bromochloromethane	128	11.476	11.482	(0.924)	44033	274.608	54.9216
180 Tetrahydrofuran	42	11.496	11.501	(0.925)	131963	1130.65	226.129
42 Chloroform	83	11.535	11.541	(0.929)	176760	279.627	55.9254
43 1,1,1-Trichloroethane	97	11.752	11.748	(0.946)	134818	282.361	56.4723
44 Cyclohexane	56	11.782	11.777	(0.948)	136631	250.130	50.0260
46 1,1-dichloropropene	75	11.920	11.925	(0.959)	137524	285.071	57.0142
47 Isobutyl alcohol	43	11.979	11.985	(0.964)	240186	14111.3	2822.26
48 Carbon Tetrachloride	117	11.910	11.915	(0.959)	118379	276.912	55.3824
49 Benzene	78	12.137	12.142	(0.977)	363718	271.486	54.2971
50 1,2-Dichloroethane	62	12.196	12.192	(0.982)	125968	273.282	54.6563
51 Trichloroethene	130	12.768	12.773	(1.028)	102647	277.027	55.4053
52 Methylcyclohexane	83	12.926	12.931	(1.040)	111656	232.832	46.5664
53 Methylmethacrylate	100	13.004	13.010	(1.047)	223614	2758.67	551.734
54 1,2-Dichloropropane	63	13.843	13.848	(1.114)	32012	283.449	56.6897
55 1,4-dioxane	88	13.073	13.079	(1.052)	44300	14230.2	2846.03
56 Dibromomethane	174	13.123	13.119	(1.056)	62138	276.269	55.2538
57 Bromodichloromethane	83	13.221	13.217	(1.064)	130157	292.819	58.5639
58 cis-1,3-Dichloropropene	75	13.586	13.592	(1.094)	154314	286.412	57.2824
59 4-Methyl-2-pentanone	43	13.665	13.661	(0.917)	244106	616.252	123.250
60 Toluene	92	13.843	13.848	(0.929)	215360	286.207	57.2413
61 Ethylmethacrylate	99	13.991	13.986	(0.939)	208083	3087.29	617.458(R)
62 trans-1,3-Dichloropropene	75	14.020	14.016	(0.941)	139582	294.978	58.9955
63 1,1,2-Trichloroethane	97	14.168	14.174	(0.951)	76128	282.897	56.5793

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Report Date: 30-Dec-2015 07:23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
64 2-hexanone	43	14.286	14.282	(0.959)	179232	666.691	133.338
65 2-chloroethyl vinyl ether	63	13.428	13.424	(1.081)	51783	284.118	56.8235
66 1,3-Dichloropropane	76	14.306	14.302	(0.960)	133318	280.765	56.1530
67 Tetrachloroethene	164	14.267	14.272	(0.958)	81034	283.833	56.7665
68 Dibromochloromethane	129	14.474	14.479	(0.972)	101854	290.051	58.0102
69 1,2-Dibromoethane	107	14.592	14.588	(0.979)	83065	280.076	56.0153
70 1-Chlorohexane	55	14.809	14.815	(0.994)	86855	256.831	51.3662
71 Chlorobenzene	112	14.918	14.923	(1.001)	244263	278.350	55.6700
72 Ethylbenzene	106	14.937	14.943	(1.003)	118043	283.215	56.6431
73 1,1,1,2-Tetrachloroethane	131	14.957	14.963	(1.004)	91378	273.542	54.7085
74 m,p-Xylene	106	15.016	15.022	(1.008)	305413	563.179	112.636
75 m,p-Xylene (part of total)	106	15.016	15.022	(1.008)	305413	563.179	112.636
76 o-Xylene	106	15.312	15.318	(1.028)	150830	291.163	58.2326
77 o-Xylene (part of total)	106	15.312	15.318	(1.028)	150830	291.163	58.2326
78 Styrene	104	15.322	15.327	(1.028)	244291	290.094	58.0189
79 Bromoform	173	15.519	15.525	(0.935)	63967	274.678	54.9355
80 Isopropyl Benzene	105	15.549	15.554	(1.044)	374052	288.909	57.7818
81 1,1,2,2-Tetrachloroethane	83	15.775	15.781	(0.950)	105936	258.911	51.7821
82 trans-1,4-dichloro-2-butene	53	15.815	15.811	(1.062)	114389	1151.30	230.259
83 1,2,3-Trichloropropane	110	15.844	15.850	(1.064)	25104	275.218	55.0436
84 Bromobenzene	156	15.874	15.870	(1.066)	100419	278.763	55.7526
85 n-Propyl Benzene	91	15.844	15.850	(0.954)	477966	261.426	52.2853
86 1,3,5-Trimethyl Benzene	105	15.953	15.949	(0.961)	298289	264.338	52.8676
87 2-Chlorotoluene	91	15.973	15.978	(0.962)	284334	257.843	51.5687
88 4-Chlorotoluene	91	16.052	16.047	(0.967)	268452	258.583	51.7166
89 tert-Butyl Benzene	119	16.209	16.215	(0.976)	290433	256.466	51.2932
90 1,2,4-Trimethyl Benzene	105	16.249	16.245	(0.979)	301281	263.033	52.6066
91 Pentachloroethane	167	16.298	16.304	(0.982)	62141	259.541	51.9082
92 sec-Butyl Benzene	105	16.377	16.383	(0.986)	401175	257.649	51.5298
93 p-Isopropyl Toluene	119	16.456	16.462	(0.991)	323227	263.251	52.6502
94 1,3-Dichlorobenzene	146	16.555	16.560	(0.997)	183940	272.575	54.5149
95 1,4-Dichlorobenzene	146	16.624	16.629	(1.001)	190426	260.180	52.0360
96 n-Butyl Benzene	91	16.791	16.797	(1.011)	318051	268.646	53.7292
97 1,2-Dichlorobenzene	146	16.959	16.955	(1.021)	169722	267.977	53.5953
98 1,2-Dibromo-3-Chloropropane	157	17.639	17.645	(1.062)	17321	264.107	52.8213
99 1,2,4-Trichlorobenzene	180	18.497	18.493	(1.114)	107367	258.597	51.7193
100 Hexachlorobutadiene	225	18.586	18.582	(1.119)	56181	234.928	46.9856
101 Naphthalene	128	18.832	18.828	(1.134)	209349	257.494	51.4989
102 1,2,3-Trichlorobenzene	180	19.128	19.134	(1.152)	95344	254.001	50.8002
M 103 1,2-Dichloroethene (total)	96				189862	529.051	105.810
M 104 Xylene (total)	106				456243	854.342	170.868

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

12/30/2015

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SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D5L30001A59.b/5L30001-SCV159.d
Lab Smp Id: 5L30001-SCV1 Client Smp ID: VSTD050AB
Inj Date : 29-DEC-2015 21:11
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 5L30001-SCV1:JAO
Misc Info : VSTD050AB
Comment :
Method : /chem/5972hp59.i/D5L30001A59.b/8260B_5ppbv5.m
Meth Date : 30-Dec-2015 07:23 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 30 QC Sample: QCCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SCV.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

M. Continuing Calibration Data

(CONTINUING CALIBRATION CHECK)

If more than one instrument is used, forms shall be arranged in order by instrument. If multiple continuing calibrations from the same instrument are used, they shall be in chronological order.

RICs and Quantitation reports for all continuing (12-hour) calibrations. Spectra not required.

EICPs displaying each manual integration.

CONTINUING CALIBRATION CHECK

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument ID: 5972hp59 Calibration: 5123005

Lab File ID: 6A12005-ICV159.d Calibration Date: 12/29/15 17:04

Sequence: 6A12005 Injection Date: 01/12/16

Lab Sample ID: 6A12005-ICV1 Injection Time: 14:13

COMPOUND	TYPE	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
Dichlorodifluoromethane	Avg	50.00	53.17	0.3208672	0.3411793	0.001	6.3	90
Chloromethane	Avg	50.00	47.38	0.4293425	0.4068279	0.1	-5.2	90
Vinyl chloride	Avg	50.00	52.45	0.2824459	0.2962696	0.001	4.9	20
Bromomethane	Avg	50.00	42.64	0.1422208	0.1212773	0.001	-14.7	90
Chloroethane	Avg	50.00	53.44	0.1267891	0.1355123	0.001	6.9	90
Trichlorofluoromethane	Avg	50.00	53.18	0.2344582	0.2493851	0.001	6.4	90
Acrolein	Avg	500.0	374.6	1.725161E-02	0.0129233	0.001	-25.1	90
1,1-Dichloroethene	Avg	50.00	48.42	0.1591616	0.1541258	0.001	-3.2	20
1,1,1-Trichloro-2,2,2-trifluoroethane	Avg	50.00	50.09	8.518751E-02	8.533629E-02	0.001	0.2	90
Acetone	Avg	125.0	124.4	5.073413E-02	5.047663E-02	0.001	-0.5	90
Iodomethane	Lin	50.00	48.23	0.1489162	0.15557	0.001	-3.5	90
1,1,2-Trichloro-1,2,2-trifluoroethane	Avg	50.00	49.40	0.2089105	0.2064018	0.001	-1.2	90
Carbon disulfide	Avg	50.00	45.36	0.710932	0.6449684	0.001	-9.3	90
3-Chloropropene	Avg	50.00	44.73	0.1023823	9.158757E-02	0.001	-10.5	90
Acetonitrile	Avg	50.00	47.91	0.3243861	0.3108492	0.001	-4.2	90
Methyl acetate	Avg	50.00	44.26	0.218588	0.193491	0.001	-11.5	90
Methylene chloride	Avg	50.00	43.97	0.227799	0.2003343	0.001	-12.1	90
Acrylonitrile	Avg	500.0	467.8	0.0663155	6.204659E-02	0.001	-6.4	90
trans-1,2-Dichloroethene	Avg	50.00	45.98	0.2213903	0.2036079	0.001	-8.0	90
Methyl tert-butyl ether	Avg	50.00	47.63	0.5010375	0.4772989	0.001	-4.7	90
1,1-Dichloroethane	Avg	50.00	46.19	0.4542984	0.4196545	0.1	-7.6	90
Chloroprene	Avg	50.00	50.10	0.3303388	0.3309732	0.001	0.2	90
Vinyl acetate	Avg	50.00	44.18	0.5655043	0.4997142	0.001	-11.6	90

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CONTINUING CALIBRATION CHECK

SW 8260B

Client:	DRAPER ADEN ASSOCIATES	SDG:	1601026
Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39		
Instrument ID:	5972hp59	Calibration:	5123005
Lab File ID:	6A12005-ICV159.d	Calibration Date:	12/29/15 17:04
Sequence:	6A12005	Injection Date:	01/12/16
Lab Sample ID:	6A12005-ICV1	Injection Time:	14:13

		CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
Isopropyl Ether	Avg	50.00	48.18	0.8504352	0.8194402	0.001	-3.6	90
cis-1,2-Dichloroethene	Avg	50.00	48.98	0.2580886	0.2528348	0.001	-2.0	90
2,2-Dichloropropane	Avg	50.00	45.96	0.3074486	0.282624	0.001	-8.1	90
Propionitrile	Avg	2500	2357	2.703462E-02	2.548821E-02	0.001	-5.7	90
2-Butanone	Avg	125.0	115.9	0.1180537	0.1094448	0.001	-7.3	90
Methacrylonitrile	Avg	500.0	480.1	0.1556013	0.1494022	0.001	-4.0	90
Bromochloromethane	Avg	50.00	49.26	0.1071185	0.1055419	0.001	-1.5	90
Chloroform	Avg	50.00	49.41	0.4222834	0.4172663	0.001	-1.2	20
1,1,1-Trichloroethane	Avg	50.00	50.00	0.3189639	0.3189605	0.001	-0.001	90
Cyclohexane	Avg	50.00	50.73	0.3649072	0.3702312	0.001	1.5	90
1,1-Dichloropropene	Avg	50.00	49.81	0.3222734	0.3210247	0.001	-0.4	90
Carbon tetrachloride	Avg	50.00	51.05	0.2855829	0.2915672	0.001	2.1	90
1,2-Dichloroethane	Avg	50.00	44.77	0.3079278	0.2756889	0.001	-10.5	90
Isobutyl alcohol	Avg	2500	2358	1.137051E-02	1.072275E-02	0.001	-5.7	90
Benzene	Avg	50.00	48.01	0.8949874	0.8593897	0.001	-4.0	90
Trichloroethene	Avg	50.00	48.11	0.2475276	0.2381506	0.001	-3.8	90
Methylcyclohexane	Avg	50.00	50.02	0.3203603	0.3204889	0.001	0.04	90
1,2-Dichloropropane	Avg	50.00	50.13	7.544622E-02	7.563533E-02	0.001	0.3	20
Dibromomethane	Avg	50.00	48.15	0.1502532	0.1446826	0.001	-3.7	90
1,4-Dioxane	Avg	2500	2350	2.079662E-03	1.955093E-03	0.001	-6.0	90
Methyl Methacrylate	Avg	500.0	479.9	5.414996E-02	5.196902E-02	0.001	-4.0	90
Bromodichloromethane	Avg	50.00	51.51	0.2969387	0.3058941	0.001	3.0	90
2-Chloroethylvinyl ether	Avg	50.00	48.15	0.1217553	0.1172433	0.001	-3.7	90

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CONTINUING CALIBRATION CHECK

SW 8260B

Client:	DRAPER ADEN ASSOCIATES	SDG:	1601026
Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39		
Instrument ID:	5972hp59	Calibration:	5123005
Lab File ID:	6A12005-ICV159.d	Calibration Date:	12/29/15 17:04
Sequence:	6A12005	Injection Date:	01/12/16
Lab Sample ID:	6A12005-ICV1	Injection Time:	14:13

		CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
cis-1,3-Dichloropropene	Avg	50.00	48.91	0.3599258	0.352105	0.001	-2.2	90
4-Methyl-2-pentanone	Avg	125.0	115.6	0.3546573	0.3279395	0.001	-7.5	90
Toluene	Avg	50.00	50.51	0.6737121	0.6806434	0.001	1.0	20
trans-1,3-Dichloropropene	Avg	50.00	48.75	0.4236714	0.4131166	0.001	-2.5	90
1,1,2-Trichloroethane	Avg	50.00	51.10	0.2409381	0.246237	0.001	2.2	90
Ethyl Methacrylate	Avg	500.0	526.8	6.034594E-02	6.358264E-02	0.001	5.4	90
1,3-Dichloropropane	Avg	50.00	50.16	0.4251425	0.426486	0.001	0.3	90
Tetrachloroethene	Avg	50.00	49.41	0.2556193	0.2525971	0.001	-1.2	90
2-Hexanone	Avg	125.0	118.4	0.240702	0.2279646	0.001	-5.3	90
1-Chlorohexane	Avg	50.00	51.02	0.3027863	0.3089823	0.001	2.0	90
Dibromochloromethane	Avg	50.00	50.46	0.3144072	0.3172866	0.001	0.9	90
1,2-Dibromoethane	Avg	50.00	48.89	0.2655403	0.2596273	0.001	-2.2	90
Chlorobenzene	Avg	50.00	50.50	0.7856977	0.7936197	0.3	1.0	90
1,1,1,2-Tetrachloroethane	Avg	50.00	50.21	0.2990926	0.3003742	0.001	0.4	90
Ethylbenzene	Avg	50.00	48.84	0.3731749	0.3645297	0.001	-2.3	20
m,p-Xylene	Avg	100.0	97.78	0.4855455	0.4747518	0.001	-2.2	90
o-Xylene	Avg	50.00	52.60	0.4638104	0.4879047	0.001	5.2	90
Styrene	Avg	50.00	51.59	0.7539749	0.7780058	0.001	3.2	90
Bromoform	Avg	50.00	50.62	0.412303	0.4174187	0.1	1.2	90
Isopropylbenzene	Avg	50.00	51.47	1.159203	1.19322	0.001	2.9	90
1,1,2,2-Tetrachloroethane	Avg	50.00	49.53	0.7243981	0.7176593	0.3	-0.9	90
1,2,3-Trichloropropane	Avg	50.00	50.41	8.166858E-02	0.0823315	0.001	0.8	90
Bromobenzene	Avg	50.00	50.71	0.3225297	0.3271234	0.001	1.4	90

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CONTINUING CALIBRATION CHECK

SW 8260B

Client: DRAPER ADEN ASSOCIATES SDG: 1601026

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Instrument ID: 5972hp59 Calibration: 5123005

Lab File ID: 6A12005-ICV159.d Calibration Date: 12/29/15 17:04

Sequence: 6A12005 Injection Date: 01/12/16

Lab Sample ID: 6A12005-ICV1 Injection Time: 14:13

COMPOUND	TYPE	CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
trans-1,4-Dichloro-2-butene	Avg	200.0	192.9	8.895814E-02	8.578642E-02	0.001	-3.6	90
n-Propylbenzene	Avg	50.00	50.94	3.236915	3.297499	0.001	1.9	90
2-Chlorotoluene	Avg	50.00	48.75	1.952345	1.90359	0.001	-2.5	90
4-Chlorotoluene	Avg	50.00	49.42	1.838021	1.816609	0.001	-1.2	90
1,3,5-Trimethylbenzene	Avg	50.00	48.84	1.997844	1.951635	0.001	-2.3	90
Pentachloroethane	Avg	50.00	52.81	0.4238927	0.4477199	0.001	5.6	90
tert-Butylbenzene	Avg	50.00	50.71	2.004933	2.033237	0.001	1.4	90
1,2,4-Trimethylbenzene	Avg	50.00	49.62	2.027895	2.012603	0.001	-0.8	90
sec-Butylbenzene	Avg	50.00	50.89	2.756698	2.805634	0.001	1.8	90
1,3-Dichlorobenzene	Avg	50.00	49.26	1.194743	1.176996	0.001	-1.5	90
p-Isopropyltoluene	Avg	50.00	51.27	2.173807	2.228843	0.001	2.5	90
1,4-Dichlorobenzene	Avg	50.00	47.91	1.295794	1.241722	0.001	-4.2	90
1,2-Dichlorobenzene	Avg	50.00	48.36	1.121308	1.084456	0.001	-3.3	90
n-Butylbenzene	Avg	50.00	49.01	2.096042	2.054603	0.001	-2.0	90
1,2-Dibromo-3-chloropropane	Avg	50.00	47.76	0.116112	0.1109028	0.001	-4.5	90
1,2,4-Trichlorobenzene	Avg	50.00	44.73	0.7350751	0.6576694	0.001	-10.5	90
Hexachlorobutadiene	Avg	50.00	47.95	0.423388	0.4060184	0.001	-4.1	90
Naphthalene	Avg	50.00	44.92	1.439418	1.293181	0.001	-10.2	90
1,2,3-Trichlorobenzene	Avg	50.00	43.74	0.6645718	0.5814084	0.001	-12.5	90
1,2-Dichloroethene (total)	Avg	100.0	94.97	0.2397395	0.2282213	0.001	-4.8	90
Xylenes (total)	Avg	150.0	150.4	0.4783004	0.4791361	0.001	0.2	90
Diethyl ether	Avg	50.00	47.08	9.332043E-02	8.787763E-02	0.001	-5.8	90
Tetrahydrofuran	Avg	200.0	187.3	7.796952E-02	7.302447E-02	0.001	-6.3	90

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CONTINUING CALIBRATION CHECK

SW 8260B

Client:	DRAPER ADEN ASSOCIATES	SDG:	1601026
Project:	WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39		
Instrument ID:	5972hp59	Calibration:	5123005
Lab File ID:	6A12005-ICV159.d	Calibration Date:	12/29/15 17:04
Sequence:	6A12005	Injection Date:	01/12/16
Lab Sample ID:	6A12005-ICV1	Injection Time:	14:13

		CONC. (ug/kg)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT
Dibromofluoromethane	Avg	50.00	47.97	0.2878437	0.2761763	0.001	-4.1	90
1,2-Dichloroethane-d4	Avg	50.00	46.74	0.2639388	0.2467366	0.001	-6.5	90
Toluene-d8	Avg	50.00	49.72	1.12656	1.120261	0.001	-0.6	90
Bromofluorobenzene	Avg	50.00	50.39	0.7694356	0.7754004	0.001	0.8	90

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

CONTINUING CALIBRATION CHECK

Client: SDG:

Project:

Instrument ID: Calibration:

Lab File ID: Calibration Date:

Sequence: Injection Date:

Lab Sample ID: Injection Time:

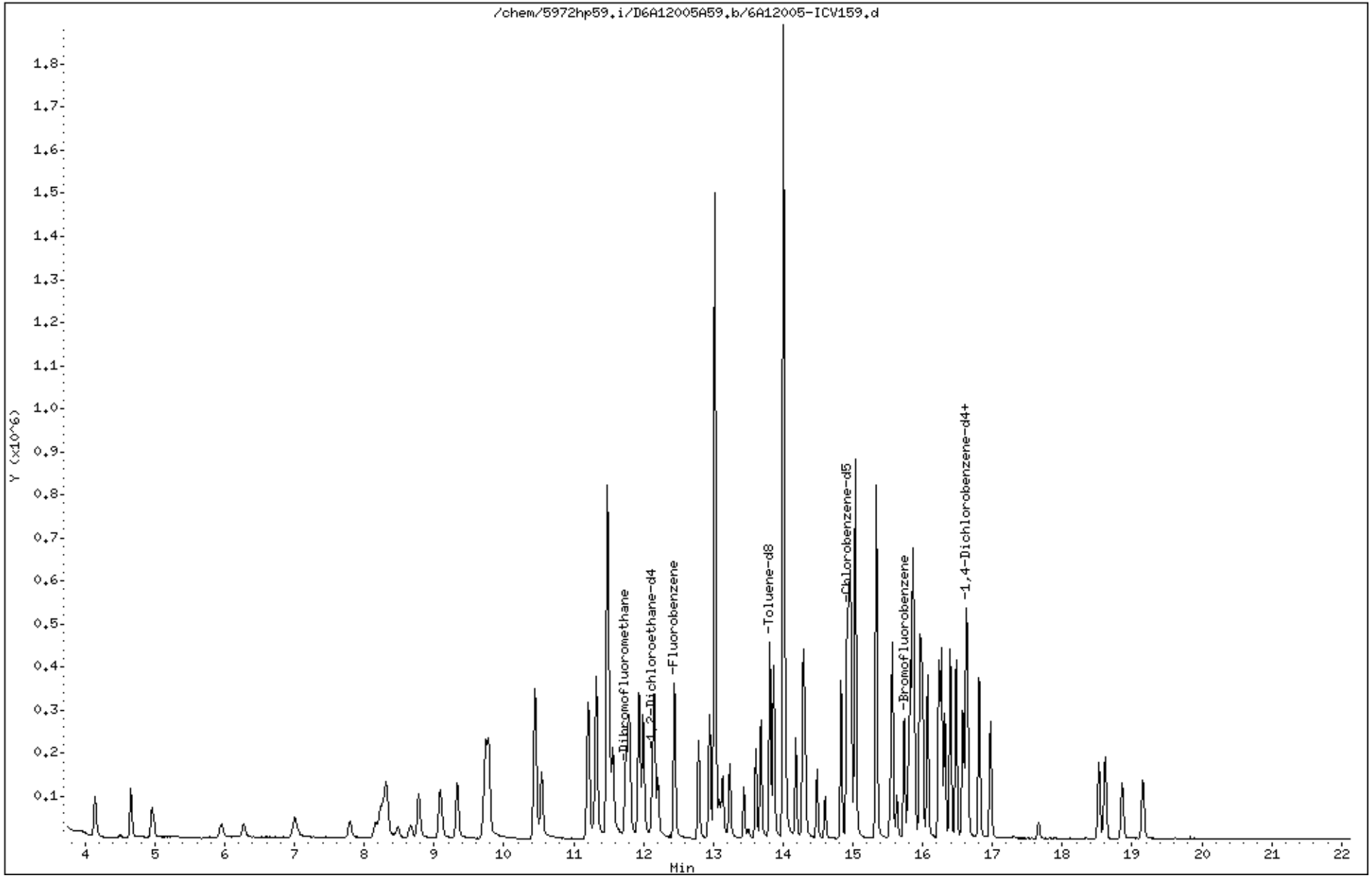
COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Date : 12-JAN-2016 14:13
Client ID: VSTD050BD
Sample Info: 6A12005-ICV1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Lab Smp Id: 6A12005-ICV1 Client Smp ID: VSTD050BD
Inj Date : 12-JAN-2016 14:13
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6A12005-ICV1:JAO
Misc Info : VSTD050BD
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 1 Fluorobenzene	96	12.438	12.418	(1.000)	391920	250.000	
* 2 Chlorobenzene-d5	117	14.913	14.894	(1.000)	286476	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.619	16.600	(1.000)	133856	250.000	
$ 4 Dibromofluoromethane	113	11.738	11.718	(0.944)	108239	250.000	239.867
$ 5 1,2-Dichloroethane-d4	65	12.132	12.113	(0.975)	96701	250.000	233.706
$ 6 Toluene-d8	98	13.808	13.789	(0.926)	320928	250.000	248.602
$ 7 Bromofluorobenzene	95	15.731	15.722	(0.947)	103792	250.000	251.938
8 Dichlorodifluoromethane	85	4.135	4.125	(0.332)	133715	250.000	265.826
9 Chloromethane	50	4.657	4.638	(0.374)	159444	250.000	236.890
10 Vinyl Chloride	62	4.963	4.944	(0.399)	116114	250.000	262.236
11 Bromomethane	94	5.959	5.920	(0.479)	47531	250.000	213.185
12 Chloroethane	64	6.274	6.235	(0.504)	53110	250.000	267.200
13 Trichlorofluoromethane	101	7.014	6.975	(0.564)	97739	250.000	265.916
178 Diethyl ether	45	7.793	7.764	(0.627)	34441	250.000	235.419
14 Acrolein	56	8.158	8.129	(0.656)	50649	2500.00	1872.77

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.237	8.198	(0.662)	33445	250.000	250.437
16 1,1,2-trichloro-1,2,2-trifluo	101	8.296	8.257	(0.667)	80893	250.000	246.998
17 1,1-Dichloroethene	96	8.326	8.296	(0.669)	60405	250.000	242.090
18 Acetone	43	8.493	8.464	(0.683)	49457	625.000	621.828
19 Iodomethane	142	8.661	8.632	(0.696)	60971	250.000	241.148
20 Carbon disulfide	76	8.779	8.750	(0.706)	252776	250.000	226.804
21 3-Chloropropene	76	9.085	9.056	(0.730)	35895	250.000	223.641
22 Acetonitrile	41	9.085	9.056	(0.730)	121828	250.000	239.567
23 Methyl acetate	43	9.105	9.085	(0.732)	75833	250.000	221.296
24 Methylene Chloride	84	9.331	9.312	(0.750)	78515	250.000	219.859
25 Acrylonitrile	53	9.785	9.766	(0.787)	243173	2500.00	2339.07
26 Methyl-tert-butyl ether	73	9.726	9.707	(0.782)	187063	250.000	238.155
28 trans-1,2-Dichloroethene	96	9.755	9.726	(0.784)	79798	250.000	229.920
29 trans-1,2-DCE (part of total)	96	9.755	9.726	(0.784)	79798	250.000	229.920
31 Isopropyl ether	45	10.446	10.426	(0.840)	321155	250.000	240.888
32 1,1-Dichloroethane	63	10.446	10.417	(0.840)	164471	250.000	230.935
33 Vinyl acetate	43	10.456	10.436	(0.841)	195848	250.000	220.915
34 Chloroprene	53	10.544	10.515	(0.848)	129715	250.000	250.480
35 2-butanone	43	11.195	11.176	(0.900)	107234	625.000	579.422
36 2,2-Dichloropropane	77	11.195	11.176	(0.900)	110766	250.000	229.814
37 cis-1,2-Dichloroethene	96	11.215	11.196	(0.902)	99091	250.000	244.911
38 cis-1,2-DCE (part of total)	96	11.215	11.196	(0.902)	99091	250.000	244.911
39 Propionitrile	54	11.323	11.304	(0.910)	499467	12500.0	11785.0
40 Methacrylonitrile	41	11.481	11.462	(0.923)	585537	2500.00	2400.40
41 Bromochloromethane	128	11.501	11.482	(0.925)	41364	250.000	246.321
180 Tetrahydrofuran	42	11.521	11.501	(0.926)	114479	1000.00	936.577
42 Chloroform	83	11.560	11.541	(0.929)	163535	250.000	247.030
43 1,1,1-Trichloroethane	97	11.767	11.748	(0.946)	125007	250.000	249.997
44 Cyclohexane	56	11.807	11.777	(0.949)	145101	250.000	253.647
46 1,1-dichloropropene	75	11.945	11.925	(0.960)	125816	250.000	249.031
47 Isobutyl alcohol	43	11.994	11.985	(0.964)	210123	12500.0	11787.9
48 Carbon Tetrachloride	117	11.935	11.915	(0.960)	114271	250.000	255.239
49 Benzene	78	12.162	12.142	(0.978)	336812	250.000	240.056
50 1,2-Dichloroethane	62	12.211	12.192	(0.982)	108048	250.000	223.826
51 Trichloroethene	130	12.793	12.773	(1.029)	93336	250.000	240.529
52 Methylcyclohexane	83	12.950	12.931	(1.041)	125606	250.000	250.100
53 Methylmethacrylate	100	13.019	13.010	(1.047)	203677	2500.00	2399.31
54 1,2-Dichloropropane	63	13.858	13.848	(1.114)	29643	250.000	250.627
55 1,4-dioxane	88	13.098	13.079	(1.053)	38312	12500.0	11751.3
56 Dibromomethane	174	13.138	13.119	(1.056)	56704	250.000	240.731
57 Bromodichloromethane	83	13.236	13.217	(1.064)	119886	250.000	257.540
58 cis-1,3-Dichloropropene	75	13.601	13.592	(1.094)	137997	250.000	244.568
59 4-Methyl-2-pentanone	43	13.680	13.661	(0.917)	234867	625.000	577.916
60 Toluene	92	13.868	13.848	(0.930)	194988	250.000	252.572
61 Ethylmethacrylate	99	14.006	13.986	(0.939)	182149	2500.00	2634.09
62 trans-1,3-Dichloropropene	75	14.035	14.016	(0.941)	118348	250.000	243.772
63 1,1,2-Trichloroethane	97	14.183	14.174	(0.951)	70541	250.000	255.498

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-ICV159.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
64 2-hexanone	43	14.301	14.282	(0.959)	163266	625.000	591.927
65 2-chloroethyl vinyl ether	63	13.443	13.424	(1.081)	45950	250.000	240.735
66 1,3-Dichloropropane	76	14.321	14.302	(0.960)	122178	250.000	250.790
67 Tetrachloroethene	164	14.282	14.272	(0.958)	72363	250.000	247.044
68 Dibromochloromethane	129	14.489	14.479	(0.972)	90895	250.000	252.290
69 1,2-Dibromoethane	107	14.607	14.588	(0.979)	74377	250.000	244.433
70 1-Chlorohexane	55	14.824	14.815	(0.994)	88516	250.000	255.116
71 Chlorobenzene	112	14.933	14.923	(1.001)	227353	250.000	252.521
72 Ethylbenzene	106	14.952	14.943	(1.003)	104429	250.000	244.208
73 1,1,1,2-Tetrachloroethane	131	14.972	14.963	(1.004)	86050	250.000	251.071
74 m,p-Xylene	106	15.031	15.022	(1.008)	272010	500.000	488.885
75 m,p-Xylene (part of total)	106	15.031	15.022	(1.008)	272010	500.000	488.885
76 o-Xylene	106	15.337	15.318	(1.028)	139773	250.000	262.987
77 o-Xylene (part of total)	106	15.337	15.318	(1.028)	139773	250.000	262.987
78 Styrene	104	15.337	15.327	(1.028)	222880	250.000	257.968
79 Bromoform	173	15.534	15.525	(0.935)	55874	250.000	253.102
80 Isopropyl Benzene	105	15.564	15.554	(1.044)	341829	250.000	257.336
81 1,1,2,2-Tetrachloroethane	83	15.800	15.781	(0.951)	96063	250.000	247.674
82 trans-1,4-dichloro-2-butene	53	15.830	15.811	(1.061)	98303	1000.00	964.346
83 1,2,3-Trichloropropane	110	15.859	15.850	(1.063)	23586	250.000	252.029
84 Bromobenzene	156	15.889	15.870	(1.065)	93713	250.000	253.561
85 n-Propyl Benzene	91	15.859	15.850	(0.954)	441390	250.000	254.679
86 1,3,5-Trimethyl Benzene	105	15.968	15.949	(0.961)	261238	250.000	244.218
87 2-Chlorotoluene	91	15.988	15.978	(0.962)	254807	250.000	243.757
88 4-Chlorotoluene	91	16.067	16.047	(0.967)	243164	250.000	247.088
89 tert-Butyl Benzene	119	16.234	16.215	(0.977)	272161	250.000	253.529
90 1,2,4-Trimethyl Benzene	105	16.264	16.245	(0.979)	269399	250.000	248.115
91 Pentachloroethane	167	16.313	16.304	(0.982)	59930	250.000	264.053
92 sec-Butyl Benzene	105	16.392	16.383	(0.986)	375551	250.000	254.438
93 p-Isopropyl Toluene	119	16.481	16.462	(0.992)	298344	250.000	256.329
94 1,3-Dichlorobenzene	146	16.579	16.560	(0.998)	157548	250.000	246.287
95 1,4-Dichlorobenzene	146	16.639	16.629	(1.001)	166212	250.000	239.568
96 n-Butyl Benzene	91	16.806	16.797	(1.011)	275021	250.000	245.058
97 1,2-Dichlorobenzene	146	16.974	16.955	(1.021)	145161	250.000	241.784
98 1,2-Dibromo-3-Chloropropane	157	17.664	17.645	(1.063)	14845	250.000	238.784
99 1,2,4-Trichlorobenzene	180	18.522	18.493	(1.115)	88033	250.000	223.674
100 Hexachlorobutadiene	225	18.611	18.582	(1.120)	54348	250.000	239.744
101 Naphthalene	128	18.857	18.828	(1.135)	173100	250.000	224.601
102 1,2,3-Trichlorobenzene	180	19.153	19.134	(1.152)	77825	250.000	218.715
M 103 1,2-Dichloroethene (total)	96				178889	500.000	475.978
M 104 Xylene (total)	106				411783	750.000	751.872

1/13/2016

N. BFB / DFTPP or FC-43 Data

For each 12-hour period, per instrument utilized, include:

Bar Graph Spectrum and Tabulated Relative Abundances

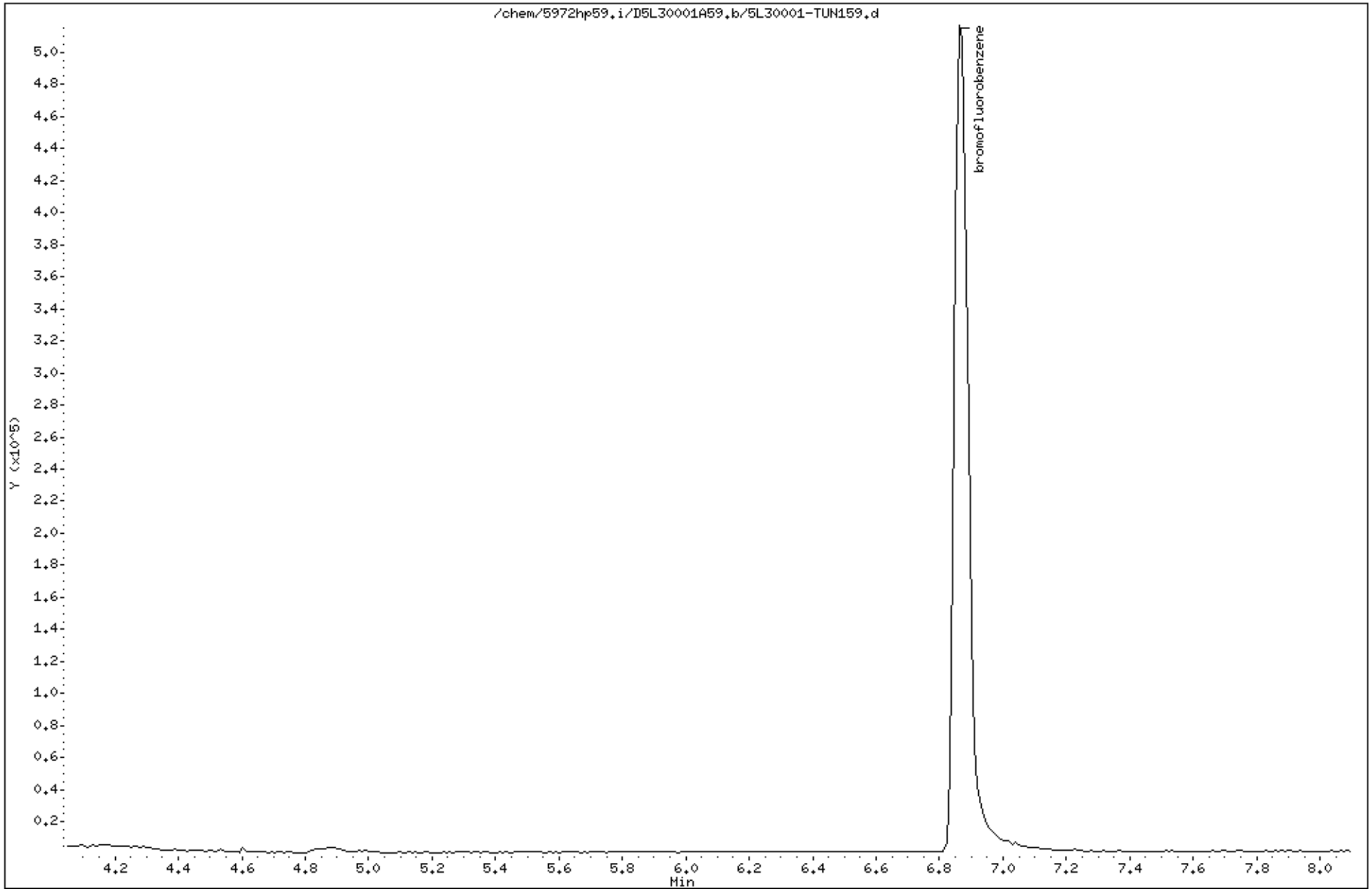
Mass Listing

RIC

PFTBA (Perfluoro-tri-n-butylamine) scan, showing the relative abundance of the key ions and the Instrument Operating Conditions

12/30/2015

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-TUN159.d
Date : 29-DEC-2015 17:04
Client ID: BFBAB
Instrument: 5972hp59.i
Sample Info: 5L30001-TUN1:JAO
Volume Injected (uL): 2.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-TUN159.d

Date : 29-DEC-2015 17:04

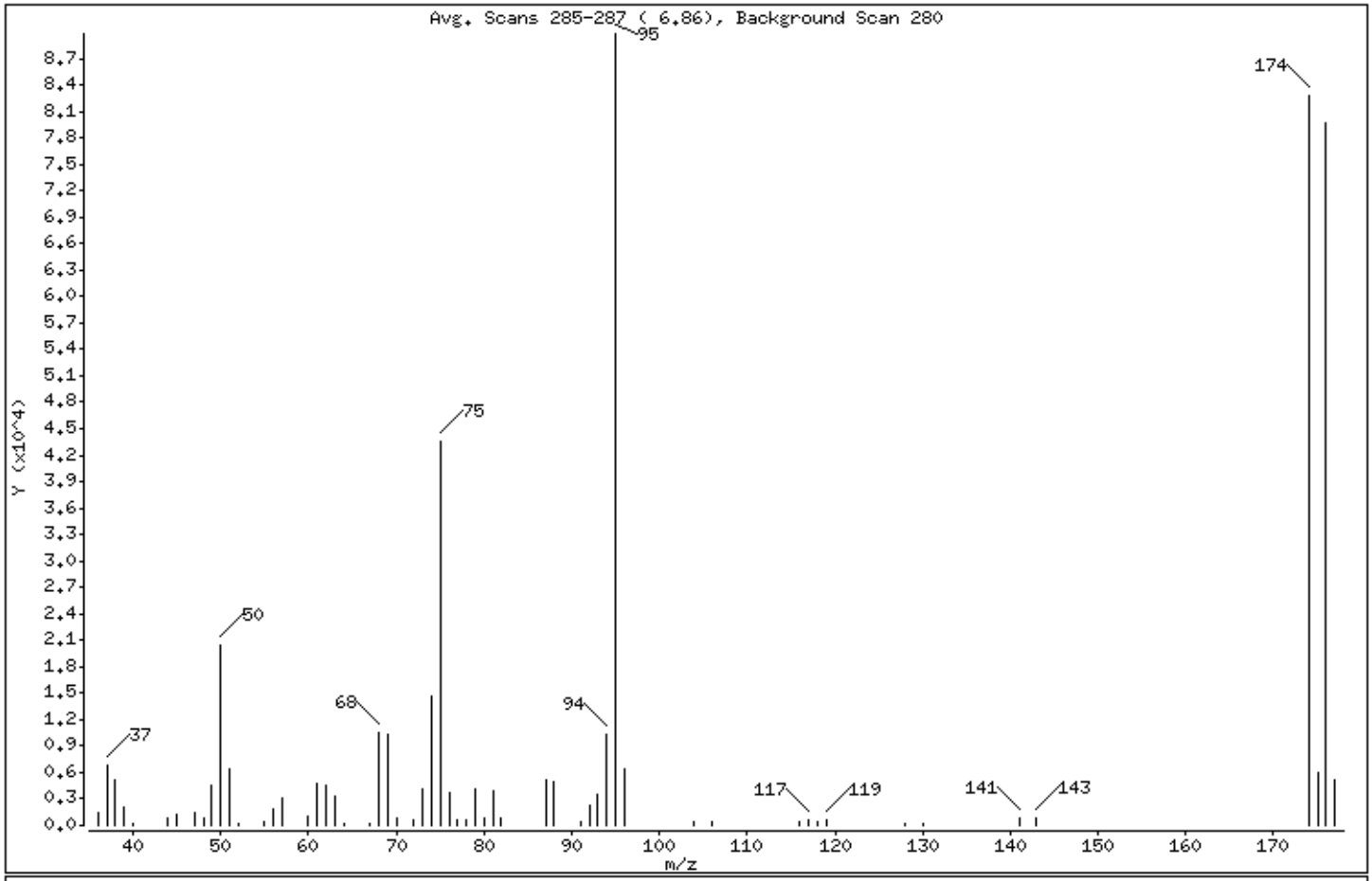
Client ID: BFBAB | Instrument: 5972hp59.i

Sample Info: 5L30001-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

1 bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.81
75	30.00 - 60.00% of mass 95	48.57
96	5.00 - 9.00% of mass 95	7.08
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	92.07
175	5.00 - 9.00% of mass 174	6.77 (7.35)
176	95.00 - 101.00% of mass 174	88.68 (96.32)
177	5.00 - 9.00% of mass 176	5.76 (6.50)

Data File: /chem/5972hp59.i/D5L30001A59.b/5L30001-TUN159.d

Date : 29-DEC-2015 17:04

Client ID: BFBAB | Instrument: 5972hp59.i

Sample Info: 5L30001-TUN1:JAO

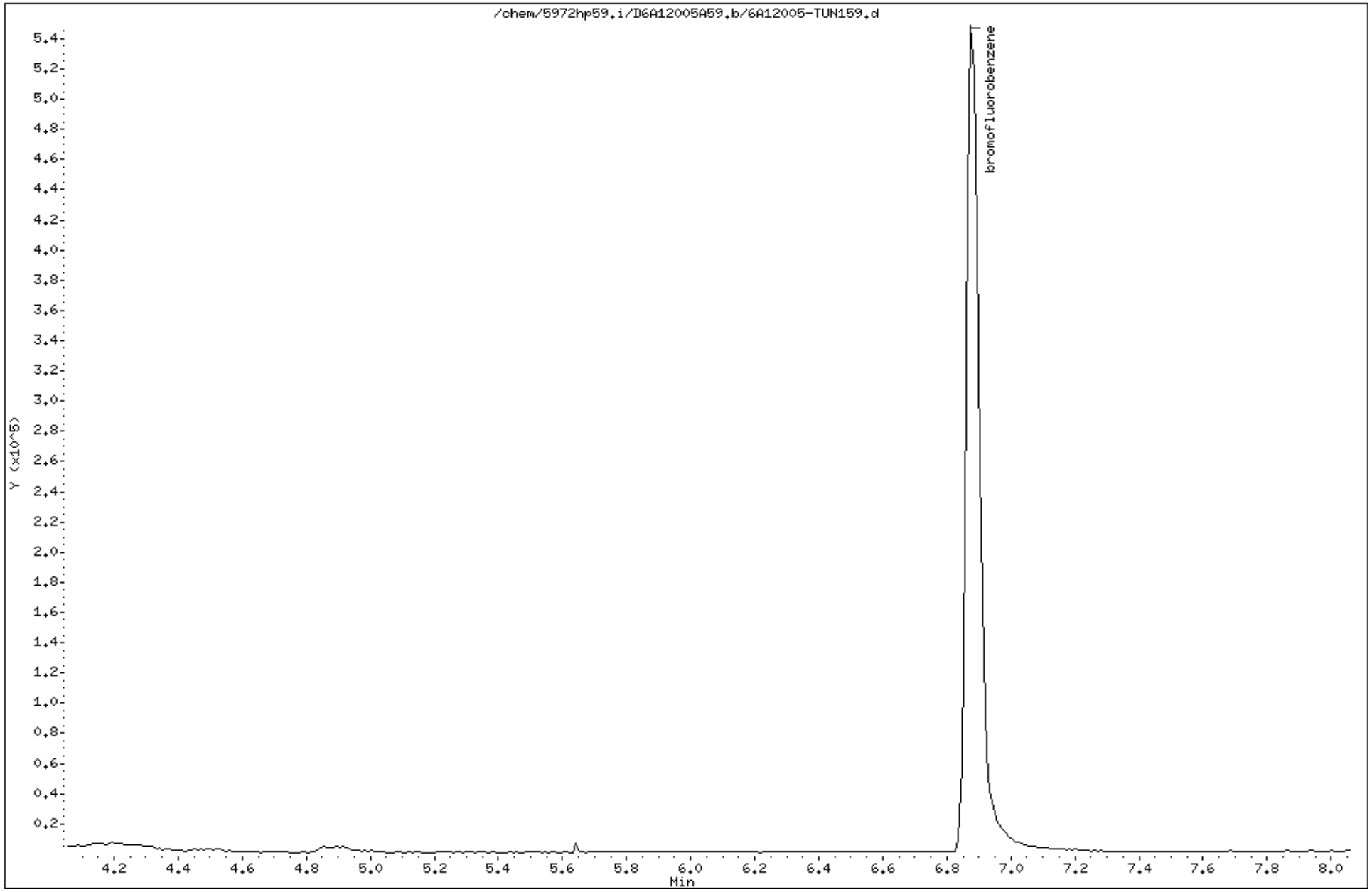
Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

Data File: 5L30001-TUN159.d
Spectrum: Avg. Scans 285-287 (6.86), Background Scan 280
Location of Maximum: 95.00
Number of points: 58

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1346	57.00	3053	77.00	704	106.00	447
37.00	6750	60.00	995	78.00	538	116.00	325
38.00	5214	61.00	4682	79.00	4060	117.00	570
39.00	2146	62.00	4567	80.00	911	118.00	388
40.00	218	63.00	3362	81.00	3980	119.00	544
44.00	858	64.00	263	82.00	786	128.00	271
45.00	1302	67.00	128	87.00	5162	130.00	244
47.00	1534	68.00	10518	88.00	4932	141.00	764
48.00	834	69.00	10345	91.00	440	143.00	725
49.00	4495	70.00	843	92.00	2328	174.00	82680
50.00	20480	72.00	554	93.00	3525	175.00	6076
51.00	6319	73.00	4124	94.00	10297	176.00	79640
52.00	119	74.00	14631	95.00	89800	177.00	5176
55.00	405	75.00	43616	96.00	6360		
56.00	1776	76.00	3757	104.00	455		

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-TUN159.d
Date : 12-JAN-2016 13:48
Client ID: BFBBD
Instrument: 5972hp59.i
Sample Info: 6A12005-TUN1:JAO
Volume Injected (uL): 2.0
Operator: JAO
Column phase: SPB-624
Column diameter: 0.32



Robin Hai 1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-TUN159.d

Date : 12-JAN-2016 13:48

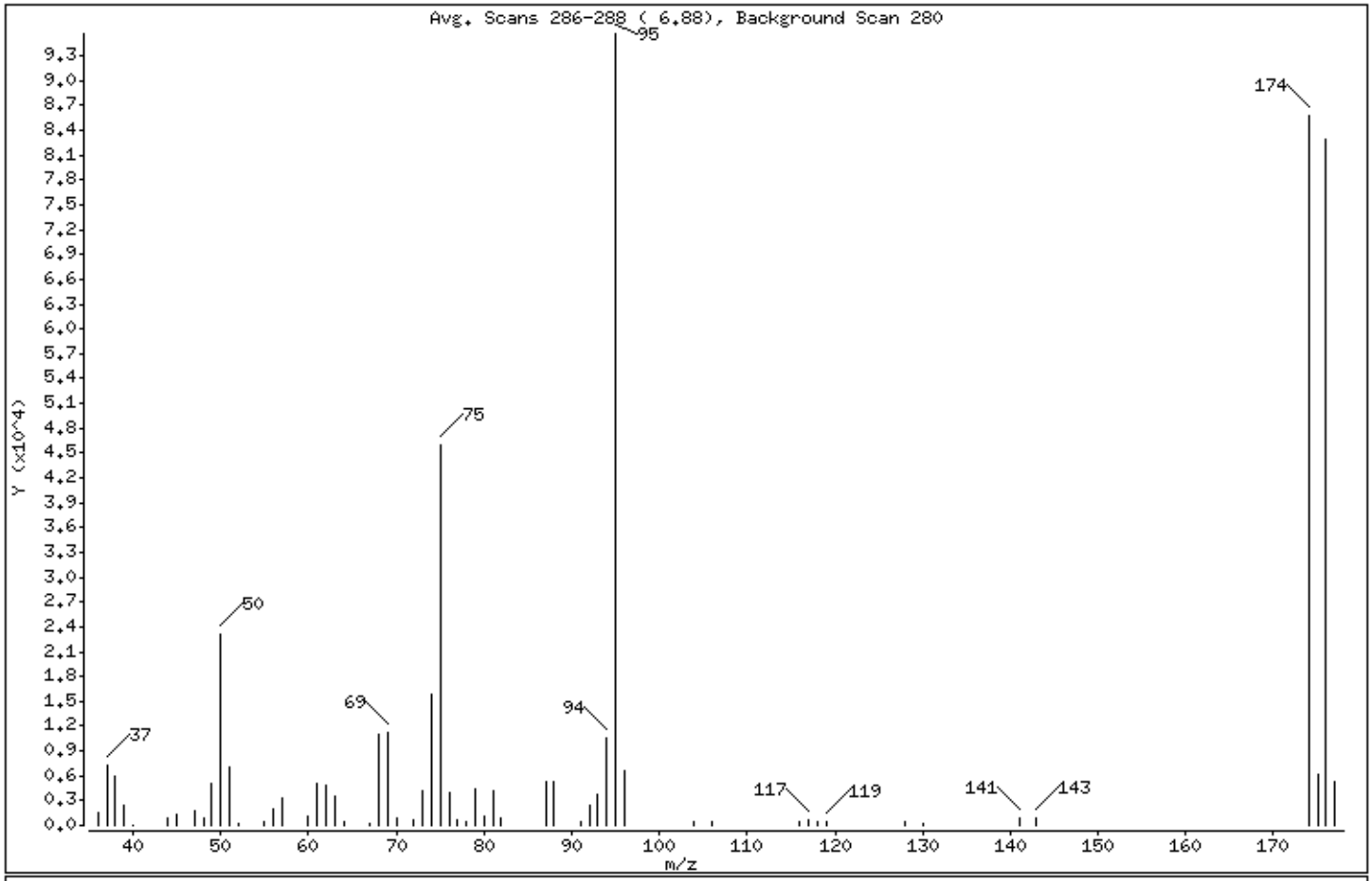
Client ID: BFBBD | Instrument: 5972hp59.i

Sample Info: 6A12005-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

1 bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	24.13
75	30.00 - 60.00% of mass 95	48.10
96	5.00 - 9.00% of mass 95	6.96
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	89.58
175	5.00 - 9.00% of mass 174	6.53 (7.29)
176	95.00 - 101.00% of mass 174	86.67 (96.75)
177	5.00 - 9.00% of mass 176	5.57 (6.42)

Data File: /chem/5972hp59.i/D6A12005A59.b/6A12005-TUN159.d

Date : 12-JAN-2016 13:48

Client ID: BFBBD | Instrument: 5972hp59.i

Sample Info: 6A12005-TUN1:JAO

Volume Injected (uL): 2.0 | Operator: JAO

Column phase: SPB-624 | Column diameter: 0.32

Data File: 6A12005-TUN159.d
Spectrum: Avg. Scans 286-288 (6.88), Background Scan 280
Location of Maximum: 95.00
Number of points: 58

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1500	57.00	3272	77.00	616	106.00	462
37.00	7214	60.00	1139	78.00	535	116.00	445
38.00	5882	61.00	5038	79.00	4486	117.00	640
39.00	2328	62.00	4865	80.00	1040	118.00	350
40.00	31	63.00	3476	81.00	4239	119.00	536
44.00	892	64.00	357	82.00	821	128.00	362
45.00	1317	67.00	261	87.00	5284	130.00	246
47.00	1776	68.00	11058	88.00	5179	141.00	840
48.00	858	69.00	11185	91.00	441	143.00	819
49.00	5159	70.00	921	92.00	2419	174.00	85688
50.00	23080	72.00	587	93.00	3743	175.00	6244
51.00	7038	73.00	4236	94.00	10537	176.00	82896
52.00	235	74.00	15735	95.00	95656	177.00	5324
55.00	402	75.00	46008	96.00	6662		
56.00	1911	76.00	4039	104.00	504		

O. Blank Data

Arranged by type of blank (method or instrument where applicable) in chronological order, by instrument.

Tabulated Results and TICs shall be included.
(ANALYSIS DATA SHEET)

RIC and Quantitation reports.

Target compound spectra with lab-generated standard Spectra and GC/MS library search spectra for TICs.

ANALYSIS DATA SHEET

SW 8260B

VBLKBE

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Extraction: EPA 5030B File ID: 6011208-BLK159.d QC Type: Blank

Initial/Final: 5mL / 5mL Lab ID: 6011208-BLK1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/12/16 22:28

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
74-87-3	Chloromethane		0.39	5.0	U
75-01-4	Vinyl chloride		0.48	5.0	U
74-83-9	Bromomethane		0.76	5.0	U
75-00-3	Chloroethane		0.55	5.0	U
75-69-4	Trichlorofluoromethane		0.49	5.0	U
75-35-4	1,1-Dichloroethene		0.53	5.0	U
67-64-1	Acetone		1.6	13	U
74-88-4	Iodomethane		0.30	5.0	U
75-15-0	Carbon disulfide		0.16	5.0	U
75-09-2	Methylene chloride		0.49	5.0	U
107-13-1	Acrylonitrile		5.1	50	U
156-60-5	trans-1,2-Dichloroethene		0.44	5.0	U
75-34-3	1,1-Dichloroethane		0.27	5.0	U
108-05-4	Vinyl acetate		0.39	5.0	U
156-59-2	cis-1,2-Dichloroethene		0.65	5.0	U
78-93-3	2-Butanone		1.5	13	U
74-97-5	Bromochloromethane		0.70	5.0	U
67-66-3	Chloroform		0.27	5.0	U
71-55-6	1,1,1-Trichloroethane		0.32	5.0	U
56-23-5	Carbon tetrachloride		0.31	5.0	U
107-06-2	1,2-Dichloroethane		0.23	5.0	U
71-43-2	Benzene		0.28	5.0	U
79-01-6	Trichloroethene		0.28	5.0	U
78-87-5	1,2-Dichloropropane		0.86	5.0	U
74-95-3	Dibromomethane		1.2	5.0	U
75-27-4	Bromodichloromethane		0.36	5.0	U
10061-01-5	cis-1,3-Dichloropropene		0.52	5.0	U
108-10-1	4-Methyl-2-pentanone		1.1	13	U
108-88-3	Toluene		0.31	5.0	U
10061-02-6	trans-1,3-Dichloropropene		0.45	5.0	U
79-00-5	1,1,2-Trichloroethane		0.51	5.0	U
127-18-4	Tetrachloroethene		0.42	5.0	U
591-78-6	2-Hexanone		1.2	13	U
124-48-1	Dibromochloromethane		0.32	5.0	U

Liberty Analytical

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ANALYSIS DATA SHEET

SW 8260B

VBLKBE

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Extraction: EPA 5030B File ID: 6011208-BLK159.d QC Type: Blank

Initial/Final: 5mL / 5mL Lab ID: 6011208-BLK1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/12/16 22:28

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
106-93-4	1,2-Dibromoethane		0.44	5.0	U
108-90-7	Chlorobenzene		0.27	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		0.34	5.0	U
100-41-4	Ethylbenzene		0.42	5.0	U
100-42-5	Styrene		0.36	5.0	U
75-25-2	Bromoform		0.95	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		0.64	5.0	U
96-18-4	1,2,3-Trichloropropane		1.1	5.0	U
110-57-6	trans-1,4-Dichloro-2-butene		2.6	20	U
106-46-7	1,4-Dichlorobenzene		0.30	5.0	U
95-50-1	1,2-Dichlorobenzene		0.35	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		0.91	5.0	U
1330-20-7	Xylenes (total)		0.25	5.0	U

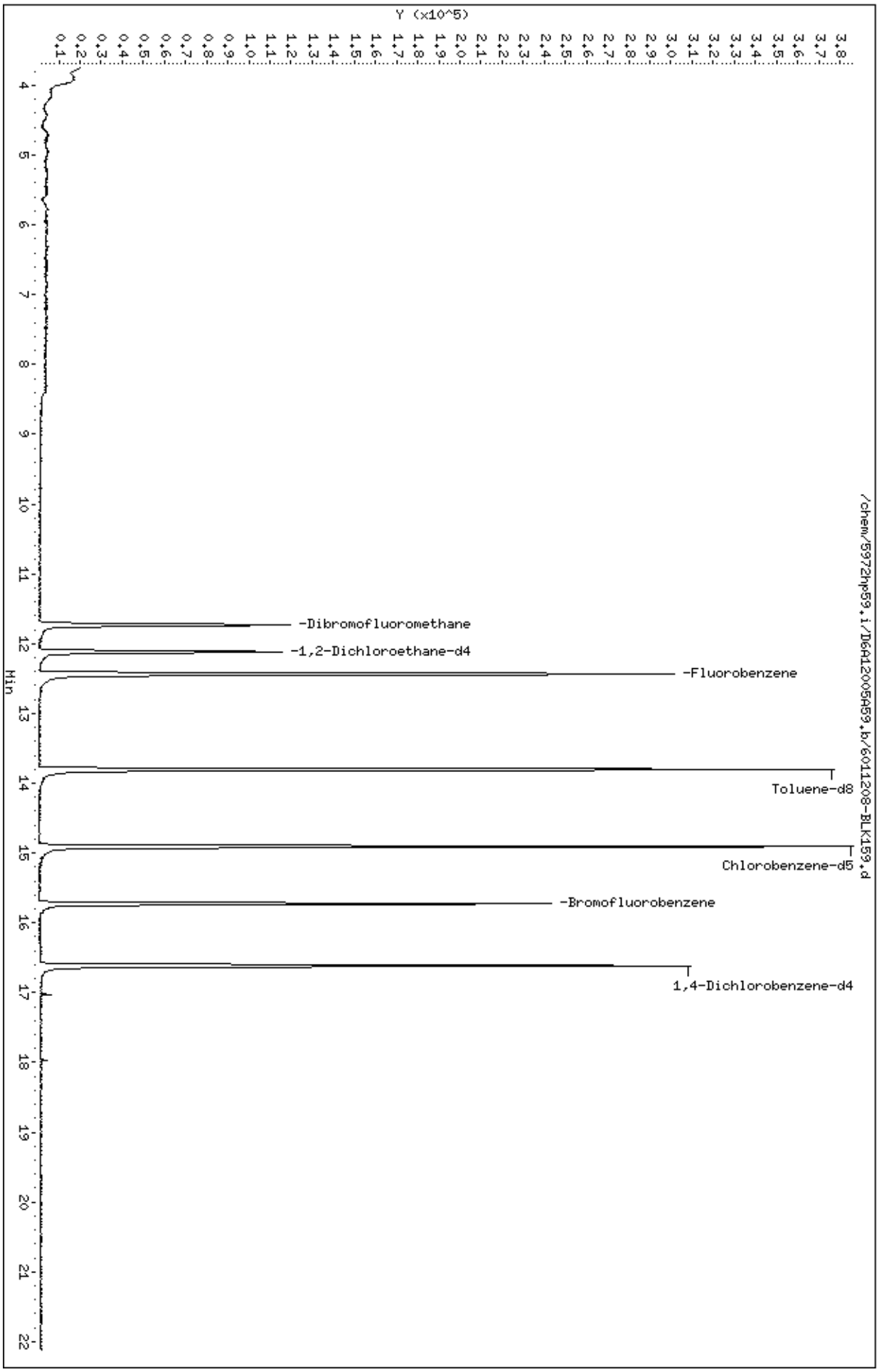
SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	50.14	100	66 - 128	
1,2-Dichloroethane-d4	50.00	55.75	112	55 - 147	
Toluene-d8	50.00	51.51	103	50 - 150	
Bromofluorobenzene	50.00	60.95	122	70 - 132	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BLK159.d
Date : 12-JAN-2016 22:28
Client ID: VBLKBE
Sample Info: 6011208-BLK1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



Robert Hamm 1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BLK159.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011208-BLK159.d
Lab Smp Id: 6011208-BLK1 Client Smp ID: VBLKBE
Inj Date : 12-JAN-2016 22:28
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011208-BLK1:JAO
Misc Info : VBLKBE
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 24 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGAWATER.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.436	12.418	(1.000)	331935	250.000	
* 2 Chlorobenzene-d5	117	14.902	14.894	(1.000)	237643	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.617	16.600	(1.000)	95457	250.000	
$ 4 Dibromofluoromethane	113	11.736	11.718	(0.944)	95815	250.705	50.1411
$ 5 1,2-Dichloroethane-d4	65	12.121	12.113	(0.975)	97687	278.754	55.7507
$ 6 Toluene-d8	98	13.797	13.789	(0.926)	275809	257.554	51.5109
$ 7 Bromofluorobenzene	95	15.730	15.722	(0.947)	89526	304.726	60.9452
9 Chloromethane	50	Compound Not Detected.					
10 Vinyl Chloride	62	Compound Not Detected.					
11 Bromomethane	94	Compound Not Detected.					
12 Chloroethane	64	Compound Not Detected.					
13 Trichlorofluoromethane	101	Compound Not Detected.					
178 Diethyl ether	45	Compound Not Detected.					
17 1,1-Dichloroethene	96	Compound Not Detected.					
18 Acetone	43	Compound Not Detected.					

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BLK159.d
Report Date: 13-Jan-2016 19:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
19 Iodomethane	142	Compound Not Detected.					
20 Carbon disulfide	76	Compound Not Detected.					
24 Methylene Chloride	84	Compound Not Detected.					
25 Acrylonitrile	53	Compound Not Detected.					
28 trans-1,2-Dichloroethene	96	Compound Not Detected.					
32 1,1-Dichloroethane	63	Compound Not Detected.					
33 Vinyl acetate	43	Compound Not Detected.					
35 2-butanone	43	Compound Not Detected.					
37 cis-1,2-Dichloroethene	96	Compound Not Detected.					
41 Bromochloromethane	128	Compound Not Detected.					
42 Chloroform	83	Compound Not Detected.					
43 1,1,1-Trichloroethane	97	Compound Not Detected.					
48 Carbon Tetrachloride	117	Compound Not Detected.					
49 Benzene	78	Compound Not Detected.					
50 1,2-Dichloroethane	62	Compound Not Detected.					
51 Trichloroethene	130	Compound Not Detected.					
54 1,2-Dichloropropane	63	Compound Not Detected.					
56 Dibromomethane	174	Compound Not Detected.					
57 Bromodichloromethane	83	Compound Not Detected.					
58 cis-1,3-Dichloropropene	75	Compound Not Detected.					
59 4-Methyl-2-pentanone	43	Compound Not Detected.					
60 Toluene	92	Compound Not Detected.					
62 trans-1,3-Dichloropropene	75	Compound Not Detected.					
63 1,1,2-Trichloroethane	97	Compound Not Detected.					
64 2-hexanone	43	Compound Not Detected.					
67 Tetrachloroethene	164	Compound Not Detected.					
68 Dibromochloromethane	129	Compound Not Detected.					
69 1,2-Dibromoethane	107	Compound Not Detected.					
71 Chlorobenzene	112	Compound Not Detected.					
72 Ethylbenzene	106	Compound Not Detected.					
73 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
74 m,p-Xylene	106	Compound Not Detected.					
75 m,p-Xylene (part of total)	106	Compound Not Detected.					
76 o-Xylene	106	Compound Not Detected.					
77 o-Xylene (part of total)	106	Compound Not Detected.					
78 Styrene	104	Compound Not Detected.					
79 Bromoform	173	Compound Not Detected.					
81 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
82 trans-1,4-dichloro-2-butene	53	Compound Not Detected.					
83 1,2,3-Trichloropropane	110	Compound Not Detected.					
95 1,4-Dichlorobenzene	146	Compound Not Detected.					
97 1,2-Dichlorobenzene	146	Compound Not Detected.					
98 1,2-Dibromo-3-Chloropropane	157	Compound Not Detected.					
M 104 Xylene (total)	106	Compound Not Detected.					

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BLK159.d
Report Date: 13-Jan-2016 19:12

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011208-BLK159.d
Lab Smp Id: 6011208-BLK1 Client Smp ID: VBLKBE
Inj Date : 12-JAN-2016 22:28
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011208-BLK1:JAO
Misc Info : VBLKBE
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 24 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: WATAUGAWATER.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

P. Laboratory Control Sample Data

Tabulated Results (ANALYSIS DATA SHEET)

RIC and Quantitation report

ANALYSIS DATA SHEET

SW 8260B

VLCSBE

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Extraction: EPA 5030B File ID: 6011208-BS159.d QC Type: LCS

Initial/Final: 5mL / 5mL Lab ID: 6011208-BS1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/12/16 23:44

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
74-87-3	Chloromethane	49.92	0.39	5.0	
75-01-4	Vinyl chloride	56.32	0.48	5.0	
74-83-9	Bromomethane	47.55	0.76	5.0	
75-00-3	Chloroethane	58.28	0.55	5.0	
75-69-4	Trichlorofluoromethane	54.52	0.49	5.0	
75-35-4	1,1-Dichloroethene	53.22	0.53	5.0	
67-64-1	Acetone	136.3	1.6	13	
74-88-4	Iodomethane	41.97	0.30	5.0	
75-15-0	Carbon disulfide	43.44	0.16	5.0	
75-09-2	Methylene chloride	46.90	0.49	5.0	
107-13-1	Acrylonitrile	496.0	5.1	50	
156-60-5	trans-1,2-Dichloroethene	46.90	0.44	5.0	
75-34-3	1,1-Dichloroethane	46.30	0.27	5.0	
108-05-4	Vinyl acetate	41.06	0.39	5.0	
156-59-2	cis-1,2-Dichloroethene	47.89	0.65	5.0	
78-93-3	2-Butanone	119.3	1.5	13	
74-97-5	Bromochloromethane	51.13	0.70	5.0	
67-66-3	Chloroform	51.56	0.27	5.0	
71-55-6	1,1,1-Trichloroethane	49.57	0.32	5.0	
56-23-5	Carbon tetrachloride	50.30	0.31	5.0	
107-06-2	1,2-Dichloroethane	52.37	0.23	5.0	
71-43-2	Benzene	48.33	0.28	5.0	
79-01-6	Trichloroethene	42.19	0.28	5.0	
78-87-5	1,2-Dichloropropane	49.88	0.86	5.0	
74-95-3	Dibromomethane	50.35	1.2	5.0	
75-27-4	Bromodichloromethane	51.50	0.36	5.0	
10061-01-5	cis-1,3-Dichloropropene	47.38	0.52	5.0	
108-10-1	4-Methyl-2-pentanone	130.0	1.1	13	
108-88-3	Toluene	48.85	0.31	5.0	
10061-02-6	trans-1,3-Dichloropropene	49.70	0.45	5.0	
79-00-5	1,1,2-Trichloroethane	54.52	0.51	5.0	
127-18-4	Tetrachloroethene	49.55	0.42	5.0	
591-78-6	2-Hexanone	136.0	1.2	13	
124-48-1	Dibromochloromethane	51.82	0.32	5.0	

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ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

VLCSBE

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Extraction: EPA 5030B File ID: 6011208-BS159.d QC Type: LCS

Initial/Final: 5mL / 5mL Lab ID: 6011208-BS1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/12/16 23:44

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
106-93-4	1,2-Dibromoethane	52.73	0.44	5.0	
108-90-7	Chlorobenzene	50.05	0.27	5.0	
630-20-6	1,1,1,2-Tetrachloroethane	50.45	0.34	5.0	
100-41-4	Ethylbenzene	49.26	0.42	5.0	
100-42-5	Styrene	51.35	0.36	5.0	
75-25-2	Bromoform	50.68	0.95	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	52.54	0.64	5.0	
96-18-4	1,2,3-Trichloropropane	54.44	1.1	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	194.7	2.6	20	
106-46-7	1,4-Dichlorobenzene	46.36	0.30	5.0	
95-50-1	1,2-Dichlorobenzene	48.82	0.35	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	49.41	0.91	5.0	
1330-20-7	Xylenes (total)	148.9	0.25	5.0	

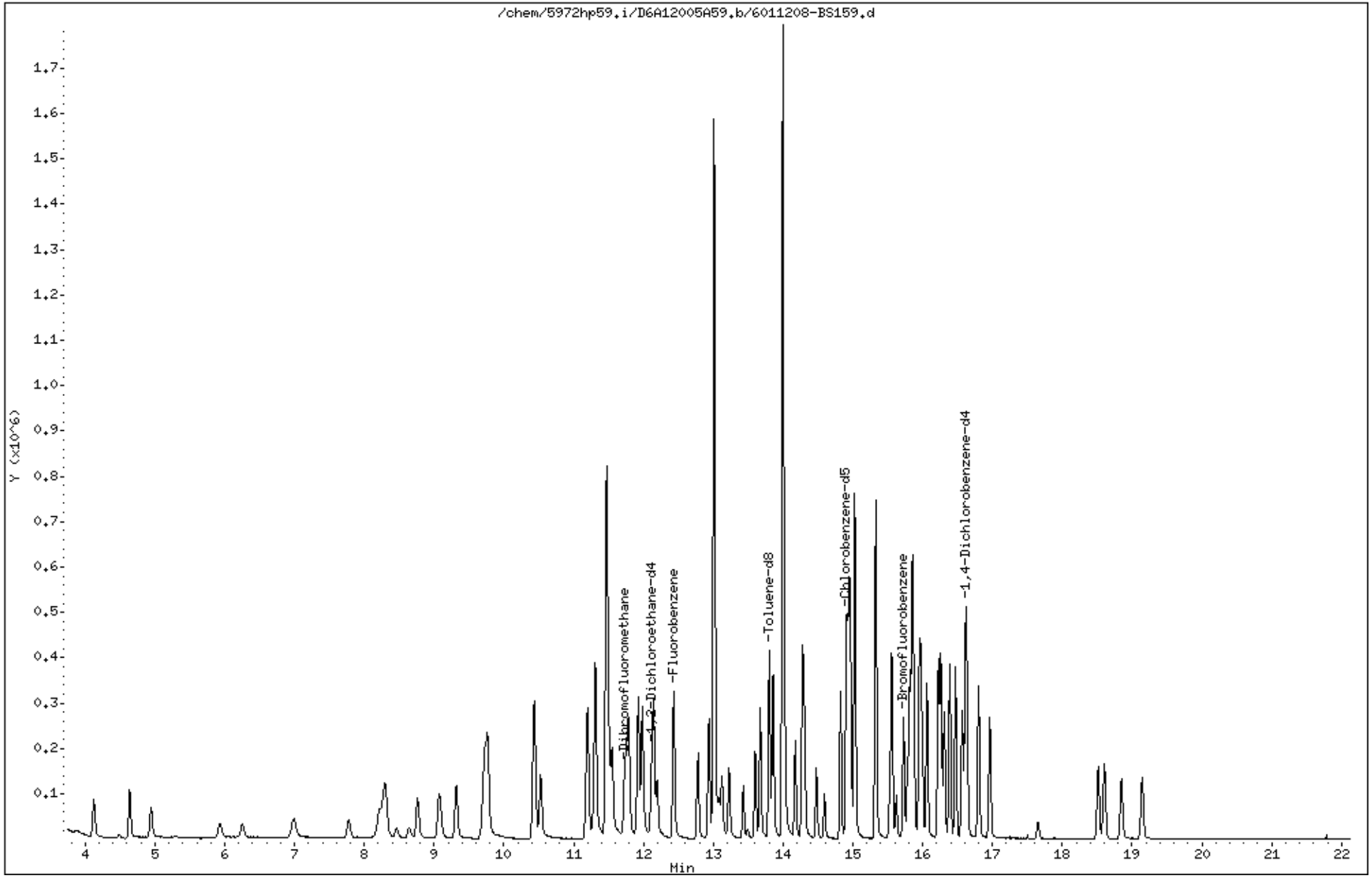
SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	49.89	100	66 - 128	
1,2-Dichloroethane-d4	50.00	50.50	101	55 - 147	
Toluene-d8	50.00	49.17	98	50 - 150	
Bromofluorobenzene	50.00	49.24	98	70 - 132	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BS159.d
Date : 12-JAN-2016 23:44
Client ID: VLCSBE
Sample Info: 6011208-BS1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BS159.d
Report Date: 13-Jan-2016 19:13

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011208-BS159.d
Lab Smp Id: 6011208-BS1 Client Smp ID: VLCSBE
Inj Date : 12-JAN-2016 23:44
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011208-BS1:JAO
Misc Info : VLCSBE
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 24 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.427	12.418	(1.000)	348406	250.000	
* 2 Chlorobenzene-d5	117	14.903	14.894	(1.000)	260313	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.609	16.600	(1.000)	126246	250.000	
$ 4 Dibromofluoromethane	113	11.727	11.718	(0.944)	100067	249.453	49.8906
$ 5 1,2-Dichloroethane-d4	65	12.122	12.113	(0.975)	92869	252.477	50.4954
$ 6 Toluene-d8	98	13.798	13.789	(0.926)	288362	245.826	49.1652
$ 7 Bromofluorobenzene	95	15.731	15.722	(0.947)	95654	246.180	49.2361
8 Dichlorodifluoromethane	85	4.124	4.125	(0.332)	114169	255.316	51.0631
9 Chloromethane	50	4.637	4.638	(0.373)	149360	249.623	49.9246
10 Vinyl Chloride	62	4.953	4.944	(0.399)	110851	281.617	56.3234
11 Bromomethane	94	5.929	5.920	(0.477)	47122	237.747	47.5494
12 Chloroethane	64	6.244	6.235	(0.502)	51488	291.393	58.2785
13 Trichlorofluoromethane	101	6.994	6.975	(0.563)	89079	272.624	54.5248
178 Diethyl ether	45	7.773	7.764	(0.625)	33045	254.088	50.8175
14 Acrolein	56	8.148	8.129	(0.656)	6676	277.678	55.5355

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BS159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.217	8.198	(0.661)	31853	268.305	53.6610
16 1,1,2-trichloro-1,2,2-trifluo	101	8.276	8.257	(0.666)	77838	267.353	53.4707
17 1,1-Dichloroethene	96	8.305	8.296	(0.668)	59021	266.086	53.2173
18 Acetone	43	8.473	8.464	(0.682)	48169	681.274	136.255
19 Iodomethane	142	8.641	8.632	(0.695)	47035	209.837	41.9674
20 Carbon disulfide	76	8.759	8.750	(0.705)	215186	217.190	43.4381
21 3-Chloropropene	76	9.065	9.056	(0.729)	31476	220.602	44.1204
22 Acetonitrile	41	9.065	9.056	(0.729)	101479	224.475	44.8950
23 Methyl acetate	43	9.094	9.085	(0.732)	78816	258.727	51.7455
24 Methylene Chloride	84	9.321	9.312	(0.750)	74452	234.520	46.9039
25 Acrylonitrile	53	9.775	9.766	(0.787)	229208	2480.10	496.020
26 Methyl-tert-butyl ether	73	9.716	9.707	(0.782)	164704	235.878	47.1757
28 trans-1,2-Dichloroethene	96	9.735	9.726	(0.783)	72350	234.495	46.8991
29 trans-1,2-DCE (part of total)	96	9.735	9.726	(0.783)	72350	234.495	46.8991
31 Isopropyl ether	45	10.435	10.426	(0.840)	295255	249.121	49.8242
32 1,1-Dichloroethane	63	10.426	10.417	(0.839)	146572	231.507	46.3014
33 Vinyl acetate	43	10.435	10.436	(0.840)	161804	205.309	41.0618
34 Chloroprene	53	10.524	10.515	(0.847)	116805	253.721	50.7442
35 2-butanone	43	11.185	11.176	(0.900)	98108	596.320	119.264
36 2,2-Dichloropropane	77	11.185	11.176	(0.900)	91852	214.373	42.8746
37 cis-1,2-Dichloroethene	96	11.205	11.196	(0.902)	86129	239.461	47.8922
38 cis-1,2-DCE (part of total)	96	11.205	11.196	(0.902)	86129	239.461	47.8922
39 Propionitrile	54	11.303	11.304	(0.910)	525176	13939.2	2787.85
40 Methacrylonitrile	41	11.471	11.462	(0.923)	603694	2783.93	556.786
41 Bromochloromethane	128	11.491	11.482	(0.925)	38162	255.635	51.1271
180 Tetrahydrofuran	42	11.501	11.501	(0.925)	122630	1128.56	225.713
42 Chloroform	83	11.550	11.541	(0.929)	151727	257.818	51.5636
43 1,1,1-Trichloroethane	97	11.757	11.748	(0.946)	110171	247.845	49.5690
44 Cyclohexane	56	11.786	11.777	(0.948)	129516	254.680	50.9361
46 1,1-dichloropropene	75	11.934	11.925	(0.960)	108112	240.715	48.1431
47 Isobutyl alcohol	43	11.984	11.985	(0.964)	208989	13188.6	2637.72
48 Carbon Tetrachloride	117	11.925	11.915	(0.960)	100104	251.521	50.3041
49 Benzene	78	12.151	12.142	(0.978)	301373	241.625	48.3250
50 1,2-Dichloroethane	62	12.201	12.192	(0.982)	112360	261.829	52.3657
51 Trichloroethene	130	12.782	12.773	(1.029)	72767	210.943	42.1886
52 Methylcyclohexane	83	12.940	12.931	(1.041)	106956	239.564	47.9127
53 Methylmethacrylate	100	13.009	13.010	(1.047)	219403	2907.36	581.472
54 1,2-Dichloropropane	63	13.847	13.848	(1.114)	26225	249.421	49.8841
55 1,4-dioxane	88	13.078	13.079	(1.052)	38504	13285.2	2657.04
56 Dibromomethane	174	13.128	13.119	(1.056)	52715	251.747	50.3494
57 Bromodichloromethane	83	13.226	13.217	(1.064)	106563	257.510	51.5020
58 cis-1,3-Dichloropropene	75	13.591	13.592	(1.094)	118839	236.919	47.3838
59 4-Methyl-2-pentanone	43	13.670	13.661	(0.917)	240049	650.033	130.007
60 Toluene	92	13.857	13.848	(0.930)	171348	244.258	48.8516
61 Ethylmethacrylate	99	13.995	13.986	(0.939)	162065	2579.20	515.840
62 trans-1,3-Dichloropropene	75	14.025	14.016	(0.941)	109633	248.517	49.7034
63 1,1,2-Trichloroethane	97	14.173	14.174	(0.951)	68387	272.591	54.5183

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BS159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
64 2-hexanone	43	14.291	14.282	(0.959)	170475	680.182	136.036
65 2-chloroethyl vinyl ether	63	13.433	13.424	(1.081)	43221	254.719	50.9438
66 1,3-Dichloropropane	76	14.311	14.302	(0.960)	119446	269.824	53.9649
67 Tetrachloroethene	164	14.271	14.272	(0.958)	65939	247.738	49.5476
68 Dibromochloromethane	129	14.479	14.479	(0.972)	84828	259.114	51.8228
69 1,2-Dibromoethane	107	14.597	14.588	(0.979)	72892	263.629	52.7259
70 1-Chlorohexane	55	14.814	14.815	(0.994)	83728	265.570	53.1140
71 Chlorobenzene	112	14.922	14.923	(1.001)	204729	250.247	50.0493
72 Ethylbenzene	106	14.952	14.943	(1.003)	95700	246.288	49.2576
73 1,1,1,2-Tetrachloroethane	131	14.962	14.963	(1.004)	78553	252.233	50.4465
74 m,p-Xylene	106	15.021	15.022	(1.008)	244994	484.585	96.9169
75 m,p-Xylene (part of total)	106	15.021	15.022	(1.008)	244994	484.585	96.9169
76 o-Xylene	106	15.327	15.318	(1.028)	125436	259.732	51.9465
77 o-Xylene (part of total)	106	15.327	15.318	(1.028)	125436	259.732	51.9465
78 Styrene	104	15.327	15.327	(1.028)	201563	256.743	51.3485
79 Bromoform	173	15.534	15.525	(0.935)	52762	253.412	50.6824
80 Isopropyl Benzene	105	15.563	15.554	(1.044)	312702	259.069	51.8138
81 1,1,2,2-Tetrachloroethane	83	15.790	15.781	(0.951)	96103	262.713	52.5427
82 trans-1,4-dichloro-2-butene	53	15.820	15.811	(1.062)	90193	973.714	194.743
83 1,2,3-Trichloropropane	110	15.859	15.850	(1.064)	23147	272.197	54.4395
84 Bromobenzene	156	15.879	15.870	(1.065)	87648	260.986	52.1971
85 n-Propyl Benzene	91	15.849	15.850	(0.954)	398139	243.571	48.7142
86 1,3,5-Trimethyl Benzene	105	15.958	15.949	(0.961)	244540	242.388	48.4775
87 2-Chlorotoluene	91	15.987	15.978	(0.963)	243399	246.879	49.3759
88 4-Chlorotoluene	91	16.056	16.047	(0.967)	220643	237.718	47.5436
89 tert-Butyl Benzene	119	16.224	16.215	(0.977)	257081	253.917	50.7835
90 1,2,4-Trimethyl Benzene	105	16.254	16.245	(0.979)	253687	247.728	49.5456
91 Pentachloroethane	167	16.313	16.304	(0.982)	56791	265.305	53.0611
92 sec-Butyl Benzene	105	16.382	16.383	(0.986)	339144	243.622	48.7245
93 p-Isopropyl Toluene	119	16.471	16.462	(0.992)	265654	242.001	48.4003
94 1,3-Dichlorobenzene	146	16.569	16.560	(0.998)	143687	238.158	47.6316
95 1,4-Dichlorobenzene	146	16.638	16.629	(1.002)	151663	231.775	46.3550
96 n-Butyl Benzene	91	16.806	16.797	(1.012)	242046	228.676	45.7352
97 1,2-Dichlorobenzene	146	16.964	16.955	(1.021)	138219	244.099	48.8197
98 1,2-Dibromo-3-Chloropropane	157	17.654	17.645	(1.063)	14487	247.072	49.4144
99 1,2,4-Trichlorobenzene	180	18.512	18.493	(1.115)	78242	210.781	42.1561
100 Hexachlorobutadiene	225	18.601	18.582	(1.120)	46170	215.945	43.1891
101 Naphthalene	128	18.847	18.828	(1.135)	170076	233.980	46.7960
102 1,2,3-Trichlorobenzene	180	19.143	19.134	(1.153)	73020	217.582	43.5163
M 103 1,2-Dichloroethene (total)	96				158479	474.337	94.8673
M 104 Xylene (total)	106				370430	744.317	148.863

1/13/2016

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SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011208-BS159.d
Lab Smp Id: 6011208-BS1 Client Smp ID: VLCSBE
Inj Date : 12-JAN-2016 23:44
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011208-BS1:JAO
Misc Info : VLCSBE
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 24 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

ANALYSIS DATA SHEET

SW 8260B

VLCSDBE

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Extraction: EPA 5030B File ID: 6011208-BSD159.d QC Type: LCS Dup

Initial/Final: 5mL / 5mL Lab ID: 6011208-BSD1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/13/16 00:16

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
74-87-3	Chloromethane	54.36	0.39	5.0	
75-01-4	Vinyl chloride	57.20	0.48	5.0	
74-83-9	Bromomethane	51.03	0.76	5.0	
75-00-3	Chloroethane	53.95	0.55	5.0	
75-69-4	Trichlorofluoromethane	54.17	0.49	5.0	
75-35-4	1,1-Dichloroethene	51.12	0.53	5.0	
67-64-1	Acetone	130.7	1.6	13	
74-88-4	Iodomethane	36.64	0.30	5.0	
75-15-0	Carbon disulfide	46.22	0.16	5.0	
75-09-2	Methylene chloride	48.85	0.49	5.0	
107-13-1	Acrylonitrile	494.2	5.1	50	
156-60-5	trans-1,2-Dichloroethene	47.70	0.44	5.0	
75-34-3	1,1-Dichloroethane	49.65	0.27	5.0	
108-05-4	Vinyl acetate	51.87	0.39	5.0	
156-59-2	cis-1,2-Dichloroethene	50.91	0.65	5.0	
78-93-3	2-Butanone	114.5	1.5	13	
74-97-5	Bromochloromethane	49.96	0.70	5.0	
67-66-3	Chloroform	52.46	0.27	5.0	
71-55-6	1,1,1-Trichloroethane	51.44	0.32	5.0	
56-23-5	Carbon tetrachloride	53.10	0.31	5.0	
107-06-2	1,2-Dichloroethane	53.99	0.23	5.0	
71-43-2	Benzene	50.90	0.28	5.0	
79-01-6	Trichloroethene	49.10	0.28	5.0	
78-87-5	1,2-Dichloropropane	54.23	0.86	5.0	
74-95-3	Dibromomethane	52.11	1.2	5.0	
75-27-4	Bromodichloromethane	54.33	0.36	5.0	
10061-01-5	cis-1,3-Dichloropropene	49.57	0.52	5.0	
108-10-1	4-Methyl-2-pentanone	129.9	1.1	13	
108-88-3	Toluene	53.13	0.31	5.0	
10061-02-6	trans-1,3-Dichloropropene	53.00	0.45	5.0	
79-00-5	1,1,2-Trichloroethane	57.28	0.51	5.0	
127-18-4	Tetrachloroethene	51.50	0.42	5.0	
591-78-6	2-Hexanone	134.3	1.2	13	
124-48-1	Dibromochloromethane	54.67	0.32	5.0	

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

SW 8260B

VLCSDBE

Client: DRAPER ADEN ASSOCIATES SDG: 1601026 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Matrix: Water Extraction: EPA 5030B File ID: 6011208-BSD159.d QC Type: LCS Dup

Initial/Final: 5mL / 5mL Lab ID: 6011208-BSD1 Column ID: SPB-624

Dilution: 1 pH: Prepared: 01/12/16 22:28

% Moisture: NA Analyzed: 01/13/16 00:16

Batch: 6011208 Sequence: 6A12005 Calibration: 5123005 Instrument: 5972hp59

CAS NO.	COMPOUND	CONC.(ug/L)	MDL	RL	Q
106-93-4	1,2-Dibromoethane	54.57	0.44	5.0	
108-90-7	Chlorobenzene	48.94	0.27	5.0	
630-20-6	1,1,1,2-Tetrachloroethane	53.62	0.34	5.0	
100-41-4	Ethylbenzene	46.75	0.42	5.0	
100-42-5	Styrene	54.59	0.36	5.0	
75-25-2	Bromoform	51.94	0.95	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	52.25	0.64	5.0	
96-18-4	1,2,3-Trichloropropane	56.65	1.1	5.0	
110-57-6	trans-1,4-Dichloro-2-butene	196.1	2.6	20	
106-46-7	1,4-Dichlorobenzene	46.20	0.30	5.0	
95-50-1	1,2-Dichlorobenzene	49.25	0.35	5.0	
96-12-8	1,2-Dibromo-3-chloropropane	48.86	0.91	5.0	
1330-20-7	Xylenes (total)	159.9	0.25	5.0	

SURROGATE RECOVERY RESULTS	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Dibromofluoromethane	50.00	52.30	105	66 - 128	
1,2-Dichloroethane-d4	50.00	52.92	106	55 - 147	
Toluene-d8	50.00	53.20	106	50 - 150	
Bromofluorobenzene	50.00	52.69	105	70 - 132	

Liberty Analytical

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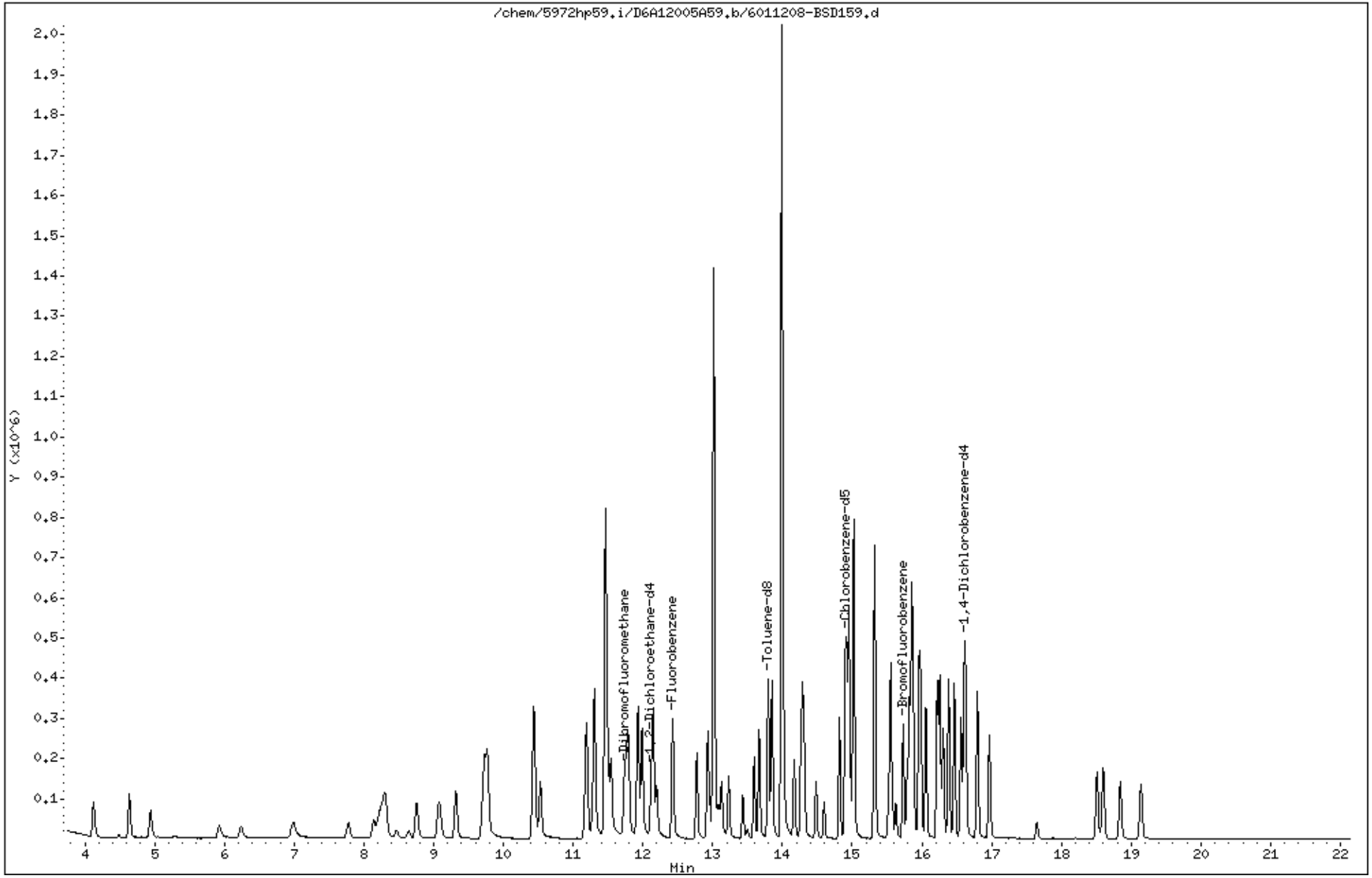
Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BSD159.d
Date : 13-JAN-2016 00:16
Client ID: VLCSDBE
Sample Info: 6011208-BSD1:JAO
Purge Volume: 5.0
Column phase: SPB-624

Instrument: 5972hp59.i
Operator: JAO
Column diameter: 0.32



1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BSD159.d
Report Date: 13-Jan-2016 19:13

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011208-BSD159.d
Lab Smp Id: 6011208-BSD1 Client Smp ID: VLCSDBE
Inj Date : 13-JAN-2016 00:16
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011208-BSD1:JAO
Misc Info : VLCSDBE
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 25 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

Concentration Formula: Amt * DF * 1/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vo	5.00000	volume of water
DF	1.00000	dilution factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1 Fluorobenzene	96	12.433	12.418	(1.000)	340437	250.000	
* 2 Chlorobenzene-d5	117	14.898	14.894	(1.000)	247036	250.000	
* 3 1,4-Dichlorobenzene-d4	152	16.614	16.600	(1.000)	123995	250.000	
$ 4 Dibromofluoromethane	113	11.732	11.718	(0.944)	102501	261.502	52.3004
$ 5 1,2-Dichloroethane-d4	65	12.117	12.113	(0.975)	95097	264.586	52.9172
$ 6 Toluene-d8	98	13.803	13.789	(0.927)	296123	266.010	53.2020
$ 7 Bromofluorobenzene	95	15.726	15.722	(0.947)	100543	263.460	52.6921
8 Dichlorodifluoromethane	85	4.120	4.125	(0.331)	124134	284.098	56.8197
9 Chloromethane	50	4.642	4.638	(0.373)	158909	271.799	54.3598
10 Vinyl Chloride	62	4.948	4.944	(0.398)	109994	285.981	57.1962
11 Bromomethane	94	5.934	5.920	(0.477)	49417	255.162	51.0324
12 Chloroethane	64	6.240	6.235	(0.502)	46576	269.764	53.9528
13 Trichlorofluoromethane	101	6.989	6.975	(0.562)	86471	270.837	54.1674
178 Diethyl ether	45	7.778	7.764	(0.626)	32099	252.591	50.5182
14 Acrolein	56	8.143	8.129	(0.655)	68021	2895.45	579.091

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Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BSD159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
15 1,1,1-trichloro-2,2,2-trifluo	117	8.222	8.198	(0.661)	30599	263.776	52.7551
16 1,1,2-trichloro-1,2,2-trifluo	101	8.261	8.257	(0.664)	77516	272.480	54.4960
17 1,1-Dichloroethene	96	8.311	8.296	(0.668)	55394	255.581	51.1161
18 Acetone	43	8.468	8.464	(0.681)	45151	653.537	130.707
19 Iodomethane	142	8.646	8.632	(0.695)	40006	183.219	36.6437
20 Carbon disulfide	76	8.764	8.750	(0.705)	223749	231.119	46.2239
21 3-Chloropropene	76	9.070	9.056	(0.730)	32090	230.170	46.0339
22 Acetonitrile	41	9.070	9.056	(0.730)	97288	220.242	44.0484
23 Methyl acetate	43	9.090	9.085	(0.731)	71205	239.214	47.8429
24 Methylene Chloride	84	9.316	9.312	(0.749)	75762	244.232	48.8464
25 Acrylonitrile	53	9.770	9.766	(0.786)	223123	2470.77	494.154
26 Methyl-tert-butyl ether	73	9.711	9.707	(0.781)	169467	248.381	49.6762
28 trans-1,2-Dichloroethene	96	9.740	9.726	(0.783)	71898	238.485	47.6971
29 trans-1,2-DCE (part of total)	96	9.740	9.726	(0.783)	71898	238.485	47.6971
31 Isopropyl ether	45	10.431	10.426	(0.839)	298335	257.612	51.5224
32 1,1-Dichloroethane	63	10.431	10.417	(0.839)	153586	248.264	49.6528
33 Vinyl acetate	43	10.441	10.436	(0.840)	199705	259.332	51.8664
34 Chloroprene	53	10.529	10.515	(0.847)	111220	247.244	49.4489
35 2-butanone	43	11.190	11.176	(0.900)	92030	572.470	114.494
36 2,2-Dichloropropane	77	11.180	11.176	(0.899)	93455	223.220	44.6440
37 cis-1,2-Dichloroethene	96	11.200	11.196	(0.901)	89470	254.573	50.9145
38 cis-1,2-DCE (part of total)	96	11.200	11.196	(0.901)	89470	254.573	50.9145
39 Propionitrile	54	11.308	11.304	(0.910)	499111	13557.5	2711.50
40 Methacrylonitrile	41	11.466	11.462	(0.922)	590661	2787.59	557.517
41 Bromochloromethane	128	11.486	11.482	(0.924)	36435	249.780	49.9560
180 Tetrahydrofuran	42	11.506	11.501	(0.925)	112591	1060.43	212.086
42 Chloroform	83	11.545	11.541	(0.929)	150822	262.279	52.4558
43 1,1,1-Trichloroethane	97	11.762	11.748	(0.946)	111706	257.181	51.4361
44 Cyclohexane	56	11.792	11.777	(0.948)	132640	266.929	53.3857
46 1,1-dichloropropene	75	11.930	11.925	(0.960)	114036	259.849	51.9698
47 Isobutyl alcohol	43	11.989	11.985	(0.964)	200400	12942.6	2588.52
48 Carbon Tetrachloride	117	11.920	11.915	(0.959)	103257	265.516	53.1032
49 Benzene	78	12.147	12.142	(0.977)	310157	254.488	50.8977
50 1,2-Dichloroethane	62	12.196	12.192	(0.981)	113204	269.970	53.9941
51 Trichloroethene	130	12.778	12.773	(1.028)	82751	245.501	49.1001
52 Methylcyclohexane	83	12.936	12.931	(1.040)	109529	251.069	50.2139
53 Methylmethacrylate	100	13.014	13.010	(1.047)	194214	2633.82	526.763
54 1,2-Dichloropropane	63	13.853	13.848	(1.114)	27858	271.154	54.2308
55 1,4-dioxane	88	13.083	13.079	(1.052)	38369	13548.5	2709.70
56 Dibromomethane	174	13.123	13.119	(1.056)	53308	260.538	52.1077
57 Bromodichloromethane	83	13.231	13.217	(1.064)	109850	271.667	54.3333
58 cis-1,3-Dichloropropene	75	13.596	13.592	(1.094)	121468	247.829	49.5658
59 4-Methyl-2-pentanone	43	13.665	13.661	(0.917)	227536	649.264	129.853
60 Toluene	92	13.853	13.848	(0.930)	176844	265.641	53.1283
61 Ethylmethacrylate	99	13.991	13.986	(0.939)	184979	3102.09	620.418
62 trans-1,3-Dichloropropene	75	14.020	14.016	(0.941)	110951	265.022	53.0044
63 1,1,2-Trichloroethane	97	14.168	14.174	(0.951)	68192	286.423	57.2846

1/13/2016

Data File: /chem/5972hp59.i/D6A12005A59.b/6011208-BSD159.d
Report Date: 13-Jan-2016 19:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
64 2-hexanone	43	14.287	14.282	(0.959)	159665	671.289	134.258
65 2-chloroethyl vinyl ether	63	13.429	13.424	(1.080)	42913	258.824	51.7647
66 1,3-Dichloropropane	76	14.306	14.302	(0.960)	114257	271.974	54.3949
67 Tetrachloroethene	164	14.277	14.272	(0.958)	65038	257.486	51.4972
68 Dibromochloromethane	129	14.484	14.479	(0.972)	84924	273.349	54.6698
69 1,2-Dibromoethane	107	14.592	14.588	(0.979)	71595	272.855	54.5710
70 1-Chlorohexane	55	14.819	14.815	(0.995)	73348	245.150	49.0300
71 Chlorobenzene	112	14.927	14.923	(1.002)	189998	244.722	48.9444
72 Ethylbenzene	106	14.947	14.943	(1.003)	86187	233.727	46.7454
73 1,1,1,2-Tetrachloroethane	131	14.967	14.963	(1.005)	79232	268.086	53.6173
74 m,p-Xylene	106	15.026	15.022	(1.009)	250998	523.143	104.629
75 m,p-Xylene (part of total)	106	15.026	15.022	(1.009)	250998	523.143	104.629
76 o-Xylene	106	15.322	15.318	(1.028)	126768	276.598	55.3196
77 o-Xylene (part of total)	106	15.322	15.318	(1.028)	126768	276.598	55.3196
78 Styrene	104	15.332	15.327	(1.029)	203374	272.972	54.5944
79 Bromoform	173	15.529	15.525	(0.935)	53102	259.675	51.9350
80 Isopropyl Benzene	105	15.559	15.554	(1.044)	315225	275.195	55.0390
81 1,1,2,2-Tetrachloroethane	83	15.785	15.781	(0.950)	93859	261.237	52.2474
82 trans-1,4-dichloro-2-butene	53	15.815	15.811	(1.062)	86190	980.508	196.102
83 1,2,3-Trichloropropane	110	15.854	15.850	(1.064)	22858	283.245	56.6491
84 Bromobenzene	156	15.874	15.870	(1.066)	87377	274.162	54.8324
85 n-Propyl Benzene	91	15.854	15.850	(0.954)	398413	248.164	49.6327
86 1,3,5-Trimethyl Benzene	105	15.953	15.949	(0.960)	254472	256.811	51.3623
87 2-Chlorotoluene	91	15.983	15.978	(0.962)	244431	252.427	50.4854
88 4-Chlorotoluene	91	16.052	16.047	(0.966)	221789	243.291	48.6581
89 tert-Butyl Benzene	119	16.219	16.215	(0.976)	252798	254.220	50.8440
90 1,2,4-Trimethyl Benzene	105	16.259	16.245	(0.979)	254844	253.376	50.6751
91 Pentachloroethane	167	16.308	16.304	(0.982)	55574	264.333	52.8666
92 sec-Butyl Benzene	105	16.387	16.383	(0.986)	346694	253.567	50.7134
93 p-Isopropyl Toluene	119	16.466	16.462	(0.991)	273249	253.439	50.6878
94 1,3-Dichlorobenzene	146	16.564	16.560	(0.997)	151134	255.049	51.0098
95 1,4-Dichlorobenzene	146	16.633	16.629	(1.001)	148469	231.013	46.2025
96 n-Butyl Benzene	91	16.801	16.797	(1.011)	255652	245.915	49.1830
97 1,2-Dichlorobenzene	146	16.969	16.955	(1.021)	136958	246.263	49.2525
98 1,2-Dibromo-3-Chloropropane	157	17.649	17.645	(1.062)	14069	244.299	48.8598
99 1,2,4-Trichlorobenzene	180	18.507	18.493	(1.114)	83033	227.748	45.5496
100 Hexachlorobutadiene	225	18.596	18.582	(1.119)	48710	231.961	46.3922
101 Naphthalene	128	18.842	18.828	(1.134)	181060	253.613	50.7226
102 1,2,3-Trichlorobenzene	180	19.148	19.134	(1.153)	76461	231.971	46.3942
M 103 1,2-Dichloroethene (total)	96				161368	494.289	98.8579
M 104 Xylene (total)	106				377766	799.741	159.948

1/13/2016

Liberty Analytical

SW846 UPDATE III METHOD 8260B QUANT & RATIO REPORT

Data file : /chem/5972hp59.i/D6A12005A59.b/6011208-BSD159.d
Lab Smp Id: 6011208-BSD1 Client Smp ID: VLCSDBE
Inj Date : 13-JAN-2016 00:16
Operator : JAO Inst ID: 5972hp59.i
Smp Info : 6011208-BSD1:JAO
Misc Info : VLCSDBE
Comment :
Method : /chem/5972hp59.i/D6A12005A59.b/8260B_5ppbv5.m
Meth Date : 13-Jan-2016 19:12 ron Quant Type: ISTD
Cal Date : 29-DEC-2015 20:07 Cal File: 5L30001-CAL459.d
Als bottle: 25 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DC.sub
Target Version: 3.50
Processing Host: dante

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

S. Run Logs / Prep Sheets / Internal CoC Documents / Standard Preparation Information / Manual Integration Summary

Run Logs

COMPUCHEM a Division of Liberty Analytical Corp DATE 1/12/16 INITIAL TIME OF TUNE 1348 SHIFT/S(A) ✓ (B)____ (C)____

GC/MS VOLATILE RUN LOG TIME TUNE EXPIRES 0148 LINKER /METHOD____

COMPUCHEM LOGBOOK 11 NNN 33 (5972hp59) METHOD: (8260B) SOM01.2 (Circle one) or Other: 5 ppb.

MAINTENANCE none

	CTKD	FILE NAME	RTKD	pH	Vial	DATE	TIME	Client ID	SDG#	INJ. VOL.*	DF+	CHEMIST	COMMENTS (ETC.)/ DISPOSITION
1		6A12005-TUN1		—	—	1/12/16	1348	BFBBD	—	2uL	—	JAO	LCD=SCD
2		-ICV1		—	—	/ /	1413	VSTD050BD	—	5mL	—		
3		6011205-BLK1		—	—	/ /	1451	VBLKBD	1601025	5.0	—		
4		-BLK1R		—	—	/ /	1522				—		
5		-BS1		—	—	/ /	1554	VLCSBD		5mL	—		
6		-MS1		—	C	/ /	1632	WS-4MS		4.90	—		
7		-MSD1		—	D	/ /	1704	WS-4MSD		5.03	—		
8		6A12005-IBL1		—	—	/ /	1742	VIBLKBD	—	5mL	—		
9		1601025-04		—	A	/ /	1814	WS-4	1601025	4.51	—		
10		-01		—	A	/ /	1846	WS-1		6.13	—		
11		-02		—	A	/ /	1917	WS-2		5.71	—		
12		-03		—	A	/ /	1949	WS-3		5.04	—		
13		-05		—	A	/ /	2021	WS-5		5.44	—		
14		-06		—	A	/ /	2053	WS-6		4.74	—		
15		-07		—	A	/ /	2124	WS-7		5.34	—		
16		-08		—	A	/ /	2156	WS-DUP		5.25	—		
17		6011208-BLK1		—	—	/ /	2228	VBLKBE	1601026	5 mL	—		
18		1601026-01 ~~-BLK~~		2	A	/ /	2306	TRIP BLANK		5mL	—		
19		6011208-BS1		JAO 1-12-16 —	JAO 1-12-16 —	/ /	2344	VLCSBE			—		
20		-BSD1		—	—	1/13/16	0016	VLCSDBE			—		
21						/ /							
22						/ /							
23						/ /							
24						/ /							

JAO 1-13-16

*On-column sample aliquot +Not applicable to soil matrix

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation

Tune (ID #7008) Lot No.: 5L21009 Calibration Group Code / Lot No.: 5K06032

Internal Standard Lot No.: 6A08015 Surrogate Lot No.: 5K05010

REVIEWED BY: [signature] Date 1-13-15

9/19/12: bm

VOA Internal Chain of Custody Sheet

Dept: PM

Matrix Water **Batch**: 6010806 **Status:** Batched **Analysis**: VOA-8260B 5PPB

Lab Id	Client Id	Received	Container	Preparation
1601026-01 A	TRIP BLANK	01/08/16	01b_40mL VOA, cool, H	EPA 5030B

Relinquished By	Date/Time	Received By	Date/Time
#2B	1-12-16	JAB	1-12-16
JAB	1-12-16	#2B	1-12-16

Manual Integration Report

Manual Integration Summary

Client: DRAPER ADEN ASSOCIATES
Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39
Work Order: 1601026
Case:
Sdg: 1601026

Analysis: VOA-8260B 5PPB
Sample Type: Cal Standard
Lab Id: 5L30001-CAL1
Client Id: VSTD005AB
Instrument: 5972hp59

Analyte	Type	M Flag
2-Butanone	TARGET	M
Acetone	TARGET	M
Bromoform	TARGET	M
Bromomethane	TARGET	M
Iodomethane	TARGET	M
Vinyl acetate	TARGET	M

Sample Total: 6

Analysis: VOA-8260B 5PPB
Sample Type: Cal Standard
Lab Id: 5L30001-CAL2
Client Id: VSTD010AB
Instrument: 5972hp59

Analyte	Type	M Flag
Acetone	TARGET	M
Bromomethane	TARGET	M
Iodomethane	TARGET	M
Vinyl acetate	TARGET	M

Sample Total: 4

Analysis: VOA-8260B 5PPB
Sample Type: Cal Standard
Lab Id: 5L30001-CAL3
Client Id: VSTD020AB
Instrument: 5972hp59

Analyte	Type	M Flag
Bromomethane	TARGET	M
Iodomethane	TARGET	M

Sample Total: 2

Total Manual Integrations: 12

1/21/2016

JANET FRAZIER

DRAPER ADEN ASSOCIATES

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

WorkOrder: 1601030

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER ADEN ASSOCIATES **Work:** 1601030

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39 **Sdg:** 1601030

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1601030-01	WS-2	Soil	01/07/2016 12:20	01/08/2016 09:06
1601030-02	WS-3	Soil	01/07/2016 12:55	01/08/2016 09:06
1601030-03	WS-5	Soil	01/07/2016 13:50	01/08/2016 09:06

ANALYSES DATA PACKAGE COVER PAGE

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Laboratory: Liberty Analytical

SDG: 1601030

Client Sample Id:	Analysis:	Lab Sample Id:
WS-2	EPA 365.4	1601030-01
WS-3	EPA 365.4	1601030-02
WS-5	EPA 365.4	1601030-03

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions addressed in the narrative. Release of the data contained in this hardcopy data package and in the Electronic Data Deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Ken Grzybowski

Date: 01/20/2016 Title: President

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

I. SAMPLE DATA PACKAGE

The Sample Data Summary Package shall contain data for all samples in one Work Order/Sample Delivery Group (SDG), as follows:

A. SDG Narrative

B. Chain of Custody Records

C. Sample Preparation and Analysis Holding Time Data
(HOLDING TIME SUMMARY)

D. MDL
(MDL SUMMARY)

E. Laboratory Control Sample Results
(LCS/LCS DUPLICATE RECOVERY)

F. Matrix Spike Results
(MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY)

G. Duplicate Results
(DUPLICATES)

H. Batch Summary
(PREPARATION BATCH SUMMARY)

I. Analysis Sequence Summary
(ANALYSIS SEQUENCE SUMMARY)

J. Target Compound Results
(ANALYSIS DATA SHEET)

K. Initial and Continuing Calibration Data
(INITIAL CALIBRATION DATA)
(INITIAL and CONTINUING CALIBRATION DATA)

L. Method and Instrument Blank Results
(BLANKS)

M. Run Logs/Raw Data

N. Digestion and Distillation Logs

O. Standard Info / Internal CoC Documents

A. SDG Narrative

Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1601030
Client: DRAPER ADEN ASSOCIATES
Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

The 3 solid samples were received intact, at 0.3 °C, with proper documentations, in sealed shipping containers, on January 8, 2016. The samples were scheduled for the requested analysis of TKP soil by water leach ASTM D3987-85. The samples were analyzed, in accordance with current EPA method, for the analyte requested as per the COC, with the exceptions and/or additions requested by the client.

SAMPLE IDs:

The cover page contained in this package lists the client ID's and the associated CompuChem numbers which are part of this SDG.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, & CCB), associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCS, Blank, and Leach Blank) were found to be within acceptable ranges. The field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

No matrix related quality control sample was requested.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Jim Feldhaus
Senior Chemist
January 20, 2016

Liberty Analytical

Liberty Analytical's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is Liberty Analytical's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.). This policy is also applicable to non-CLP data packages.

Revision 7 (01/12/2011)

Liberty Analytical

WET CHEMISTRY DATA REPORTING QUALIFIERS

On the appropriate reporting form, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. The qualifiers used are:

U : This flag indicates the compound was analyzed for, not detected and is reported as less than the Method Detection Limit (MDL) (or as defined by the client). The Reporting Limit (RL), or Limit of Quantitation (LOQ), and the MDL will be adjusted to reflect any dilution or concentration of the sample and, for soils, the percent moisture.

J : This flag indicates the reported result is an estimated value. The flag is used when an analyte is detected and the result is less than the adjusted RL/LOQ but equal to or greater than the MDL.

Q : This flag denotes that one or more quality control criteria have failed (e.g., LCS recovery, Continuing Calibration Verification, or CCV) and reanalyses can't be performed. The Q flag is applied to all specific analyte(s) in all samples associated with the failed quality control criteria.

B : This flag is used when the analyte is found in the associated method or calibration blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

D: This flag is applied to an analyte when the reported result is based on a dilution.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

The extensions: D, S, and SD are added to the end of the Client ID and represent the following:

D – Matrix Duplicate
S – Matrix Spike
SD – Matrix Spike Duplicate

Revision 0 (03-15-2011)

B. Chain of Custody Records

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the Work Order/SDG. The CoC documents shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental Corp., Liberty Analytical 501 Madison Ave. Cary, NC 27513 (800) 833 5097 Fax (919) 379-4050 Attn: Cathy Dover

TKC 1/7/16

Client: Watauga County, NC **Attn:** Mr. J.V. Potter **Address:** 336 Landfill Road, Boone, NC 28607 **Phone:** (828) 264-5305 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street, Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** Watauga County Landfill **Location:** Watauga County, NC **Event:** 2016 Soil Sampling **DAA JN:** 6520-39 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** ~~BATCH~~ ~~Sample Collection for Project Complete?~~ YES **Carrier:** UPS **Tracking Number:** 1Z2373010197512129

Box 1: Matrix
SW Surface Water, GW Groundwater, L Leachate, S Soil, T Trip Blank, E Equipment Blank, P Product, O Other

Box 2: Preservative
A HCL, B HNO_3, C H_2SO_4, D $Na_2S_2O_3$, E NaOH, F ZnAc, G Other (Specify), H None

Box 3: Filtered/Unfiltered
F Filtered, U Unfiltered

Box 4: Sample Type
G Grab, C Composite

Box 5: Sample Container Type
P Plastic, AG Amber Glass, V VOA, CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

GENERAL NOTES:
1. See attached Target Analyte Lists for 8260 and Inorganic Parameters.
2. Report soil results based on dry weight.
3. Report LOQ/MDL + estimated results.
4. Report results in mg/kg.
5. Reporting limits to meet NC P5RG limits as specified in e-mail dated 11/27/2015 (attached).

Sample ID	Date: 2016	Time	Box 1: Matrix	Number of Bottles	Inorganics (Total) Methods 6010/6020	VOAs 5035A/8260C (MeOH Preserved)	VOAs 5035A/8260C w/ Ultra Pure Blank Water (DI Water)	% Moisture	8260C - 5 mL purge (See attached TA list)	COD SM5220D	BOD SM 5210B	Total Phosphorous - Method 365.4	Sample Depth	reg. SOIL	TKP	BOD COD SUB
Box 4 - Sample Type					G	G	G	G	G	G	G	G				
Box 3 - Filtered/Unfiltered					-	-	-	-	U	-	-	-				
Required pH of Sample					-	-	-	-	<2	-	-	-				
Box 2 - Preservative					H	G	G	H	A	H	H	H				
Box 5 - Sample Container Type					1-4oz CG	1-40ml V	2-40ml V	1-4oz CG	3-40ml V	1-8 oz CG						
WS-1	1/7	1200	S	5	X	X	X	X					Sample Depth: 1-3"	1601025-01	—	—
WS-2	1/7	1220	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-02	1601030-01	1601031-01
WS-3	1/7	1255	S	6	X	X	X	X		X	X	X	Sample Depth: 3-6"	-03	↓ -02	↓ -02
WS-4	1/7	1320	S	5	X	X	X	X					Sample Depth: 6-9"	-04	—	—
WS-5	1/7	1350	S	6	X	X	X	X		*			Sample Depth: 2-5"	-05	1601030-03	1601031-03
WS-6	1/7	1410	S	5	X	X	X	X					Sample Depth: 3-6"	-06	—	—
WS-7	1/7	1435	S	5	X	X	X	X					Sample Depth: 2-5"	-07	—	—
~~WS-8~~			~~S~~		~~X~~	~~X~~	~~X~~	~~X~~					~~Sample Depth:~~	—	—	—
WS-DUP	1/7	1230	S	5	X	X	X	X					Sample Depth: 3-6"	-08	—	—
WS-BG	1/7	1130	S	2	X			X					Sample Depth: 2-4"	-09	—	—
Trip Blank	1/7		T	3					X							
WS-4 MS	1/7	1320	S	4	X	X	X							1601025-04		
WS-4 MSD	1/7	1320	S	4	X	X	X							↓ -04		

Laboratory Provided 1601026-01

Clients Special Instructions:

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.3°C Received on Ice ✓ Yes ____ No
Describe problems, if any:

* received 8oz jar for WS-5, but not noted on COC for BOD, COD & Total P — per Karen this sample needs these parameters (DB) 1/8/16

Sampler Name (Print): Tyler Emery	Date: 1/7/16	#1 Relinquished by (Signature): Tyler Emery	Date: 1/7/16	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Tyler Emery	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print):	Date:	#1 Received by (Signature):	Date: 1/8/16	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time:	Company Name: CompuChem / LIBERTY	Time: 0906	Company Name:	Time:	

TKC 1/5/2016 page 1 of 4 KW 1-5-16

Watauga 2016 Soil Sampling Event
JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Analyte List

Common name	CAS RN	
Antimony	(Total)	Inorganics Soil only
Arsenic	(Total)	
Barium	(Total)	
Beryllium	(Total)	
Cadmium	(Total)	
Chromium	(Total)	
Cobalt	(Total)	
Copper	(Total)	
Lead	(Total)	
Nickel	(Total)	
Selenium	(Total)	
Silver	(Total)	
Thallium	(Total)	
Vanadium	(Total)	
Zinc	(Total)	
Acetone	67-64-1	8260 Soil and trip blank
Acrylonitrile	107-13-1	
Benzene	71-43-2	
Bromochloromethane	74-97-5	
Bromodichloromethane	75-27-4	
Bromoform; Tribromomethane	75-25-2	
Carbon disulfide	75-15-0	
Carbon tetrachloride	56-23-5	
Chlorobenzene	108-90-7	
Chloroethane; Ethyl chloride	75-00-3	
Chloroform; Trichloromethane	67-66-3	
Dibromochloromethane; Chlorodibromomethane	124-48-1	
1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	
trans-1,4-Dichloro-2-butene	110-57-6	
1,1-Dichloroethane; Ethylidene chloride	75-34-3	
1,2-Dichloroethane; Ethlyene dichloride	107-06-2	
1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	
1,2-Dichlorpropane; Propylene dichloride	78-87-5	
cis-1,3-Dichlorpropene	10061-01-5	
trans-1,3-Dichlorpropene	10061-02-6	
Ethylbenzene	100-41-4	
2-hexanone; Methyl butyl ketone	591-78-6	
Methyl bromide; Bromomethane	74-83-9	
Methyl chloride; Chloromethane	74-87-3	
Methylene bromide Dibromomethane	74-95-3	
Methylene chloride; Dichloromethane	75-09-2	
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	
Methyl iodide; Iodomethane	74-88-4	
4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	
Styrene	100-42-5	
1,1,1,2-Tetrachloroethane	630-20-6	
1,1,2,2-Tetrachloroethane	79-34-5	
Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	
Toluene	108-88-3	
1,1,1-Trochlorethane; Methylchloroform	71-55-6	
1,1,2-Trichloroethane	79-00-5	
Trichloroethylene; Trichlorethene	79-01-6	
Trichlorofluoromethane; CFC-11	75-69-4	
1,2,3-Trichloropropane	96-18-4	
Vinyl acetate	108-05-4	
Vinyl chloride	75-01-4	
Xylenes	1330-20-7	

See page 4 of 4 for reporting limits.

Watauga 2016 Soil Sampling Event
JN 6520-39
1-5-16 KWS

Karen Weber

From: Cathy Dover <cdover@compuchemlabs.com>
Sent: Friday, November 27, 2015 2:27 PM
To: Karen Weber
Cc: Janet Frazier; Kathy Olsen
Subject: RE: Watauga Upcoming Soil Sampling - Special Project
Attachments: APP.I LIST AGAINST PSRG LIMITS.pdf

Hi Karen,

I went through all of our reporting limits for the APP. I VOA compounds and metals elements and there are few we would need to use the MDL to meet the lowest PSRG. We can meet all of the metals by using 6020A for the prep/analysis. There are two VOA compounds (1,2,3-trichloropropane & vinyl chloride) that have extremely low PSRG limits and our MDL is higher...

Chromium (7440-47-3) does not appear on the PSRG limit table.

I have attached the APP.I compound/element list with the RL/MDL info. Let me know if you need anything else.

Have a great weekend!

Cathy

Cathy Dover
Supervisor of Project Management
CompuChem
501 Madison Ave.
Cary, NC 27513
919-379-4089 office
919-379-4050 fax

From: Karen Weber [mailto:KWeber@daa.com]
Sent: Tuesday, November 24, 2015 1:51 PM
To: Cathy Dover
Cc: Janet Frazier; Kathy Olsen
Subject: Watauga Upcoming Soil Sampling - Special Project

Watauga 2016 Soil Sampling Event JN 6520-39 1-5-16 KJ

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Lab reporting limits + PSRG review

	Common name	CAS RN	RL mg/kg 6020A	RL mg/kg 6010C	Metals mg/kg PSRG/Low	6020A MDL mg/kg
*	Antimony	(Total)	1	3	0.9	0.115
*	Arsenic	(Total)	1	1	0.68	0.269
	Barium	(Total)	5	20		
	Beryllium	(Total)	0.5	0.5		
	Cadmium	(Total)	0.5	0.5		
7440-47-3 ←	Chromium	(Total)	6	1		
	Cobalt	(Total)	0.5	2		
	Copper	(Total)	1	0.5		
	Lead	(Total)	0.5	1		
	Nickel	(Total)	0.5	1		
	Selenium	(Total)	2.5	1		
	Silver	(Total)	0.5	0.5		
7440-28-0 *	Thallium	(Total)	0.5	3	0.28	0.0164
	Vanadium	(Total)	2.5	2		
	Zinc	(Total)	2.5	3		

FOR VOA: RL / PSRG / MDL (in mg/kg) ✓ if RL does not meet

	Common name	CAS RN	RL / PSRG / MDL
	Acetone	67-64-1	0.0125
	Acrylonitrile	107-13-1	0.050
	Benzene	71-43-2	0.005
	Bromochloromethane	74-97-5	0.005
	Bromodichloromethane	75-27-4	0.005
	Bromoform; Tribromomethane	75-25-2	0.005
	Carbon disulfide	75-15-0	0.005
	Carbon tetrachloride	56-23-5	0.005
	Chlorobenzene	108-90-7	0.005
	Chloroethane; Ethyl chloride	75-00-3	0.005
	Chloroform; Trichloromethane	67-66-3	0.005
	Dibromochloromethane; Chlorodibromomethane	124-48-1	0.005
	1,2-Dibromo-3-chlorpropane; DBCP	96-12-8	0.005
	1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4	0.005
	o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	0.005
	p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	0.005
*	trans-1,4-Dichloro-2-butene	110-57-6	0.020 / 0.0084 / MDL → 0.0018
	1,1-Dichloroethane; Ethylidene chloride	75-34-3	0.005
*	1,2-Dichloroethane; Ethlyene dichloride	107-06-2	0.005 / 0.002 / MDL → 0.00027
	1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4	0.005
	cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	0.005
	trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5	0.005
*	1,2-Dichlorpropane; Propylene dichloride	78-87-5	0.005 / 0.0032 / MDL → 0.00063
*	cis-1,3-Dichlorpropene	10061-01-5	0.005 / 0.0023 / MDL → 0.00039
*	trans-1,3-Dichlorpropene	10061-02-6	0.005 / 0.0023 / MDL → 0.00041
	Ethylbenzene	100-41-4	0.005
	2-hexanone; Methyl butyl ketone	591-78-6	0.0125
	Methyl bromide; Bromomethane	74-83-9	0.005
	Methyl chloride; Chloromethane	74-87-3	0.005
	Methylene bromide Dibromomethane	74-95-3	0.005
	Methylene chloride; Dichloromethane	75-09-2	0.005
	Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	0.0125
	Methyl iodide; Iodomethane	74-88-4	0.005
	4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1	0.0125
	Styrene	100-42-5	0.005
	1,1,1,2-Tetrachloroethane	630-20-6	0.005
*	1,1,2,2-Tetrachloroethane	79-34-5	0.005 / 0.0012 / MDL → 0.00037
	Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4	0.005
	Toluene	108-88-3	0.005
	1,1,1-Trichlorethane; Methylchloroform	71-55-6	0.005
*	1,1,2-Trichloroethane	79-00-5	0.005 / 0.0032 / MDL → 0.00072
	Trichloroethylene; Trichlorethene	79-01-6	0.005
	Trichlorofluoromethane; CFC-11	75-69-4	0.005
**	1,2,3-Trichloropropane	96-18-4	0.005 / 0.000032 / MDL → 0.00091
	Vinyl acetate	108-05-4	0.005
**	Vinyl chloride	75-01-4	0.005 / 0.00019 / MDL → 0.00042
	Xylenes	1330-20-7	0.005

* meets using MDL
** MDL ↑ than PSRG (lowest)

page 4 of 4

WORK ORDER

Printed: 1/13/2016 6:30:14PM

1601030

Liberty Analytical

Client:	**DRAPER ADEN ASSOCIATES**	**Project Manager:**	**Cathy Dover**
Project:	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**	**Project Number:**	**WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39**
SDG:	**1601030** **CASE:**	**Status:**	**Received**

Report To:

DRAPER ADEN ASSOCIATES
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540) 552-0444
Fax: -

Invoice To:

WATAUGA COUNTY, NC
MR. J.V. POLTER
842 WESTKING STREET/COURTHOUSE, SUITE 1
BOONE, NC 28607
Phone :-
Fax: -

Date Due:	01/28/2016 00:00 (20 day TAT)		
Received By:	Cathy Dover	Date Received:	01/08/2016 09:06
Logged In By:	Cathy Dover	Date Logged In:	01/11/2016 16:52

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?: **NO** Spike Level: **FULL Spike**	Deliverable: **Level 4**	EDD : **36) DRAPER ACCESS**

LCS*WATER LEACH THEN TKP*UNITS WILL NEED TO BE CONVERTED BACK TO mg/kg*PLEASE DO WATER LEACH AS LATE IN THE DAY AS POSSIBLE BECAUSE HAVE TO SUB BOD OFF OF WATER LEACH & IT HAS 48 HR. HOLDING TIME

Analysis	Due	TAT	Expires	Received	Comments
1601030-01 WS-2 [Soil] Sampled 01/07/2016 12:20 Eastern					
TKP SOIL BY WATER LEACH	01/28/2016 16:00	20	02/04/2016 12:20	01/08/2016 09:06	
WATER LEACH	01/28/2016 16:00	20	01/21/2016 12:20	01/08/2016 09:06	
1601030-02 WS-3 [Soil] Sampled 01/07/2016 12:55 Eastern					
TKP SOIL BY WATER LEACH	01/28/2016 16:00	20	02/04/2016 12:55	01/08/2016 09:06	
WATER LEACH	01/28/2016 16:00	20	01/21/2016 12:55	01/08/2016 09:06	
1601030-03 WS-5 [Soil] Sampled 01/07/2016 13:50 Eastern					
TKP SOIL BY WATER LEACH	01/28/2016 16:00	20	02/04/2016 13:50	01/08/2016 09:06	
WATER LEACH	01/28/2016 16:00	20	01/21/2016 13:50	01/08/2016 09:06	

C. Sample Preparation and Analysis Holding Time Data

(HOLDING TIME SUMMARY)

Sample collection, receipt, preparation and analysis dates with method holding time requirements.

HOLDING TIME SUMMARY

EPA 365.4

Client: DRAPER ADEN ASSOCIATES

Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

SDG: 1601030

Sample Name	Date Collected	Date Received	Date Prepared	Date Analyzed	Days to Analysis	Max Days to Analysis*	Q
WS-2	01/07/16	01/08/16	01/14/16	01/19/16	12.1	28	
WS-3	01/07/16	01/08/16	01/14/16	01/19/16	12.1	28	
WS-5	01/07/16	01/08/16	01/14/16	01/19/16	12.0	28	

Liberty Analytical

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D. MDL

(MDL SUMMARY)

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Liberty Analytical
SDG: 1601030
Client: DRAPER ADEN ASSOCIATES
Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39
Matrix: SOIL
Instrument: LACHATC2

Analyte	MDL	RL	Units	Method
Phosphorus-Total	0.1	5.00	mg/kg	EPA 365.4

E. Laboratory Control Sample Results

(LCS/LCS DUPLICATE RECOVERY)

LCS/LCSD recovery, relative percent difference and quality control acceptance criteria.

LCS / LCS DUPLICATE SUMMARY

EPA 365.4

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011402-BS1 Matrix: Soil Client ID: WLCSVC Batch: 6011402

ANALYTE	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC.	Q	QC LIMITS REC.
Phosphorus-Total	3.000	2.98	99.4		90 - 110

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H. Batch Summary

(PREPARATION BATCH SUMMARY)

Sample names, cross-referenced with Lab Sample ID’s, with sample preparation details.

PREPARATION BATCH SUMMARY

EPA 365.4

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Batch: 6011402 Matrix: Soil Preparation: ASTM D3987-85

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL/WT (g)	FINAL VOL/WT (mL)
WS-2	1601030-01	01/14/16 12:32	100	2000
WS-3	1601030-02	01/14/16 12:32	100	2000
WS-5	1601030-03	01/14/16 12:32	100	2000
PBVC	6011402-BLK1	01/14/16 12:32	20.0	20.0
Leach BLK XY	6011402-BLK2	01/14/16 12:32	100	2000
WLCSVC	6011402-BS1	01/14/16 12:32	20.0	20.0

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I. Analysis Sequence Summary

(ANALYSIS SEQUENCE SUMMARY)

ANALYSIS SEQUENCE SUMMARY

EPA 365.4

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Sequence: 6A19003 Calibration: 9121702 Instrument: LACHATC2

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PBVC	6011402-BLK1	6A19003_Seq-011	01/19/16 14:36:34
Leach BLK XY	6011402-BLK2	6A19003_Seq-012	01/19/16 14:37:47
WLCSVC	6011402-BS1	6A19003_Seq-013	01/19/16 14:39:00
WS-2	1601030-01	6A19003_Seq-014	01/19/16 14:40:13
WS-3	1601030-02	6A19003_Seq-015	01/19/16 14:41:26
WS-5	1601030-03	6A19003_Seq-016	01/19/16 14:42:38

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J. Target Compound Results

(ANALYSIS DATA SHEETS)

ANALYSIS DATA SHEET

WS-2

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601030-01 % Solid: Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7723-14-0	Phosphorus-Total	0.378	0.100	5.00	1	J	EPA 365.4	6A19003	1/19/16 14:40

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ANALYSIS DATA SHEET

WS-3

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601030-02 % Solid: Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7723-14-0	Phosphorus-Total	4.20	0.100	5.00	1	J	EPA 365.4	6A19003	1/19/16 14:41

Liberty Analytical

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ANALYSIS DATA SHEET

WS-5

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 1601030-03 % Solid: Matrix: Soil Sampled: 01/07/16 Received: 01/08/16

CAS NO.	Analyte	Conc. (mg/kg)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7723-14-0	Phosphorus-Total	0.554	0.100	5.00	1	J	EPA 365.4	6A19003	1/19/16 14:42

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ANALYSIS DATA SHEET

PBVC

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011402-BLK1 Matrix: Soil

CAS NO.	Analyte	Conc. (mg/kg)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7723-14-0	Phosphorus-Total		0.00500	0.250	1	U	EPA 365.4	6A19003	1/19/16 14:36

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ANALYSIS DATA SHEET

Leach BLK XY

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011402-BLK2 Matrix: Soil

CAS NO.	Analyte	Conc. (mg/kg)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7723-14-0	Phosphorus-Total		0.100	5.00	1	U	EPA 365.4	6A19003	1/19/16 14:37

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

ANALYSIS DATA SHEET

WLCSVC

Client: DRAPER ADEN ASSOCIATES SDG: 1601030 Project: WATAUGA CO.LF-2016 SOIL SAMPLING/6520-39

Lab ID: 6011402-BS1 Matrix: Soil

CAS NO.	Analyte	Conc. (mg/kg)	MDL	RL	D.F.	Q	Method	Sequence	Analyzed
7723-14-0	Phosphorus-Total	2.98	0.00500	0.250	1		EPA 365.4	6A19003	1/19/16 14:39

Liberty Analytical

ACCREDITED IN ACCORDANCE WITH nelac

K. Initial and Continuing Calibration Data

(INITIAL CALIBRATION DATA)
(INITIAL AND CONTINUING CALIBRATION CHECK)

M. Run Logs/Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the quarterly verification of method and instrument parameters submitted as a part of each data package.

Raw data shall be labeled with Client Identification numbers and appropriate codes in order to identify:

- calibration standards, including source and preparation date
- initial and continuing calibration blanks and preparation blanks
- initial and continuing calibration verification standards, , Laboratory Control Sample, and post digestion spike
- diluted and undiluted sample and all weights, dilutions, and volumes used to obtain the reported values
- duplicates
- spikes (indicating standard solutions used, final spike concentrations, and volumes involved).
- instrument used, any instrument adjustments, data corrections or other apparent anomalies on the measurement record, including all data voided or data not used and a brief written explanation
- time and date of each analysis (instrument run logs can be submitted if they contain this information)

Raw Data for:

Instrument: LACHATC2

File Name: 6A19003_Seq-011

Sequence: 6A19003

Analysis: TKP SOIL BY WATER LEACH

OmnionPrime FIA Run Log

Analysis: TTL PHOSPHORUS (TKP) 365.4 W **Instrument:**

Operator(s): BWL **Date/Time** 1/19/2016 - 14:24 **to** 1/19/2016 - 14:46 **File Name:** 6A19003.csv

Work Order
1601030

Batch
6011402
6A19003

Reagents
5L07006

Comments / Maintenance
None

Sample ID	Client ID	Sample Type	DF	Date	Time	Standard #	Comments
6A19003-CAL6	S4.00	CALIB STD	1	1/19/2016	14:24:28		
6A19003-CAL5	S2.00	CALIB STD	1	1/19/2016	14:25:40		
6A19003-CAL4	S1.00	CALIB STD	1	1/19/2016	14:26:51		
6A19003-CAL3	S0.5	CALIB STD	1	1/19/2016	14:28:04		
6A19003-CAL2	S0.25	CALIB STD	1	1/19/2016	14:29:17		
6A19003-CAL1	S0	CALIB STD	1	1/19/2016	14:30:30		
6A19003-ICV1	ICV	ICV	1	1/19/2016	14:31:42		
6A19003-ICB1	ICB	ICB	1	1/19/2016	14:32:56		
6A19003-CCV1	CCV	CCV	1	1/19/2016	14:34:08		
6A19003-CCB1	CCB	CCB	1	1/19/2016	14:35:21		
6011402-BLK1	PBVC	BLANK	1	1/19/2016	14:36:34		
6011402-BLK2	Leach BLK XY	BLANK	1	1/19/2016	14:37:47		
6011402-BS1	WLCSVC	LCS	1	1/19/2016	14:39:00		
1601030-01	WS-2	SAMPLE	1	1/19/2016	14:40:13		
1601030-02	WS-3	SAMPLE	1	1/19/2016	14:41:26		
1601030-03	WS-5	SAMPLE	1	1/19/2016	14:42:38		
6A19003-CCV2	CCV	CCV	1	1/19/2016	14:45:44		
6A19003-CCB2	CCB	CCB	1	1/19/2016	14:46:57		

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 1/20/2016

Author: wetchem

Date : 1/20/2016

Original Run Filename: OM_1-19-2016_14-23-30.OMN Created: 1/19/2016 14:23:30
Original Run Author's Signature: [wetchem]
Current Run Filename: 6A19003.omn Last Modified: 1/19/2016 14:50:03
Current Run Author's Signature: [wetchem]
Description: EPA 365.4
Lachat Method 10-115-01-1-D

Sample	Rep.	Cup No.	Channel 2 TKP Conc. (mg/L)	Area (V.s)	Detection Time	MDF
S4.00	1	S1	4.0000	34.2736	1/19/2016@14:24:28	
S2.00	1	S2	2.0000	17.3143	1/19/2016@14:25:40	
S1.00	1	S3	1.0000	9.2077	1/19/2016@14:26:51	
S0.5	1	S4	0.5000	4.7020	1/19/2016@14:28:04	
S0.25	1	S5	0.2500	2.8300	1/19/2016@14:29:17	
S0	1	S6	0.0000	0.4144	1/19/2016@14:30:30	
ICV	1	S13	2.9465	25.3978	1/19/2016@14:31:42	
		Known Conc:	3.0000			
			DQM Test: > + Concentration Limit			
		Result:	2.9465 < 3.3000			
		Message	ICB PASS			
		Action				
			DQM Test: < - Concentration Limit			
		Result:	2.9465 > 2.7000			
		Message	ICV PASS			
		Action				
		Calibration:	Table/Fig. : 1			
ICB	1	S14	0.0081	0.6442	1/19/2016@14:32:56	
		Known Conc:	0.0000			
			DQM Test: > + Concentration Limit			
		Result:	0.0081 < 0.2500			
		Message	Pass			
		Action				
			DQM Test: < - Concentration Limit			
		Result:	0.0081 > -0.2500			
		Message	Pass			
		Action				
CCV	1	S2	1.9643	17.1235	1/19/2016@14:34:08	
		Known Conc:	2.0000			
			DQM Test: > + Concentration Limit			
		Result:	1.9643 < 2.2000			
		Message	Pass			
		Action				
			DQM Test: < - Concentration Limit			
		Result:	1.9643 > 1.8000			
		Message	CCV PASSES			
		Action				
CCB	1	S6	-0.0248	0.3670	1/19/2016@14:35:21	
		Known Conc:	0.0000			
			DQM Test: > + Concentration Limit			
		Result:	-0.0248 < 0.2500			
		Message	Pass			
		Action				
			DQM Test: < - Concentration Limit			
		Result:	-0.0248 > -0.2500			
		Message	Pass			
		Action				
6011402-BLK1	1	1	-0.0313	0.3124	1/19/2016@14:36:34	
6011402-BLK2	1	2	-0.0133	0.4637	1/19/2016@14:37:47	
6011402-BS1	1	3	2.9832	25.7068	1/19/2016@14:39:00	
1601030-01	1	4	0.0189	0.7351	1/19/2016@14:40:13	
1601030-02	1	5	0.2101	2.3460	1/19/2016@14:41:26	
1601030-03	1	6	0.0277	0.8095	1/19/2016@14:42:38	
CCV	1	S2	1.9371	16.8945	1/19/2016@14:45:44	
		Known Conc:	2.0000			
			DQM Test: > + Concentration Limit			
		Result:	1.9371 < 2.2000			
		Message	Pass			
		Action				
			DQM Test: < - Concentration Limit			
		Result:	1.9371 > 1.8000			

Author: wetchem

Date : 1/20/2016

		Message	CCV PASSES			
		Action				
CCB	1	S6	-0.0618	0.0548	1/19/2016@14:46:57	
		Known Conc:	0.0000			
DQM Test: > + Concentration Limit						
		Result:	-0.0618 < 0.2500			
		Message	Pass			
		Action				
DQM Test: < - Concentration Limit						
		Result:	-0.0618 > -0.2500			
		Message	Pass			
		Action				

Channel 2 (TKP) - Current View

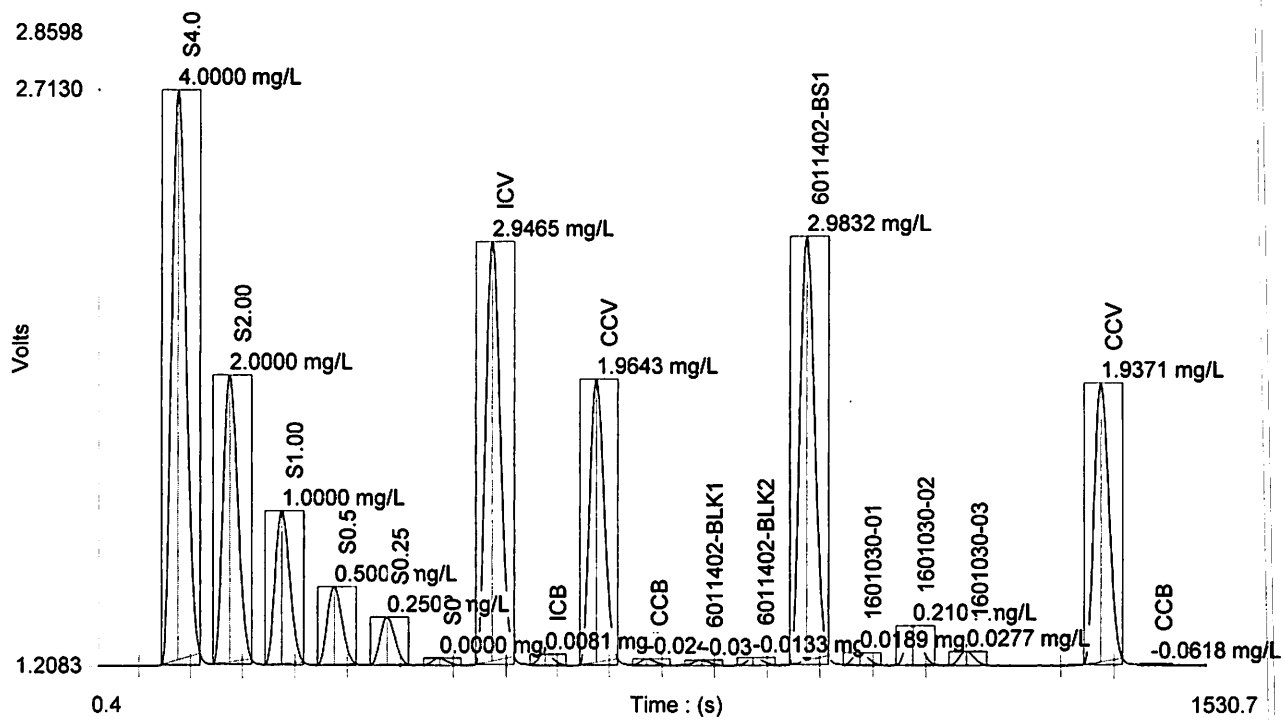


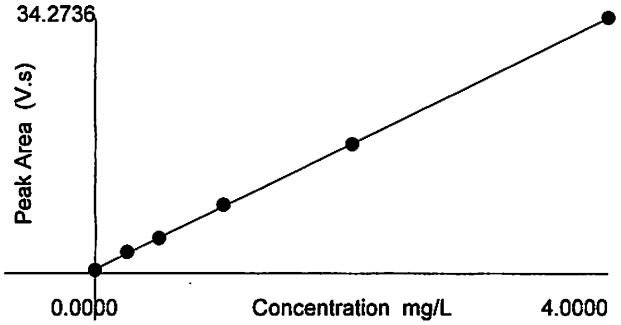
Table : 1 (TKP)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	4.0000	1	34.2736	1.4882	0.0	0.0	4.0001	1/19/2016	14:24:28
2	2.0000	1	17.3143	0.7496	0.0	0.6	1.9870	1/19/2016	14:25:40
3	1.0000	1	9.2077	0.3976	0.0	-2.3	1.0247	1/19/2016	14:26:51
4	0.5000	1	4.7020	0.2018	0.0	1.8	0.4898	1/19/2016	14:28:04
5	0.2500	1	2.8300	0.1221	0.0	-5.5	0.2676	1/19/2016	14:29:17
6	0.0000	1	0.4144	0.0181			-0.0192	1/19/2016	14:30:30

Author: wetchem

Date : 1/20/2016

Figure : 1 (TKP)



Area = 8.4230 * Conc + 0.5773
Conc = 0.1187 * Area - 0.0683
Correlation Coefficient (r) = 0.99993

Weighting : None

N. Digestion and Distillation Logs

The following logs shall be submitted, as appropriate, for each preparation procedure. The logs shall include: (1) date; (2) sample weights and volumes, with initial sample weight/volume and final volume clearly indicated; (3) sufficient information to unequivocally identify which QC samples (i.e., LCS, PB) correspond to each batch digested; (4) comments describing any significant sample changes or reactions which occur during preparation shall be entered in the log and noted in the SDG Narrative; (5) identification of the sample preparer(s) [signature (s)].

TKN/TKP PREPARATION LOG

TKN Method: EPA MCAWW 351.2
TKP Method: EPA MCAWW 365.4
Prepared By: BFP 2713

CompuChem
A Division Of
Liberty Analytical Corp.

Preparation Date: 1-14-16
Preparation Time: 1232
Batch Number: 6011402

COMPUCHEM SAMPLE ID	CLIENT SAMPLE ID	SAMPLE TYPE	Initial Volume (mL)	Final Volume (mL)	*Description Before	Element Standard ID	Comments
	S4.0	ICAL	20	20	CS/CL	SG 27015	
	S2.0/CCV	ICAL/CCV	20	20	CS/CL	SG 27014	
	S1.0	ICAL	20	20	CS/CL	SG 27013	
	S0.5	ICAL	20	20	CS/CL	SG 27012	
	S0.25	ICAL	20	20	CS/CL	SG 27011	
	S0/ICB/CCB	ICAL/ICB/CCB	20	20	CS/CL	SG 27010	
	ICV	ICV	20	20	CS/CL	GA 14001	
6011402-BLK1	PBVC	MB	20	20	CS/CL		
6011402-BLK2	Leach BLK XY	Leach Blank	20	20	CS/CL		
6011402-BS1	WLCSVC	LCS	20	20	CS/CL		
1601030-01	WS-2	Sample	20	20	CS/CY		
1601030-02	WS-3	Sample	20	20	BR/CY		
1601030-03	WS-5	Sample	20	20	BR/CY		

1-14-16

TKP/TKN and QC S0 S0.25 S0.5 S1.0 S2.0 S4.0 ICV ICB CCV CCB

NOTE: All standards and QC for TKP/TKN were prepared at the same day as the associated samples. Refer to the attached Standard/QC Preparation Log, with date matching the above preparation date, for preparation method.

Record of Temperature/Time	
Hot Block Temp @ 160 C	158° C
Hot Block Temp @ 380 C	375° C
Hot Block Identifier	TKN/TKP Block #1
Time on 160 C step	60 min
Time on 380 C step	90 min

ICV/LCS Reference

TKP ICV/LCS :
60 uL of 1000 mg/L TKP 2nd Source
Ref#: SL21001

TKN ICV/LCS :
60 uL of 1000 mg/L TKN 2nd Source
Ref#:

MS/MSD Reference

TKP MS/MSD :
60 uL of 1000 mg/L TKP 2nd Source
Ref#:

TKN MS/MSD :
60 uL of 1000 mg/L TKN 2nd Source
Ref#:

* R=red, BL=blue, Y=yellow, G=green, O=orange, V=violet, W=white, CS=colorless, BR=brown, BK=black,GY= grey, CL=clear, CY=cloudy, OP=opaque

Reviewed By: [signature] Date: 1/14/16

Shading has been applied to unused portions of this worksheet as a substitute for 'Z-out'.

"The presence of the Chemist's/analyst's employee ID number, or signature, on this log attests that strict compliance with the method's SOP has occurred. Any SOP deviations requires documentation by the chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation."

B. Patterson
Assigned To

2713
Employee ID Number

PREPARATION BENCH SHEET

6011201

WATER LEACH

Matrix: Soil

Prepared using: WET CHEM - ASTM D3987-85

Date/Time Extracted: 1-12-16 @ 1257

Lab Number	Client ID	QCType	Sample Weight (g)	Volume Added (mL)	QC	Comments Final Volume
1601030-01	WS-2	Sample	100.0	2000	N/A	1677
1601030-02	WS-3	Sample	100.0	2000	↓	1608
1601030-03	WS-5	Sample	100.0	2000	↓	1838
6011201-BLK1	~~FILBLK XY~~ BEP 1-13-16 Leach BLK XY	Blank	N/A	2000	N/A	1928

LOADED TUMBLER CALIB.CHECK (MUST BE 30 +/- 2 RPM)	
TUMBLER #	CALC. RPM
2A	32
(COUNT RPM FOR 30 SEC. AND MULTIPLY NUMBER BY 2 TO CALCULATE RPM)	

ROTATION TIME ONLY

Date/Time Started: 1-12-16 @ 1257

Date/Time Stopped: 1-13-16 @ 1302

Balance ID: 8591

Filter Manufacturer: Env. Express

Filter Lot: 400105[redacted]232

Final Vol Verified: B. Patterson

Reviewed By: [signature]

bch_Leachate.rpt (Rev. 0 3/11/2011)

Internal Chain of Custody

EXTRACT CHAIN OF CUSTODY

6011402

Liberty Analytical

Prepared using: WET CHEM - ASTM D3987-85

Matrix: Soil

Lab Number	Client ID	Analysis
1601030-01	WS-2	TKP SOIL BY WATER LEACH
1601030-02	WS-3	TKP SOIL BY WATER LEACH
1601030-03	WS-5	TKP SOIL BY WATER LEACH
6011402-BLK1	PBVC	QC
6011402-BLK2	Leach BLK XY	QC
6011402-BS1	WLCSVC	QC

Relinquished By	Date	Received By	Date
[signature]	1-14-16 1645	Wet Chem	1-14-16 1645

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

April 05, 2016

Ms. Janet Frazier
Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060

RE: Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Dear Ms. Frazier:
Enclosed are the analytical results for sample(s) received by the laboratory on January 14, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Per client request, report revised 4/5/16 to update sample ID from W-4 to W-5.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project:	WATAUGA CO. LF SOIL
Pace Project No.:	92282959

Asheville Certification IDs
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92282959001	**WS-2**	Water	01/13/16 13:15	01/14/16 10:40
92282959002	**WS-3**	Water	01/13/16 13:15	01/14/16 10:40
92282959003	**WS-5**	Water	01/13/16 13:15	01/14/16 10:40
92282959004	**Leach Blank**	Water	01/13/16 00:00	01/14/16 10:40

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SAMPLE ANALYTE COUNT

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92282959001	**WS-2**	SM 5210B	BRJ	1	PASI-A
		SM 5220D	WRC	1	PASI-A
92282959002	**WS-3**	SM 5210B	BRJ	1	PASI-A
		SM 5220D	WRC	1	PASI-A
92282959003	**WS-5**	SM 5210B	BRJ	1	PASI-A
		SM 5220D	WRC	1	PASI-A
92282959004	**Leach Blank**	SM 5210B	TEP	1	PASI-A
		SM 5220D	WRC	1	PASI-A

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PROJECT NARRATIVE

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Date: April 05, 2016

WS-2 (Lab ID: 92282959001)

- A soil sample from this location was leached and filtered. The 1/13/16 @ 13:15 collection date/time was when the filtration time began.

WS-3 (Lab ID: 92282959002)

- A soil sample from this location was leached and filtered. The 1/13/16 @ 13:15 collection date/time was when the filtration time began.

WS-5 (Lab ID: 92282959003)

- A soil sample from this location was leached and filtered. The 1/13/16 @ 13:15 collection date/time was when the filtration time began.

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PROJECT NARRATIVE

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Method: **SM 5210B**
Description: 5210B BOD, 5 day
Client: Draper Aden Associates
Date: April 05, 2016

General Information:
4 samples were analyzed for SM 5210B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: WET/42501

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 1647879)
  - BOD, 5 day

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Method: **SM 5220D**
Description: 5220D COD
Client: Draper Aden Associates
Date: April 05, 2016

General Information:
4 samples were analyzed for SM 5220D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Sample: WS-2 **Lab ID: 92282959001** Collected: 01/13/16 13:15 Received: 01/14/16 10:40 Matrix: Water

Comments: • A soil sample from this location was leached and filtered. The 1/13/16 @ 13:15 collection date/time was when the filtration time began.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	ND	mg/L	2.0	1	01/15/16 02:33	01/19/16 22:35		L2
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	ND	mg/L	25.0	1		01/19/16 13:30		

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ANALYTICAL RESULTS

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Sample: WS-3 **Lab ID: 92282959002** Collected: 01/13/16 13:15 Received: 01/14/16 10:40 Matrix: Water

Comments: • A soil sample from this location was leached and filtered. The 1/13/16 @ 13:15 collection date/time was when the filtration time began.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	ND	mg/L	2.0	1	01/15/16 02:33	01/19/16 22:35		L2
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	ND	mg/L	25.0	1		01/19/16 13:30		

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ANALYTICAL RESULTS

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Sample: WS-5 **Lab ID: 92282959003** Collected: 01/13/16 13:15 Received: 01/14/16 10:40 Matrix: Water

Comments: • A soil sample from this location was leached and filtered. The 1/13/16 @ 13:15 collection date/time was when the filtration time began.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	ND	mg/L	2.0	1	01/15/16 02:33	01/19/16 22:35		L2
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	ND	mg/L	25.0	1		01/19/16 13:30		

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ANALYTICAL RESULTS

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Sample: Leach Blank **Lab ID: 92282959004** Collected: 01/13/16 00:00 Received: 01/14/16 10:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	ND	mg/L	2.0	1	01/14/16 19:46	01/19/16 16:30		
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	ND	mg/L	25.0	1		01/19/16 13:30		

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QUALITY CONTROL DATA

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

QC Batch: WET/42497 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92282959004

METHOD BLANK: 1647773 | Matrix: Water
Associated Lab Samples: 92282959004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	01/19/16 16:30	

LABORATORY CONTROL SAMPLE: 1647774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	171	86	84.6-115.4	

SAMPLE DUPLICATE: 1647775

Parameter	Units	92282959004 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	ND	ND		10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

QC Batch: WET/42501 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92282959001, 92282959002, 92282959003

METHOD BLANK: 1647878 Matrix: Water
Associated Lab Samples: 92282959001, 92282959002, 92282959003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	01/19/16 22:35	

LABORATORY CONTROL SAMPLE: 1647879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	153	77	84.6-115.4	L0

SAMPLE DUPLICATE: 1647880

Parameter	Units	92283004001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	570	570	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

QC Batch: WETA/26137 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92282959001, 92282959002, 92282959003, 92282959004

METHOD BLANK: 1649385 Matrix: Water
Associated Lab Samples: 92282959001, 92282959002, 92282959003, 92282959004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	01/19/16 13:30	

LABORATORY CONTROL SAMPLE: 1649386

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	776	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1649387 1649388

Parameter	Units	92282959001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	mg/L	ND	750	750	758	758	100	100	90-110	0	3	

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QUALIFIERS

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WATAUGA CO. LF SOIL
Pace Project No.: 92282959

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92282959001	**WS-2**	SM 5210B	WET/42501	SM 5210B	WET/42503
92282959002	**WS-3**	SM 5210B	WET/42501	SM 5210B	WET/42503
92282959003	**WS-5**	SM 5210B	WET/42501	SM 5210B	WET/42503
92282959004	**Leach Blank**	SM 5210B	WET/42497	SM 5210B	WET/42500
92282959001	**WS-2**	SM 5220D	WETA/26137		
92282959002	**WS-3**	SM 5220D	WETA/26137		
92282959003	**WS-5**	SM 5220D	WETA/26137		
92282959004	**Leach Blank**	SM 5220D	WETA/26137		

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Pace Analytical®	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 28DEC2015 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.17	Issuing Authority: Pace Huntersville Quality Office

Sample Condition Upon Receipt

Client Name: Campuchem

Project #: WO# : 92282959

92282959

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other:

Thermometer Used: IR Gun #5 SN: 155271998

Type of Ice: ☐ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has be

Cooler Temp Corrected (°C): 2.0

Temp should be above freezing to 6°C **Correction Factor:** 0.0 °C

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

Date and Initials of Person Examining Contents: RT 1/14/16

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No	☐ N/A	6. BOD
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used? RT 1/14/16	☑ Yes	☑ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WW				
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	☐ Yes	☐ No	☑ N/A	
Samples checked for dechlorization	☑ Yes	☐ No	☐ N/A	14.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager SCURF Review: _____ **Date:** 1-14-16

Please send pdf reports/ACCESS EDD/invoice to Janet Frazier @ Draper (jfrazier@daa.com)

S 14924

COMPUCHEM
a division of Liberty Analytical Corp.

501 Madison Avenue
Cary, NC 27513
1-800-833-5097

SUBCONTRACT CHAIN-OF-CUSTODY RECORD

Project Name: WATAUGA CO. LF SOIL	Samples shipped to: PACE	CompuChem point-of-contact: (4) CATHY DOVER
TAT: 14 calendar day	Contact: Kevin Goodwin/receiving	Phone: (919) 379-4100 x 4089 *JANET FRAZIER
Report style: level	Address: 2275 Riverside Dr. Asheville, NC 28804	Fax: (919) 379- 4050 (540) 552-0444
Disk requirement:	Phone: (828) 254-7176	Sampling complete? (Y) or N (see Note 1)
	Project Locale (state)	Project-specific (PS) or Batch (B) QC? per method

BOX #1
1. Surface Water
2. Ground Water
3. Leachate
4. Rinsate
5. Soil / Sediment / Sludge
6. Trip Blank
7. Oil
8. Waste
9. Other _____

BOX #2
A. HCl + Ice
B. HNO_3 + Ice
C. NaOH + Ice
D. H_2SO_4 + Ice
E. Unpreserved
F. Ice Only
G. Other _____
H. $NaHSO_4$ + Ice
I. ZnAc+NaOH + Ice
J. Methanol

BOX #3
F- Filtered
U- Unfiltered

BOX #4
H- High
M- Medium
L- Low

BOX #5
C- CLP
T- TCLP
S - SW-846
W- CWA 600-series
O- Other _____

	Sample ID 92282959	Date / Year 1/13/16	Time *	Box #1 Matrix	Box #2 Preservative	Box #3 Filtered / Unfiltered	Box #4 Expected Conc.	Box #5 Method	# of Bottles	Use for Lab QC (MS or DUP)	PARAMETERS BOD	PARAMETERS COD				CCN	Remarks / Comments (see Notes 2 & 3)
																	filtration start time: 13:15 on 1/13/16
001	WS-2	1/7/16	1220	3	F/D	F			2		✓	✓					*collections time for original soil sample (see note above for filtration time for BOD holding time.
002	WS-3		1255						2		✓	✓					
003	WS-4		1350						2		✓	✓					
004	Leach Blank	1/13/16	—	3					2		✓	✓					

1/13/16

Clients Special Instructions:

Lab: Received in good condition? Y or N **Describe any problems:** Temperature 2.0 °C

#1 Relenquished by:(sig)	Date: 1/13/16	#2 Relinquished by:(sig)	Date:	Relinquished by:(sig)	Date:
Company Name: CompuChem	Time: 1737	Company Name:	Time:	Company Name:	Time:
#1 Received by:(sig)	Date: 1/14/16	#2 Received by:(sig)	Date:	#2 Received by:(sig)	Date:
Company Name: PACE	Time: 10:40	Company Name:	Time:	Company Name:	Time:

Note (1) If "N" lab should batch samples to await remainder of project - maximizing batch size and minimizing QC ratio; if "Y" lab should begin processing batches now.
Note (2) Samples should be stored 60 days after date report mailed at no extra charge.
Note (3) All lab copies of data should be retained for a minimum of 3 years.
Note (4) Please call point-of-contact to verify receipt of samples.

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